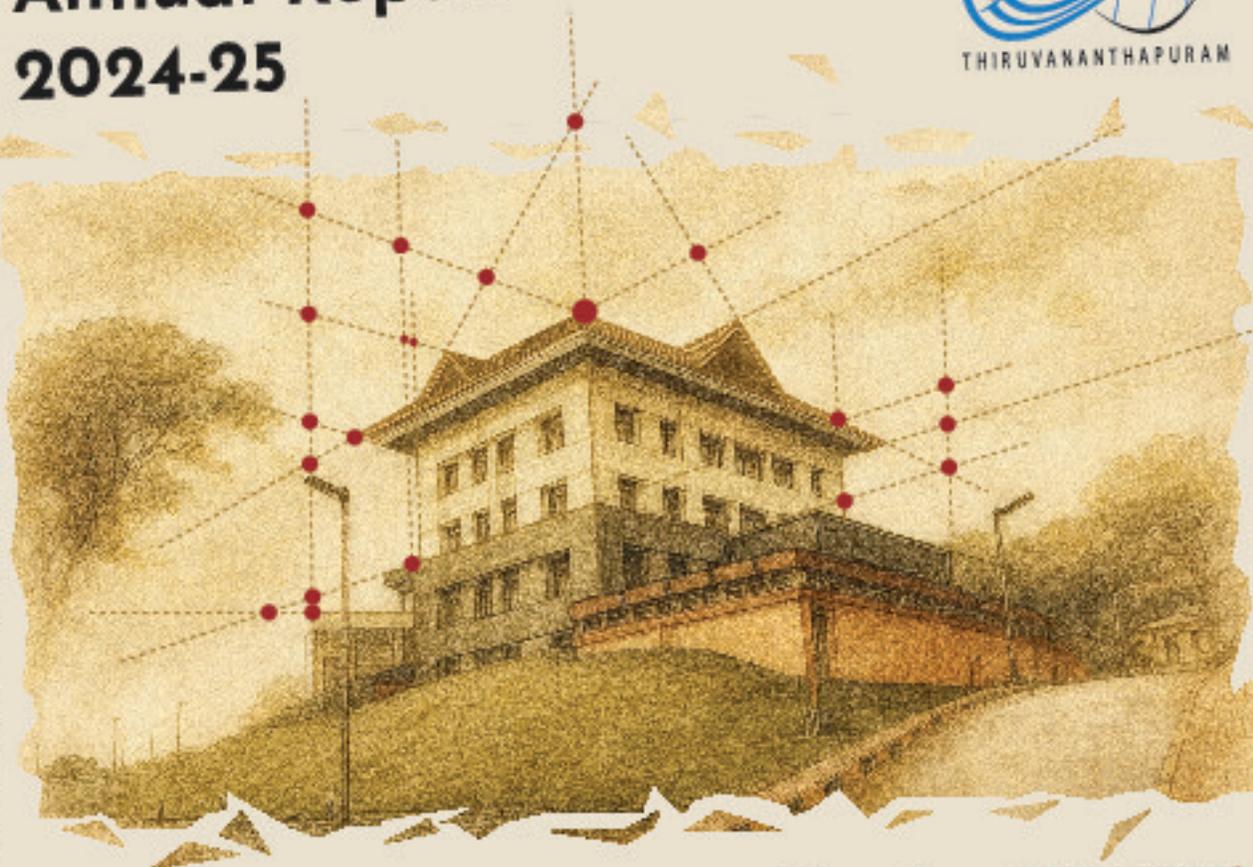
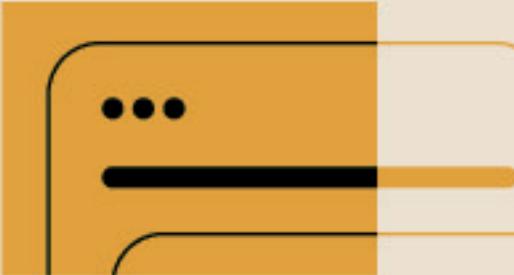


Annual Report 2024-25



Indian Institute of Science Education and Research
Thiruvananthapuram (IISER TVM)





***Indian Institute of Science
Education and Research
Thiruvananthapuram (IISER TVM)***

Annual Report 2024-25



Credits

Annual Report Preparation Committee

Chairman	Dr. Satish Khurana, Associate Professor
Ex-Officio Members	Head, School of Biology Head, School of Chemistry Head, School of Physics Head, School of Mathematics Head, Data Science and SEESS
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Convener	Dr. Sainul Abideen P., Deputy Librarian

Design:

Mr. Shyam M.
(s.m.designs.business@gmail.com)

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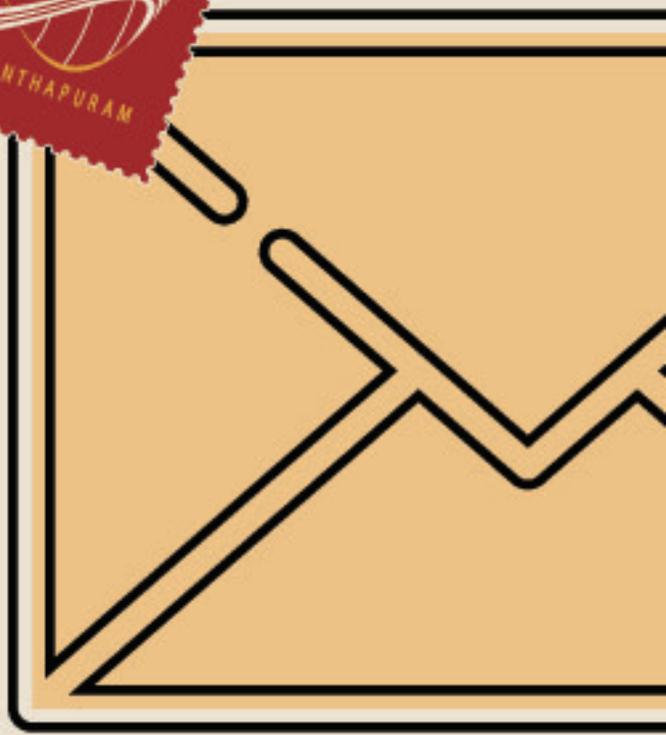
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- Prof. J. N. Moorthy,
Director, IISER Thiruvananthapuram
- Maruthamala P. O., Vithura, Thiruvananthapuram,
Kerala, India - 695551
- T: +91 0471-2778009, 8044, 8028
- E-Mail: padirector@iisertvm.ac.in



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DIRECTOR'S FOREWORD



I am pleased to present the 16th Annual Report of the Indian Institute of Science Education and Research Thiruvananthapuram (IISER TVM).

During 2024–2025, the institute has made significant strides across academics, research, and infrastructure. Student intake increased, faculty recruitment accelerated, academic processes were streamlined, and campus facilities improved markedly. Continuing its upward trajectory, IISER TVM is currently placed 11th among the Indian institutions in the Nature Index Rankings. The institute also features among the top 2,000 global institutions, as well as within the top 10% of the Global 2000 list of the Centre for World University Rankings (2025). It is also noteworthy that IISER TVM features among top 100% institutions in the world created post 1975, as per Nature Index rankings.

The institute currently hosts over 2,100 students across its academic programs. With the addition of 14 new faculty members, the current faculty strength stands at 116 across the Schools of Biology, Chemistry, Mathematics, Physics, Data Science, and Earth, Environmental and Sustainability Sciences. Efforts are also underway to recruit new staff members to cater to the smooth functioning of various activities in the institute. We are grateful to the Ministry of Education's timely sanction of additional faculty positions to cater to the increase in student enrolment.

Students remain our foremost stakeholders. In the past academic year, to strengthen our andragogy, we have undertaken a comprehensive revision of our academic framework, curricula, and syllabi across all our academic programs, namely the BS-MS, the π BS-MS, the 2-year MSc, and the iPhD/PhD programs. The introduction of multiple exit options, and skill and ability enhancement courses enabled the alignment of the institute's academic structure with the tenets of the National Education Policy (NEP) 2020. Our faculty have played a pivotal role in strengthening the academic portfolio of the institute by designing new courses, developing new academic programs, and implementing the NEP reforms. The institute is committed to nurturing well-rounded individuals through multidisciplinary and holistic education, and active participation in co-curricular and extracurricular activities. On the research arena, several extramural research proj-

ects, including the ones that are of national priority, have been secured by our faculty. Some of the accolades our faculty members received include securing prestigious fellowships of leading academies, securing membership of the editorial boards of various journals, and scientific organizations and societies. The institute research community remains actively engaged with national and international scientific developments by hosting various scientific events. We hosted the third edition of the Refresher and Preparative Winter School by the Schools of Biology, Chemistry, and Physics last December. The fourth edition of the annual Frontiers Symposium Series was held across all the schools in the month of January this year.

The institute infrastructural augmentation remains a top priority for the administration. To facilitate various activities under the administrative structure of the institute, a new administrative complex became operational. A dedicated building for the School of Mathematics has also been set up. A new Central Library equipped with modern facilities to provide contemporary learning environments to the students is poised for completion this year. Research infrastructure is constantly being bolstered through the acquisition of state-of-the-art scientific equipment and upgrades to the existing ones. Meeting lounges have been established in the Schools of Physics and Mathematics, and on all floors of the new administrative complex, and a new café has been set up near the administrative block. Thanks to the support from the Ministry of Education, we could revitalize campus infrastructure to enable the creation of a vibrant academic and residential ecosystem in the campus.

In the coming years, the institute plans to launch new schools to expand its academic offerings, recruit new faculty members in niche research areas, undertake infrastructure development, and pursue research projects of national priority. As we march ahead with a clear mission and vision to realize the transformative power of education, I express my deep appreciation and gratitude to Prof. Arvind A. Natu, the Chairperson, Board of Governors, and all the members of the Board of Governors for their guidance and support. I whole-heartedly extend my appreciation to every individual that has contributed to the growth of this institution.

J. N. Moorthy

Director



Photo: Parthiban, Electrical substations team, IISERTVM

Board of Governors

BoG Members for the year 2024-25

as on 31.03.2025

Prof. Arvind A. Natu	Chairperson, BoG
Prof. J. N. Moorthy	Director, IISER TVM
Joint Secretary (TE)	MoE, Govt. of India
Secretary	Department of New & Renewable Energy, Govt. of India
Secretary	Housing and Urban Affairs, Govt. of India
Chief Secretary	Govt. of Kerala
Joint Secretary & Financial Advisor	MoE, Govt. of India
Director	Indian Institute of Science, Bangalore
Director	IIT Dharwad (upto 05.08.2024)
Director	CSIR-SERC (since 2012.2024)
Dr. G. Satheesh Reddy	Former Secretary, Dept. of Defence R&D and Former Chairman, DRDO (since 2012.2024)
Prof. Nishant K. T.	School of Biology, IISER TVM
Prof. M. M. Shaijumon	School of Physics, IISER TVM
Prof. Mahesh Hariharan	Registrar, Secretary, BoG, IISER TVM

Senate

Senate members for the year 2024-25

as on 31.03.2025

Prof. J. N. Moorthy	Director & Chairman, Senate, IISER TVM
Prof. Giridhar U. Kulkarni	President, JNCASR
Dr. Pamela Singla	Professor, Department of Social Work, Delhi University
Dr. Deepa Venkitesh	Professor, Department of Electrical Engineering, IIT Madras
Prof. G. Ambika	Honorary Professor, School of Physics, IISER TVM
Prof. K. George Thomas	Dean Faculty Affairs, IISER TVM (upto 02.03.2025) & School of Chemistry
Prof. Anil Shaji	Dean Faculty Affairs, IISER TVM (since 03.03.2025) & Head, SEESS and Data Science
Prof. Joy Mitra	Dean Academic Affairs, IISER TVM
Prof. Vinesh Vijayan	Associate Dean Academic Affairs, IISER TVM
Prof. Swathi R. S.	Dean R&D, IISER TVM
Prof. Utpal Manna	Dean Student Affairs, IISER TVM (upto 02.01.2025) & Head, School of Mathematics (since 03.03.2025)
Prof. Rajeev N. Kini	Dean Student Affairs, IISER TVM (since 03.01.2025)
Prof. Kana M. Sureshan	Dean I&P, IISER TVM (upto 18.03.2025) & School of Chemistry
Prof. Reji Varghese	Dean I&P, IISER TVM (since 19.03.2025)
Prof. Shaijumon M. M.	Head, School of Physics, IISER TVM (since 18.04.2024)

Senate

Senate members for the year 2024-25

as on 31.03.2025

Prof. Ajay Venugopal	Head, School of Chemistry, IISER TVM
Dr. Ravi Maruthachalam	Head, School of Biology, IISER TVM (since 19.04.2024)
Prof. M. P. Rajan	School of Mathematics, IISER TVM
Prof. Tapas Manna	School of Biology, IISER TVM
Prof. Ramesh Chandranath	School of Physics, IISER TVM
Prof. Manoj A. G. Namboothiry	School of Physics, IISER TVM
Prof. Nishant K. T.	School of Biology, IISER TVM
Prof. Sukhendu Mandal	School of Chemistry, IISER TVM
Prof. Hema Somanathan	School of Biology, IISER TVM
Prof. Devaraj P.	School of Mathematics, IISER TVM
Prof. Viji Z. Thomas	School of Mathematics, IISER TVM
Prof. Ullasa Kodandaramaiah	School of Biology, IISER TVM
Dr. Tanumoy Mondal	Chief Warden, IISER TVM
Prof. Srinivasa M. Srinivasula	Deputy Director, IISER TVM
Prof. Mahesh Hariharan	Registrar & Secretary, Senate, IISER TVM

Finance Committee

Finance Committee Members for the year 2024-25 as on 31.03.2025

Prof. Arvind A. Natu	Chairman, Finance Committee, IISER TVM
Prof. J. N. Moorthy	Director, IISER TVM
Joint Secretary (TE)	MoE, Govt. of India
Joint Secretary & Financial Advisor	MoE, Govt. of India
Col. Raja Sekhar (Retd.)	Registrar, IISER Pune (upto 11.07.2024)
Shri. Ajay Kumar Mishra	Chief Financial Officer, NTIHAC Foundation, IIT Kanpur (since 12.07.2024)
Prof. Utpal Manna	School of Mathematics, IISER TVM (upto 22.12.2024)
Prof. Ramesh Chandra Nath	School of Physics, IISER TVM (since 23.12.2024)
Prof. Mahesh Hariharan	Registrar & Secretary, Finance Committee

Building And Works Committee

Building And Works Members for the year 2024-25 as on 31.03.2025

Prof. J. N. Moorthy	Chairman & Director, IISER TVM
Prof. S. Murty Srinivasula	Deputy Director, IISER TVM
Prof. Manoj Mathur	SPA, New Delhi
Shri. Sudhir Kumar Chawla	EE, Retd. as DG (In-Situ), CPWD
Shri. Vivek Prakash Srivastava	CE, IIT Kharagpur
Prof. Mahesh Hariharan	Registrar, IISER TVM
Prof. Shaijumon M. M.	School of Physics, IISER TVM (since 14.04.2024)
Ms. Simi Seelan	Executive Engineer/ Project & Estate Officer, IISER TVM
Prof. K. M. Sureshan	Secretary & DoIP, IISER TVM (upto 18.03.2025)
Prof. Reji Varghese	Secretary & DoIP, IISER TVM (since 19.03.2025)

Research Reports



School of Biology

01



School of Chemistry

02



School of Data Science

03



School of Earth, Environmental
and Sustainability Sciences

04



School of Mathematics

05



School of Physics

06



Research Reports

01

School of Biology



SoB

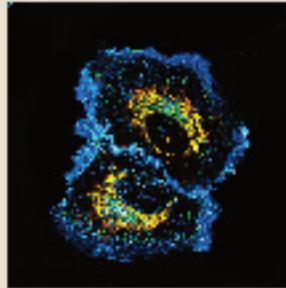


SoC

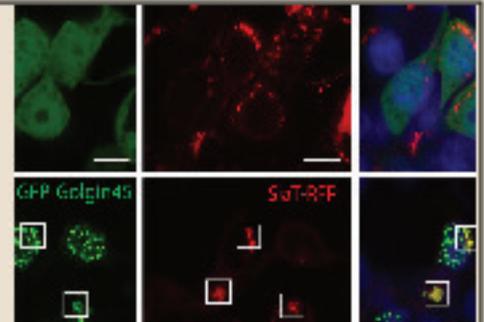


**Srinivasa Murty
Srinivasula**

Professor



Mitochondria (yellow) - Lipid (Green) contact sites in AS49 cells stably expressing RFFL-GFP (Cyan)



Golgin54-GFP and Golgi(Red) in H120293T cells stably expressing RFFL-untag

ORGANELLE HOMEOSTASIS, E3 LIGASES AND DUBS, HOST-PATHOGEN INTERACTION

CARPs : Role in Organelle Homeostasis and Stress Response

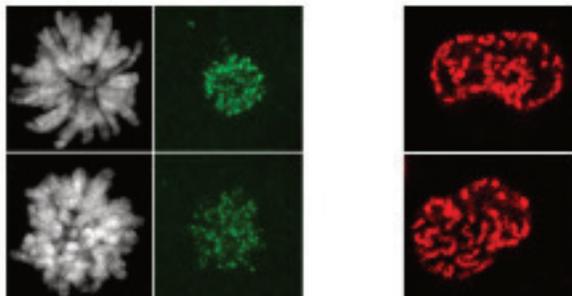
The CARPs E3 ubiquitin ligases, comprising CARP1 (also known as RNF34) and CARP2 (also known as RFFL), plays a central role in regulating organelle architecture and cellular stress responses. These ligases integrate extracellular cues like heat stress, with intracellular remodeling by targeting key structural and signaling proteins for ubiquitination.

CARP2 regulates Golgi dynamics in response to epidermal growth factor (EGF) by promoting the degradation of Golgin45, a key tethering protein, leading to Golgi dispersal. This activity requires CARP2's ligase function and endosomal localization. CARP1, a close homolog, is also under investigation for its role in maintaining Golgi structure.

Beyond the Golgi, CARP2 modulates mitochondrial homeostasis. It is recruited to damaged mitochondria, primes them for Parkin (PRKN) recruitment, and directly ubiquitinates Mitofusin 2 (MFN2). CARP2 knockout results in enlarged, hyperfused mitochondria, while re-expression restores normal morphology and rescues defects caused by Charcot-Marie-Tooth disease-associated MFN2 mutations.

Emerging data also suggest that CARPs may regulate heat shock proteins (HSPs), linking them to proteostasis during stress.

Together, these findings highlight CARPs as versatile regulators of inter-organelle communication and stress adaptation, offering novel insights into the spatial coordination of organelle function in health and diseases.



Left image: Chromosome organization in human cells upon depletion (bottom) of microtubule protein CKAP5 (Gln P-4); Right image: Chromosome organization in M-Cherry H2B-expressing human cell upon depletion (bottom) of ubiquitin ligase FBW7

CHROMOSOME SEGREGATION, MICROTUBULE AND CENTROSOME REGULATION

Chromosome mis-segregation causes aneuploidy and tumorigenesis. Defects of both microtubule interaction with the centromeric DNA-assembled kinetochore and duplication of centrosomes/centrioles substantially contribute to chromosome segregation defects.

Over the past fifteen years or so, research work of Tapas Manna has identified a number of novel regulators and their molecular mechanisms in those processes in human cells. His work has unravelled key roles of specific microtubule plus end associated proteins in the stabilization of kinetochore attachment with the microtubules and controlling chromosomal instability and aneuploidy in human cells. His work also has identified novel functions of proteins that regulate duplication of centrosomes in cells essential for spindle microtubule formation and chromosome segregation during mitotic cell division. His work has also identified E3 ubiquitin ligase that prevents mitotic checkpoint errors and controls centriole/centrosome amplification, factors that promote cancer progression.



Tapas K. Manna

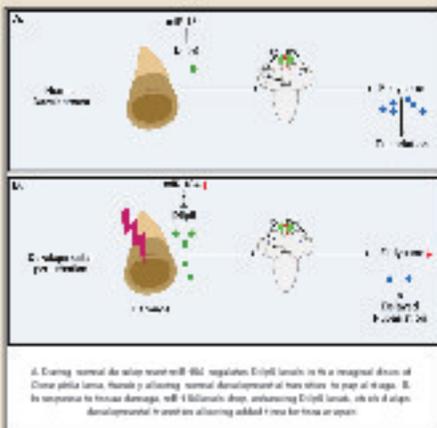
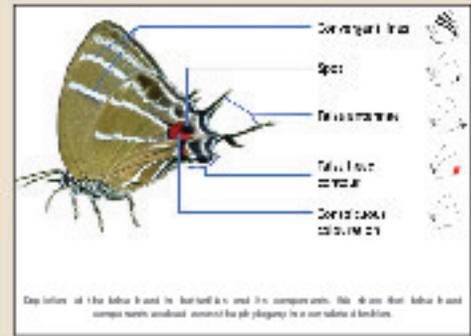
Professor



**Ullasa
Kodandaramaiah**
Professor

EVOLUTIONARY ECOLOGY

- 1) We have shown that pupal colour plasticity in insects is not only an adaptation against predation, but also against desiccation stress
- 2) We show, for the first time, that seasonal win pattern polyphenism in butterflies is regulated by Relative Humidity of the air. Relative Humidity not only directly influences eyespot size, but also indirectly, through its effect on host plant quality
- 3) We show that under some conditions, prey that match their immediate backgrounds have poorer survival compared to prey that match the background colour pattern of nearby patches
- 4) We show strong divergences in host use in *Catopsilia pomona*. Populations separated by as little as 100 km utilize different sets of host plants



DEVELOPMENTAL BIOLOGY AND GENETICS

Our research aims to study how living organisms adapt to changes in their internal and external environments. Our major focus is to understand how changes in the environment influence the timing and coordination of development and physiological processes.

During normal development of an organism, growth must be coordinated with developmental timing. While it is known that both internal signals and environmental cues help in regulating developmental timing, a complete understanding is still missing. One important way organisms control development is through the small non-coding RNAs called microRNAs (miRNAs), which

help fine-tune gene expression. Using *Drosophila* as our model, we investigated the role of miRNAs that regulate developmental timing. Our study showed that microRNA miR-184 plays a key role in timing larval metamorphosis in to pupae by acting in the imaginal disc tissues. We found that miR-184 aids in controlling the levels of Dilp8 (Drosophila insulin-like peptide 8), a signaling molecule which is crucial for maintaining proper growth and developmental timing. Under normal conditions, miR-184 keeps Dilp8 levels under control, allowing development to proceed normally. However, when tissue damage occurs during development, miR-184 levels drop, which in turn increase Dilp8 levels, delaying further development to allow time for repair. These findings reveal a novel mechanism by which miR-184 ensures timely development and also contributes to the organism's ability to respond to tissue damage.

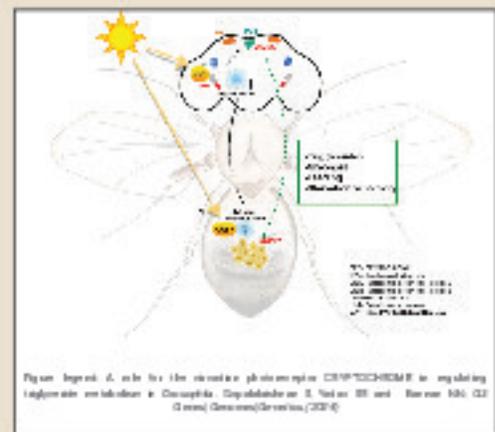
Broadly, our research seeks to understand how organisms maintain developmental balance even when faced with genetic or environmental stress. By studying processes that are evolutionarily conserved in humans, our research contributes to the understanding of developmental processes and related disorders—ultimately contributing to improve human health and well-being.



Jishy Varghese
Associate Professor

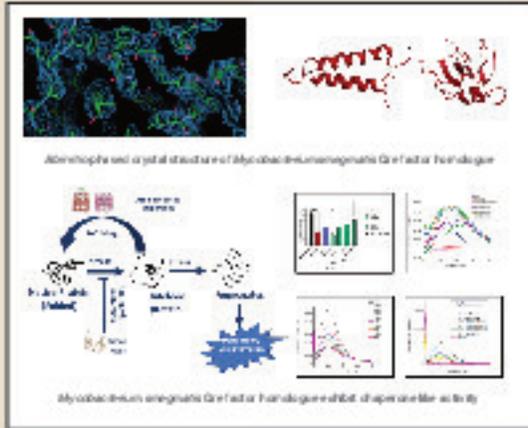
CHRONOBIOLOGY

Dr. Nisha N Kannan's group is interested in understanding the circadian clock at the genetic, neuronal network level and how the circadian clock rhythmically regulates the behavior, physiology and metabolism of an organism. Recent studies were focused on deep brain circadian photoreceptor CRYPTOCHROME (CRY) and to probe into a possible unconventional role for the primary circadian photoreceptor CRY in metabolism. We observed that the *cry²* flies exhibited increased starvation resistance and triglyceride levels compared with the control



Nisha N. Kannan
Associate Professor

flies. We also observed that *cry²* flies had significantly increased food intake, glycogen concentrations, and lifespan. In addition, cryptochrome seemed to affect triglyceride levels in adult flies in response to calorie-restricted and high-fat diets. These results suggest a role for the circadian photoreceptor CRY in triglyceride metabolism in *Drosophila*.



TRANSCRIPTION REGULATION, DNA DAMAGE AND REPAIR, ANTI MICROBIAL RESISTANCE (AMR), STRUCTURAL MOLECULAR BIOLOGY, SINGLE PARTICLE CRYOEM AND PROTEIN CRYSTALLOGRAPHY

Rise in Anti-Microbial Resistance (AMR) of *Mycobacterium tuberculosis* (*Mtb*), the causative agent of TB against first-line drugs, Rifampicin and Isoniazid, has led to complications in tackling AMR *Mtb*. Rifampicin targets RNA polymerase (RNAP), making it a highly druggable



Ramanathan Natesh
Associate Professor

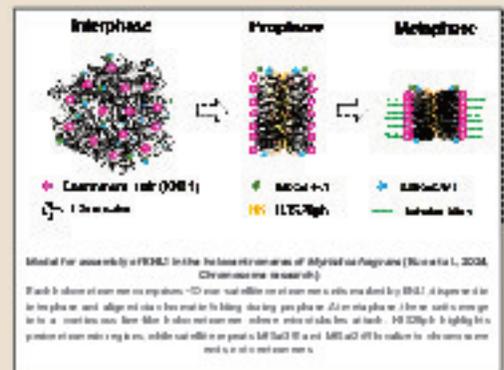
target. Gre factors are a group of regulatory proteins that bind to the secondary channel of RNAP to promote the rescue and reactivation of the stalled elongation complex by enhancing the RNAP transcript cleavage activity. The putative *Mycobacterium smegmatis* (*Ms*) Gre factor homologue (*Gfh*) (*MsGfh*) competes with its Gre factor, to bind to the RNAP secondary channel. However, in spite of having a high sequence identity with mycobacterial Gre factors (*MtbGre/MsGre*), *MsGfh* does not show transcript cleavage activity. We have expressed, purified and crystallised *MsGfh* and its selenomethionine (*SeMet*) derivative *MsGfh^{SeMet}*. *MsGfh^{SeMet}* crystals belonging to *P3₂21* space group with *a* = 82.9 Å, *b* = 82.9 Å, *c* = 107.1 Å and $\gamma = 120^\circ$, *Z* = 12 could diffract to better than 29 Å resolution. The structure was solved by *ab initio* SAD phasing using a *SeMet* Single wavelength Anomalous Data (SAD) collected at ESRF MASSIF-1 Synchrotron beamline. *MsGfh* does not inhibit transcription, although has structural similarity to *TthGfh*, a RNAP secondary channel inhibitor. *MtbGfh* on the other hand was shown to inhibit RNAP. It has already been reported that *MsGfh* binds to RNAP. Therefore, cryoEM studies of the complex is in progress, to decipher the function of *MsGfh*, if any. In addition, we have shown that the presence of FKBP fold renders *MsGre* to exhibit a moonlighting chaperone-like activity. We have shown that *MsGfh* also exhibits a similar chaperone function. Our study focuses on structural and functional characterization of *MsGfh* using various biophysical and biochemical techniques such as cryoEM, Protein Crystallography, CD, DLS/MALS, activity assays, in order to understand the significance of *Gre/Gfh* and their connection to AMR.



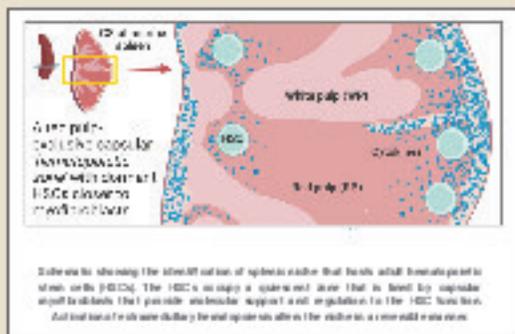
Ravi Maruthachalam
Associate Professor

CENTROMERES, KINETOCHORES, HAPLOIDS, NUTMEG, GENOME STABILITY, ARABIDOPSIS

Holocentric species are characterized by the presence of centromeric activity distributed along the entire length of their chromosomes. In the dioecious species *Myristica fragrans*, which has relatively small chromosomes, we confirmed holocentricity through the chromosome-wide localization of the centromere-specific protein KNL1, α -tubulin fibers, and the histone modification H3S28ph, which is dependent on the cell cycle. Each holocentromere appears to consist on average, of ten centromeric units. However, none of the high-copy satellite repeats identified and analyzed via *in situ* hybridization were centromere-specific. Additionally, there were no sex-specific major repeats observed in the high-copy repeat profiles of male or female plants, nor was there any significant difference in genome size between the sexes. These findings suggest that *M. fragrans* likely



does not possess heteromorphic sex chromosomes. This work was done in collaboration with Andreas Houben group at IPK, Gatersleben, Germany and published in the Chromosome Research (Kuo et al., 2024).



STEM CELLS AND DEVELOPMENTAL BIOLOGY

Hematopoietic stem cells (HSCs) maintain a lifetime supply of all blood cells, a function that is regulated by several physico-chemical and molecular factors. Bone marrow (BM) is the primary source of HSC activity. Loss of BM function leads to the activation of facultative hematopoietic niches such as the spleen, which itself hosts a significant number of HSCs reported to be equivalent to the ones studied in the BM. However, molecular factors that

support splenic HSCs at steady state and the cellular factors that constitute their niche have remained unknown. In our recent study, we provide the first model of splenic niche that renders support to HSCs during steady state. Extensive spatial analysis demonstrated that all splenic HSCs were restricted to $\approx 200\mu\text{m}$ distance from the outer capsule. Within this 'hematopoietic zone', the distribution of HSCs relative to the capsular myofibroblasts was determined by their proliferation state. Global proteome analysis showed that the secretory extracellular proteins along with key hematopoietic factors were enriched in the capsular tissue of the spleen. Importantly, proteome based interaction analysis showed a myofibroblasts-biased association of splenic hematopoietic population. Disruption in molecular interaction with niche or induction of proliferation resulted in spatial redistribution of HSCs in a reorganized hematopoietic niche. This study is expected to be an outset for an array of studies to understand splenic hematopoiesis.

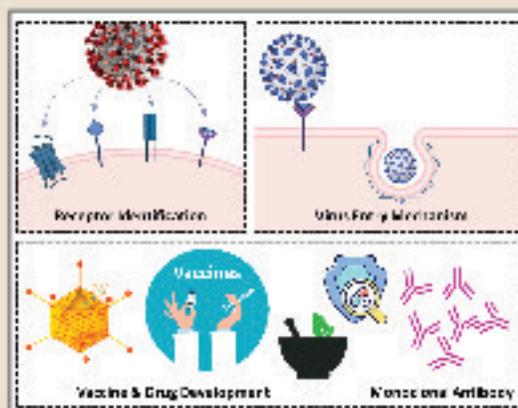
Satish Khurana
Associate Professor



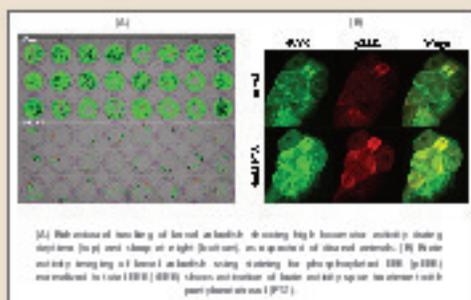
V. Stalin Raj
Associate Professor

VIRUS- RECEPTOR INTERACTION, PSEUDOTYPED VIRUSES, ADENOVIRAL VECTOR AND NANOPARTICLE VACCINE, MONOCLONAL ANTIBODY PRODUCTION

Our laboratory is dedicated to decipher the fundamental mechanisms of viral entry and host cell interactions in coronaviruses, adenoviruses and flaviviruses. To facilitate the study of these viruses in a BioSafety Level-2 (BSL-2) setting, we have successfully developed pseudotyped viruses. These tools have enabled us to safely understand the entry mechanism,



evaluate the neutralizing antibodies and screen potential entry inhibitors. We are also engaged in vaccine development, emphasis on self-assembling nanoparticle-based vaccine and adenovirus vector platforms focused at targeting emerging and re-emerging infectious threats. In parallel, we are expanding our research on influenza by developing immunological assays and monoclonal antibodies to support the evaluation of vaccine candidates.



MOLECULAR NEURODEVELOPMENTAL BIOLOGY (A) Understanding the neural and molecular basis of complex behaviours:

We have established assays to study stress-responsive behaviour and social behaviour in adult zebrafish and are currently working on developing new behavioural assays to study learning, memory and conditioning in zebrafish. We have also established assays to study stress response, circadian behaviour and habituation learning in larval zebrafish. We are

working on understanding the role of innate immune factors in the development of the brain and in the determination of behaviour.

(B) Elucidating the contribution of chromatin factors to epileptogenesis:



Amrutha Swaminathan
Assistant Professor

Since the contribution of chromatin factors to epileptogenesis is not well understood, we used data from patient case reports in order to identify 8 factors with the strongest association with epilepsy. We have generated mutants of 3 of these using CRISPR-Cas9 technologies and characterized the nature of the mutation. We are currently working on understanding possible neurodevelopmental defects in these mutants by analyzing behaviour, neuroanatomy and brain activity mapping.



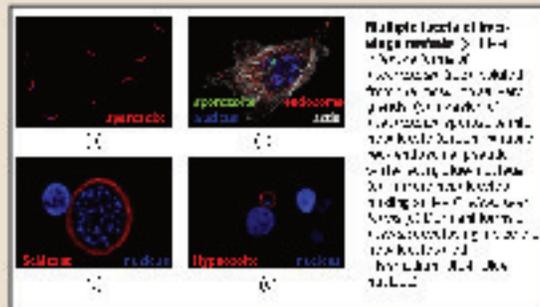
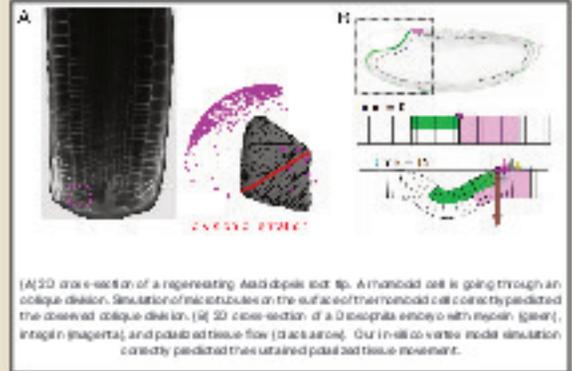
Bandan Chakraborty
Assistant Professor

THEORETICAL AND COMPUTATIONAL BIOLOGY

Theoretical and Computational Biology is the latest addition to the School of Biology at IISER Thiruvananthapuram, which aims at interdisciplinary research in biology by bringing biologists, physicists, and mathematicians together. We develop computational models to predict the outcome of a biological process, which guides new experiments to challenge the predictions and offers an optimized model-experiment framework for biological discoveries.

How tissues recover their shape after injury is a fundamental question in developmental biology. In plants, this process is particularly intriguing, as rigid cell walls prevent cell migration. To investigate how form is restored without movement, we used *Arabidopsis* root tip resection as a model. Following injury,

we observed a shift in cell shape from elongated cubes to rhomboids. These shape changes were closely tied to division orientation—cube-shaped cells divided horizontally, while rhomboid cells divided obliquely. We hypothesize that these coordinated changes help re-establish the U-shaped structure of the root tip. To test this, we developed a computational model that integrates cell geometry, mechanics, and biochemical signaling. Simulations showed that geometry alone could predict division orientation, and reducing microtubule stability at cell edges improved the accuracy of oblique division predictions. Experimental results confirmed these findings, emphasizing the role of geometry in guiding root tip regeneration. In parallel, we explored how cells in animal tissue coordinate large-scale movement during morphogenesis. In *Drosophila*, Myosin II accumulates in curved regions, triggering axis elongation through mechanical feedback. Sustaining this polarized tissue flow requires integrin-based adhesion and precise coordination between mechanical forces and signaling pathways. Using a dynamic vertex model, we found that feedback between attachment and detachment forces enhances the robustness of tissue flow and accelerates the flow as Myosin II activity increases. However, effective enhanced tissue flow only occurs within a narrow range of force values. We are now exploring alternative mechanisms to maintain stable, directional tissue flow across a broader range of force values, offering new insights into the robustness of sustained polarized tissue flow.



BIOLOGY OF PARASITIC INFECTIONS, HOST-TARGETED INTERVENTIONS

Our research focuses on understanding how the intracellular parasites such as *Plasmodium* and *Toxoplasma* rewires the complex host signalling network for its survival. Key to any intracellular survival strategy involves, deriving nutrients from the host while parallelly evading innate sensing. Understanding the nutrient trafficking mechanism

at the host-parasite interface would significantly serve as to better the understand the molecular determinants of the infection and also the factors driving the triggers of active and dormant forms. Central focus of our lab is to understand the mechanisms by which the intracellular liver-stage parasite 1) evade host innate sensing, 2) acquire nutrients from the host cells.



Kamalakannan Vijayan
Assistant Professor



Manish Kumar
Assistant Professor

EPIGENETICS AND INFECTIOUS DISEASES

My research focuses on understanding how environmental cues shape epigenetic regulation in eukaryotic cells, particularly how external signals influence gene expression through dynamic epigenetic modifications. By leveraging mass spectrometry-based proteomics, protein-protein interaction mapping, post-translational modification (PTM) analysis, transcriptomics, and proteogenomics, our work aims to uncover core regulatory mechanisms that can inform the development of novel diagnostics and therapeutic interventions for infectious diseases and other human health disorders.

During my postdoctoral research at the Harvard T.H. Chan School of Public Health, I identified lysine lactylation as a novel epigenetic modification in *Plasmodium falciparum*, the causative agent of severe malaria. My findings demonstrated that protein lactylation levels respond dynamically to extracellular lactate concentrations and influence the expression of key parasite genes. This work highlighted a direct link between host metabolic status—particularly in the context of lactic acidosis—and the parasite’s epigenetic and transcriptional landscape.

In our lab, we adopt a systems biology framework to dissect how metabolic intermediates regulate cellular signaling pathways, modulate chromatin organization, and drive gene expression programs. Through the integration of high-resolution mass spectrometry, functional genomics, and molecular biology, we aim to construct comprehensive regulatory maps that illuminate how metabolic and epigenetic networks contribute to disease progression.

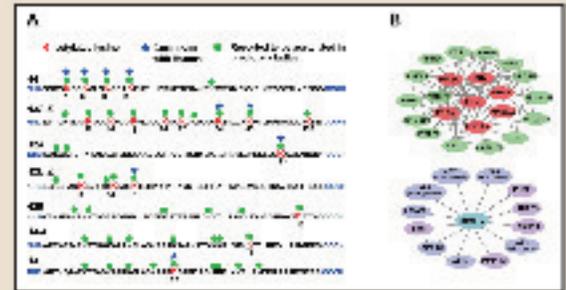


Figure 6. Identification of lactylation in *Plasmodium* parasites. A: A comprehensive map of lysine lactylation in *P. falciparum* parasites highlights lysine residues identified as lactylated in red. B: The predicted protein-protein interaction network among the lactylated proteins revealed distinct clusters of factors and histone-interacting proteins, alongside an interaction network involving HDAC and its associated AP2 transcription factor.



GENOME EDITING, GENETICS AND GENOMICS

Genomics: Genome of a Vechur calf was sequenced on both short-read illumina and long-read nanopore platforms. Hybrid de novo assembly approach was deployed to obtain an average contigs length of 1.97 Mbp and N50 of 4.94 Mbp. Using a short-read genome sequence of the corresponding sire and dam, a haplotype-resolved genome was also assembled. We have also assembled a

haplotype-resolved genome of crossbreed cattle, Sunandhini to understand the genome composition of the well-established dairy breed of Kerala. Meanwhile, we are also solving the genomes of agriculturally and ecologically important organisms including Oyster.

Genome-wide CRISPR Screens: To understand basic biological processes like response to DNA damage, cytoskeleton dynamics, genome-wide CRISPR screens has been carried.

Genome-editing of agriculturally and/or ecologically important organisms: we have initiated in vitro fertilisation, embryo culture and genome editing in bovine to introduce variants imparting characteristics like improved disease resistance using genome editing technologies



N. Sadananda Singh
Assistant Professor



Nishana Mayilaadumveettil
Assistant Professor

CHROMATIN ORGANIZATION

My team explores the multiple ways in which nuclear organization and chromosomal interactions are important for regulation of cellular processes and how their perturbations can lead to diseases. The current projects of the lab include

- Defining how alteration in chromatin organization proteins result in tumorigenesis.
- Deciphering the molecular pathways underlying cohesinopathy in neurological disorders.
- Understanding the role of non-B DNA structures in genome organization.
- Uncovering the role of physical proximity in chromosomal translocations.
- Delineating the differences in the action of cohesin during mitosis and meiosis.

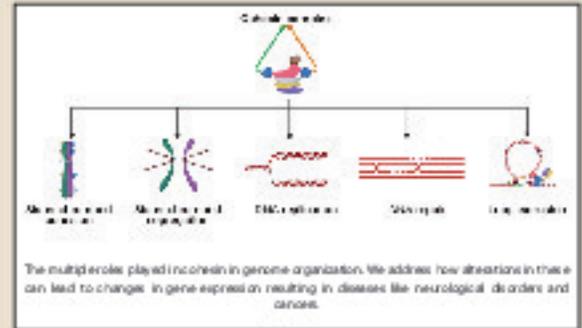


Figure 1. Desiccation of starch granules in legume seeds. In desiccated seeds, starch granules are highly resistant to digestion. When seeds are rehydrated, starch granules are highly digestible and release glucose. When seeds are rehydrated, starch granules are highly digestible and release glucose. When seeds are rehydrated, starch granules are highly digestible and release glucose.

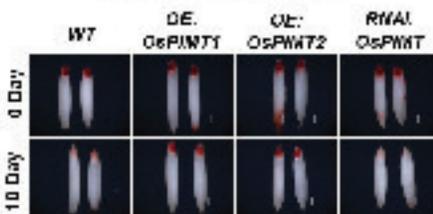


Figure 2. Suppression of OsPMT in rice and wheat seeds. Desiccation tolerance is an important trait for legume seeds. Suppression of OsPMT results in increased seed desiccation tolerance in rice and wheat. In rice, OsPMT1 and OsPMT2 are essential for seed desiccation tolerance. In wheat, OsPMT1 and OsPMT2 are essential for seed desiccation tolerance. In rice, OsPMT1 and OsPMT2 are essential for seed desiccation tolerance. In wheat, OsPMT1 and OsPMT2 are essential for seed desiccation tolerance.

PLANT MOLECULAR BIOLOGY

Beyond their crucial role in agriculture and human nutrition, seeds possess unique biological capabilities, including the remarkable ability to store starch and survive in a desiccated (dry) state for prolonged periods. Starch granules in legumes are distinct from cereal starches in that they have a distinctive morphology and relatively high resistance to digestion, which provides health benefits (Figure 1). However, the mechanisms by which they form is poorly understood. Therefore, our research focuses on identifying and characterizing the genes and proteins involved in starch granule formation, and assessing their effects on granule size, shape, and number by leveraging the natural variation present in legumes. We also aim to investigate the molecular mechanisms especially protein repair enzymes (PREs) regulating seed survivability and geminability in the desiccated state in legume crops (Figure 2). To address these research questions, we employ cutting-edge tools and techniques spanning

plant molecular biology, biochemistry, plant transformation and functional genomics.



Nitin Uttam Kamble
Assistant Professor

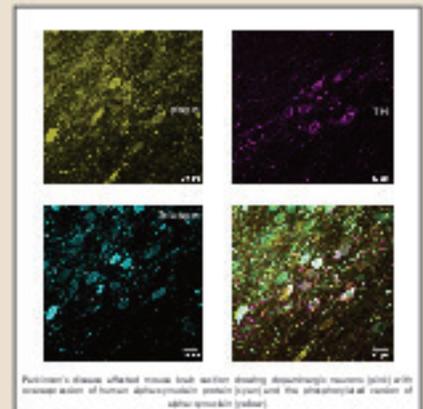


Poonam Thakur
Assistant Professor

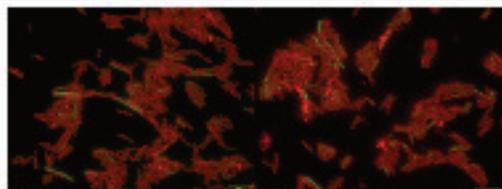
NEURODEGENERATION, PROTEIN AGGREGATION, DISEASE MODELS

Major research projects in the lab focus on

- Developing better mouse models of PD and utilizing them to decipher the disease mechanisms
- Developing therapeutics and neuroprotective agents for PD
- Understand the impact of metabolic disturbances, such as Diabetes, on PD
- Impact of cell biological processes such as lipid alterations, post-translational modifications, neuroinflammation on PD progression



Parkinson's disease affected mouse brain sections showing dopaminergic neurons (TH) with increased levels of human alpha-synuclein protein (p-Syn) and the phosphorylation of alpha-synuclein (p-Syn).



Replication-transcription collisions (RTCs) induce DNA damage.

Spontaneous DNA damage (visualized by scabination of DNA break repair protein RecA tagged with GFP) after induction of RTCs causes increased DNA breaks, evident by enhanced recruitment of RecA-GFP foci (green) leading to genomic instability in bacterial cells.

REPLICATION-TRANSCRIPTION COLLISIONS (RTCs) INDUCE DNA DAMAGE.

The overarching aim of work is elucidating the origins and mechanisms of spontaneous mutations in bacteria. We focus on the inevitable and harmful outcomes of collisions between the machinery of DNA replication and transcription. We are interested in understanding how replication-transcription collisions (RTCs) cause replication stress.



Sabari Sankar Thirupathy
Assistant Professor

interrupt transcription, induce DNA damage and mutagenesis. We address these combining classical genetics, molecular biology, genomics and bioinformatics approaches.

We are building a mechanistic model wherein we show that coordination between replication and transcription factors plays a crucial role in minimizing deleterious mutations and maintaining genomic stability. In the absence of the collision-mitigating factors, cells suffer from severe replication stress and high rate of mutations. Further, we investigate the consequences of RTCs on genome organization and evolution. We recently identified a fundamental link between the nature of DNA replication and the biased gene distribution on the DNA strands, highlighting the greater impact of replication-transcription collisions. Besides, we probe into how RTCs may accelerate drug resistance in bacteria. Thus, understanding RTCs will give insights into understanding bacterial evolution.



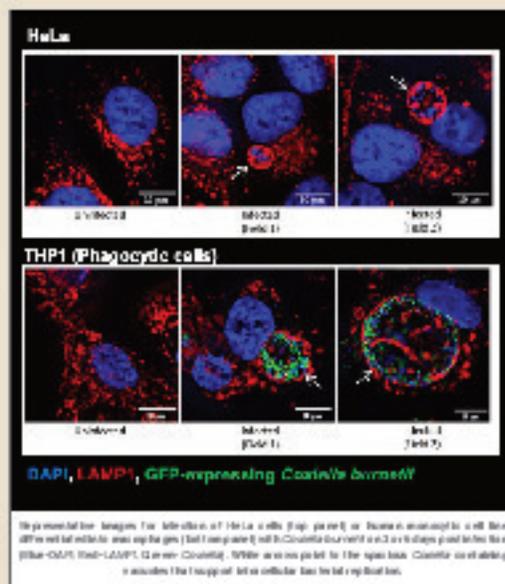
Sandhya Ganesan
Assistant Professor

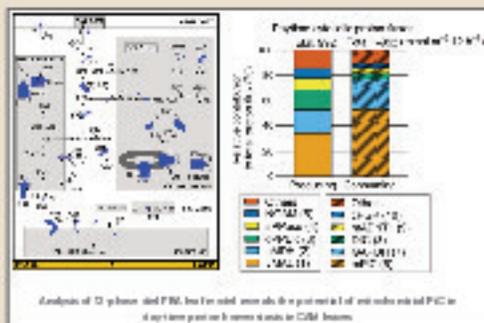
HOST-PATHOGEN INTERACTION

Our research broadly focuses on host-pathogen interaction at cellular and molecular level during infection. Many bacterial pathogens have evolved to replicate robustly inside intracellular organelles of host cells and secrete effector proteins to disarm immune surveillance (Examples: *Coxiella*, *Legionella*, *Salmonella*, *Mycobacteria*). We aim to use these bacterial pathogens as model systems to identify common and distinct themes in host defense and understand pathways and mechanisms underlying vesicle traffic, cell-intrinsic defense, immune dysregulation that drive pathogenesis. Ongoing research directions and highlights include-

implications

- B. Understanding the role of secreted bacterial proteins in manipulation of host cell biological processes
- C. Identifying the role of vesicle traffic-related proteins in cell-autonomous response against intracellular bacterial pathogens
- D. Establishing assays to identify/repurpose antimicrobials for effective control of bacterial pathogens





COMPUTATIONAL SYSTEMS BIOLOGY, PLANT METABOLISM, PARASITE METABOLISM

During the previous academic year, researchers in my team explored

- (a) the role of citrate and other organic acids in CAM leaf metabolism
- (b) multiple machine learning and transcriptomics data driven approach to predict synthetic lethality in humans
- (c) metabolism in *Plasmodium vivax* and human hepatocytes
- (d) metabolism in M1 and M2 macrophages

(e) integration of AI features into the TrypanoCyo database

The team has also developed two databases related to the work

- (a) TrypanoCyo 2.0 - a pathway genome database of *Trypanosoma brucei*
- (b) SLxGO - a database of synthetic lethal gene pairs in humans

I have also been involved in two publications with international collaborators

- (a) Sprent, N., Cheung, C.Y.M., Shameer, S., Ratcliffe, R.G., Sweetlove, L.J. and Töpfer, N. 2024. "Metabolic modelling suggests distinct roles for sugars and carboxylic acids during stomatal opening and unexpected flux configurations in central carbon metabolism" *The Plant Cell*, Volume 37, Issue 1, January 2025, kcae252. <https://doi.org/10.1093/plcel/kcae252>
- (b) Daems, S., Shameer, S., Ceusters, N., Sweetlove, L.J., and Ceusters, J. 2024. "Metabolic Modelling Identifies Mitochondrial Pi Uptake and Pyruvate Efflux as Key Aspects of Daytime Metabolism and Proton Homeostasis in Crassulacean Acid Metabolism Leaves." *New Phytologist* 244 (1): 159–75. <https://doi.org/10.1111/nph.20032>



Sanu Shameer
Assistant Professor



Vijay Jayaraman
Assistant Professor

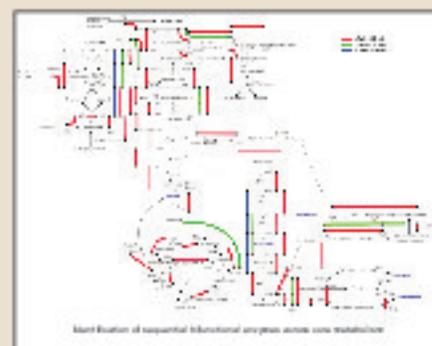
EVOLUTIONARY AND SYSTEMS BIOCHEMISTRY

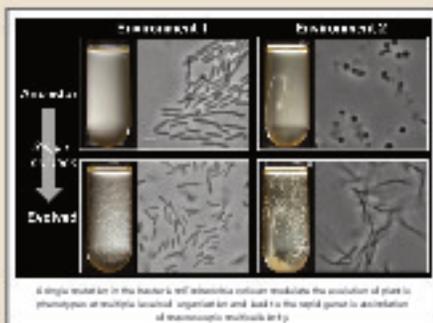
The "Evolutionary and Systems Biochemistry lab (EvoSysBio lab)" is interested in the evolutionary origins and the "logic" of post-translational regulatory strategies of enzymes like small molecule-based allosteric regulation and regulation by metabolon/anti-metabolon formation.

The following are the major themes of research in the lab

- Understanding design principles involved in bifunctional antagonistic enzymes
- Evolution and regulation of metabolon/anti-metabolon
- Studying enzymes from microbial pathogens with 4Fe-4S-3Cys type clusters in their active sites
- Design principles in the regulation of enzymes involved in ROS homeostasis

In our approach to address questions in these areas, our lab employs molecular phylogenetics, directed evolution, biochemical and biophysical tools, bioinformatics and high-throughput bacterial growth measurements. We have active collaborations for mathematical modelling and microfluidics-based approaches.





EVOLUTIONARY BIOLOGY

I have wide-ranging interests in the evolution of asexual systems at both micro- and macro-evolutionary scales. Currently, my lab is pursuing experimental studies along the following directions:

1. How does environmentally-induced multicellularity shape the ecological interactions of antagonistic bacteria?

Recently, we have demonstrated that stress-induced multicellularity impairs the stress-aided coexistence of antagonistic bacteria despite causing their spatial segregation.

2. The origin and evolution of multicellularity

Using evolution experiments spanning more than 500 generations, we have shown that bacterial multicellularity shows high bidirectional evolvability in the “genes as followers mode”. We have successfully evolved both obligate unicellularity and obligate macroscopic multicellularity in distinct lineages descending from the same ancestor.

3. The (regulatory) evolution of motility in multicellular bacteria to enable self-sustaining life-cycles

Multicellular mats in bacteria show a trade-off with swimming: mat formers do not swim. Hence, mats are considered evolutionary dead ends because they cannot transport themselves to new habitats. Using evolution experiments, we have broken this trade-off and successfully evolved obligately multicellular mat forming bacteria that can swim, disperse, and have a self-sustaining life-cycle.

4. The evolutionary flexibility of antiphage defense systems in bacteria

5. The origin of cell differentiation in nascently multicellular lineages

We use experimental evolution, genomics, and transcriptomics to achieve our goals. We primarily work with bacterial and bacteriophage populations, but in some cases, we also use analytical and/or individual-based models to better understand the underlying phenomena.



Yashraj Chavhan
Assistant Professor



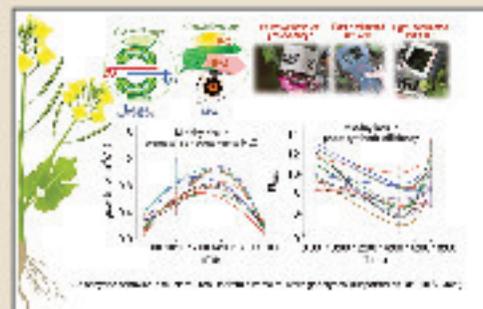
Anirban Guha
Ramalingaswami Fellow

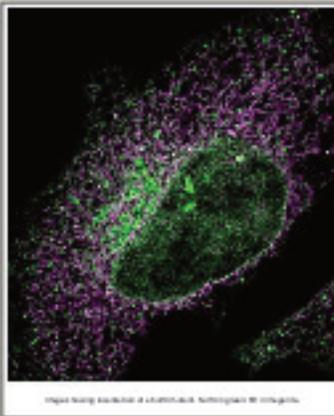
PLANT ECOPHYSIOLOGY & CLIMATE CHANGE BIOLOGY

At present, our lab has three ongoing projects. The first project, funded by [DBT-RLS grant](#), focuses on identifying hydraulic traits and trait complexities in industrial crops (sorghum and mustard) for better yield and climate resilience. The second project funded by [ANRF-CRG](#), focuses on understanding the comparative photobiology of co-existing mangrove species in both planted and pristine coastal habitats of Kerala. The third project, funded by the international [TreeFund Grant](#), focuses on identifying best health diagnostic markers for urban mangrove trees.

We have recently received an equipment grant from the [Center for International Forestry Research and World Agroforestry \(CIFOR-ICRAF\)](#) to leverage our ongoing research on mangrove ecophysiology and climate change response. We ask empirical questions addressing whole-plant physiology and stress resilience in natural and managed ecosystems and controlled growth conditions.

We integrate ecophysiological, anatomical, and real-time plant monitoring approaches. Our research has implications for genotype improvement, agroecosystem productivity, carbon sequestration, and management and sustainability of coastal wetlands. Please visit our lab webpages for more details of lab activities <https://www.iiserdm.ac.in/faculty/guhaanirban> : WWW.GUHAANIRBAN.WEEBLY.COM





LYSOSOMAL BIOLOGY

Lysosomes are the degradative organelles crucial for the normal functioning of cells. Lysosomal degradative function is carried out by enzyme hydrolases and their cofactors. Defects in lysosomal degradation cause an abnormal accumulation of undigested macromolecules leading to the disruption of cellular functions. Our lab research is focused on addressing how lysosomal degradative capacity is maintained in cells.

Lysosomal proteins synthesized in ER are transported to lysosomes via Golgi compartment. We are studying a lysosomal cargo Prosaposin transported by an ER sorting receptor Surf4. We hypothesized that lysosomes levels of Prosaposin are sustained by receptor-mediated ER exit rates. We are testing if ER exit could be determined by cargo capture, and vesicle loading. Using the Surf4-Prosaposin model, we studied the parameters of receptor-cargo interactions that maintain ER exit rates. We identified a Surf4 mutant that showed an

increase in the number of ER exit sites. This indicates an increased affinity of receptor with cargo that promoted the localized receptor concentration at ER exit sites. The accumulation of cargo at ER exit sites mediates further loading into COPII vesicles and cargo exit. Thus, modulation of ER exit rates helps maintain lysosomal levels of proteins required for lysosomal degradative function.



Swathi Devireddy

*DBT-Ramalingaswami
Faculty Fellow*



Karthik Chandiran

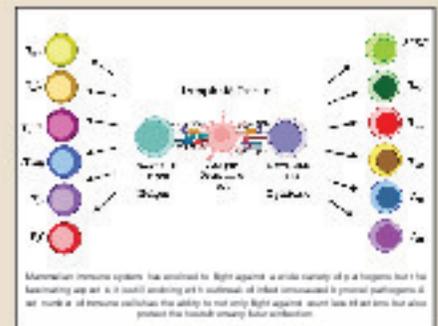
Faculty Fellow

IMMUNOLOGY, T CELL DIFFERENTIATION

The fascination towards the whole adaptive nature of the immune response and its ability to orchestrate a specific response to a particular infection is the major reason for pursuing the current line of research. In particular, our immune system has been armed with only a limited number of immune cells and still it has been capable of generating appropriate response to control the immediate infection and protect the hosts from future infection. Our lab is studying how one naive T cell can differentiate into an effector cell to fight an infection and a memory cell to protect from future infections.

An infection triggers a wide variety of immune cells to the site of infection, mainly the innate immune cells during the early phase of infection. These cells secrete a variety of proteins called cytokines and chemokines to alert and recruit the adaptive immune cells to the site of infection where they get programmed to provide a specific targeted immune response. Eventually, most of these adaptive

immune cells undergo apoptotic cell death while some remain in the host to protect from future infections. After decades of research, we still do not know completely about activation and differentiation of T cells. While the advent of Next Generation Sequencing Technologies has led to unraveling of interesting details, it has also raised more questions about how the entire differentiation process works. Currently we are investigating about 1) the cytokines and 2) evolutionarily conserved signaling pathways involved in the differentiation process.



Research Reports

02

School of Chemistry



SoB



SoDS



J. N. Moorthy
Professor & Director

ORGANIC PHOTOCHEMISTRY SUPRAMOLECULAR CHEMISTRY ORGANIC MATERIALS

In continuation of the ongoing research from Prof. J. N. Moorthy's laboratory on bottom-up development of functional organic materials by de novo molecular design, the laboratory has shown that fluorescent layered metal-organic frameworks, i.e., MOFs, can be accessed systematically. By exploiting the ultrasonication-induced liquid-phase exfoliation (UILPE) technique, the group has demonstrated access to

fluorescent metal-organic nanosheets (MONs). The latter are shown to be applicable for sensing applications, e.g., selective sensing of the $H_2PO_4^-$ anion. By rationally designing electron-rich bis-pyridine tetracarboxylic acid linker, the group has shown that the layered MOFs accessed by metalation can be readily subjected to exfoliation by mechanical grinding to yield 2D MONs. By a systematic investigation, the capture of iodine by MONs has been demonstrated for the first time. Indeed, the laboratory has shown that the extent of iodine capture can be correlated with the magnitude of exfoliation, which is essentially determined by the duration of grinding. The observed notable iodine capture is attributed to i) a large increase in surface area with exfoliation, ii) ability of the electron-rich p-conjugated organic linker to form a charge-transfer complex with iodine, and iii) the presence of free and uncoordinated carboxylic acids of the linker that reinforce binding of iodine through charge transfer.

Photochromism is a phenomenon involving the reversible interconversion of species between two of its isomeric forms with distinct absorption properties. The group has exploited photochromism associated with diarylbenzopyrans and diarylnaphthopyrans to demonstrate a variety of phenomena such as toroidal conjugation, phane effect, mesomeric effects, etc. In continuation of these studies, it was shown that the contentious issue of homoconjugation can be tested and validated. Indeed, highly conjugated diarylbenzopyrans with heterocyclic moieties serve not only as photochromic systems, but also as useful systems that exhibit acidochromism.

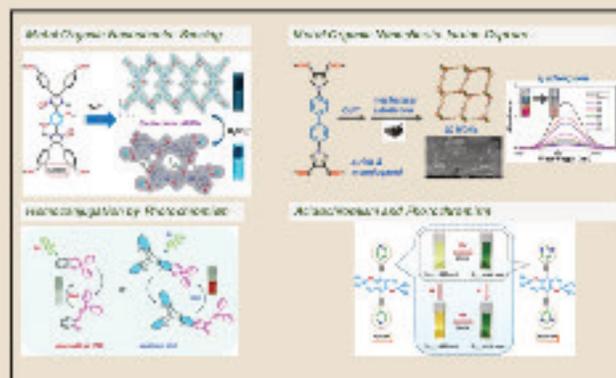
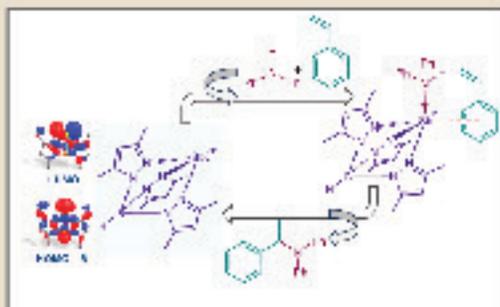


Photo: Shyam M, Alumnus Batch '19, IISERTVM



MAIN GROUP CHEMISTRY

The research work is focussed in the topical area of reactive main group chemistry - structural aspects of Lewis acids and their implications in homogeneous catalysis. Main group compounds find applications as Lewis acids and bases in synthetic chemistry and typically activate one type of substrate at their binding sites. However, cationic low-oxidation-state p-block compounds possess unique electronic properties such as low-energy LUMOs and a stereochemically active lone pair. These properties raise

the question of whether such low-coordinate p-block compounds could interact with two or more different substrates to promote an intermolecular reaction under mild conditions that are otherwise thermodynamically less feasible. We aimed to address this question by synthesizing an antimony (Sb) compound in the +III oxidation state and exploring its reactivity. The large empty coordination sphere in $[\text{TpMe}_2\text{Sb}][\text{B}(\text{C}_6\text{F}_5)_4]_2$ offers multiple substrates to bind to the antimony centre, leading to the study of intermolecular hydroamination involving styrene derivatives with diphenylamine and 9H-carbazole as proof of concept. These investigations unfold the prospects of the use of LUMO and the $5s$ lone pair on antimony in chemical transformations. The simultaneous interaction of HNPt2 and styrene with the Sb centre prior to hydroamination is an example of the proximity effect. Although this concept has been explored in enzyme catalysis, our proof-of-concept demonstration is unique among reactive main group compounds. The amphiphilic binding of substrates prior to reactions could provide various opportunities in homogeneous catalysis, and this proximity-effect-driven catalysis offers a new research direction for main group Lewis acids. Extension of the amphiphilic binding concept to the design of main group compounds and exploration of their reactivity could lead to catalytic pathways to increase reaction selectivity and address challenges in sustainable synthesis.

Ajay Venugopal
Professor



K. George Thomas
Professor

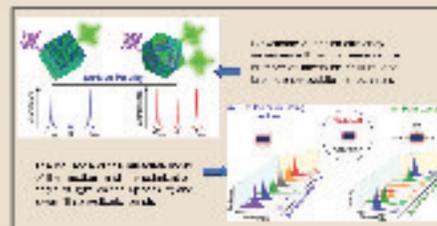
LIGHT-MATTER INTERACTION AT NANOSCALE

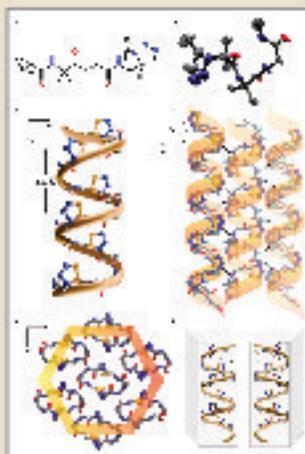
The group has investigated exciton delocalization in various semiconductor nanocrystals by adopting single-particle photoluminescence spectroscopy (*J. Phys. Chem. C* 128, 4373-4382 (2024); *J. Am. Chem. Soc.* 146, 20300-20311 (2024)). Based on these studies, it has been established that biexcitonic quantum efficiency increases with the increase in the number of facets on cesium lead bromide perovskite nanocrystals, progressing from cube to rhombic dodecahedron to rhombicuboctahedron nanostructures (*Nano Lett.* 24, 10434-10442 (2024)). In CdSe-CdS nanocrystals with tadpole morphology, tuning the CdSe core size and CdS shell length revealed that smaller cores and extended shells promote electron delocalization due to reduced electron-hole wave function overlap (*J. Phys. Chem. C* 128, 10945-10954 (2024)).

Strong coupling between plasmonic and excitonic systems creates new hybrid states comprising upper (E^+) and lower (E^-) plexcitonic bands. Both experimental and theoretical investigations reveal a gradual increase in the intensity of the E^- band and a decrease in that of the E^+ band, as the refractive index of

the medium increased from 1.0 to 1.5. In contrast, on varying the polarization angle, a gradual disappearance and formation of both the plexcitonic bands are observed (*J. Phys. Chem. C* 129, 542-551 (2025)).

A physical approach for the preferential enhancement of band edge emission of CdSe QDs over their trap state emission is demonstrated using frequency-specific plasmonic resonance coupling. Selective photoluminescence enhancement is achieved by matching the plasmon resonance of Au nanoparticles with the band edge emission of QDs (*Chem. Sci.* 15, 20263-20273 (2024)).





SUPRAMOLECULAR CHEMISTRY

Prof. Kana M. Sureshan is a leading figure in supramolecular chemistry and organic materials, renowned for his ground-breaking work in solid-state organic reactions. Challenging the traditional solution-phase paradigm, he demonstrated precise control over organic transformations in the solid state, pioneering new avenues in topochemistry. A significant breakthrough came in 2010 with the development of the Topochemical Azide-Alkyne Cycloaddition (TAAC) reaction, a thermal, catalyst-free, and solvent-free “click” reaction. This innovation enabled the synthesis of crystalline polymers inaccessible via conventional methods, extending the principles of click chemistry to the solid phase.

His research has led to unique polysaccharide-, nucleic acid-, and protein-mimics. More recently, Prof. Sureshan introduced the Topochemical Ene-Azide Cycloaddition (TEAC) reaction for regioselective and stereospecific alkene-azide cycloaddition, yielding triazoline-linked crystalline polymers. He further

demonstrated their conversion to aziridine-linked polymers and diverse structures, presenting immense potential for polymer synthesis. His work also includes Topochemical Diels-Alder Cycloaddition for depolymerizable polymers, addressing sustainability. Beyond fundamental contributions, Prof. Sureshan has advanced smart gelsators for applications like soft optics, conductive fabrics, CO₂ capture, and notably, marine oil spill recovery, showcasing significant societal impact.



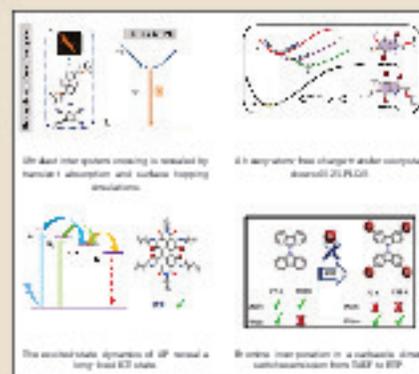
Kana M. Sureshan
Professor



Mahesh Hariharan
Professor

EXCITED STATE DYNAMICS IN BIOMOLECULES, ORGANIC CRYSTALS AND ORGANISED DONOR-ACCEPTOR SYSTEMS

- Demonstrated the triplet excited-state population via intramolecular SB-CS in a conformationally rigid PDI trimer at the single-molecule level.
- Excited-State Dynamics in a segregated donor-acceptor stacks were compared to that of a peri bis-donor acceptor system.
- Various guest molecules were used to modulate the photophysical pathways of a coronene bisimide cyclophane.
- Solid-state NMR and electron diffraction were employed to reveal the exciton coupling and structure in a eumelanin precursor.
- A terylenediimide-based near IR emitter was synthesized and probed at the single-molecule level.
- Analyzed the excitation wavelength-dependent fluorescence in a cyclooctatetraene-based polymorph.



- Magnetic anisotropic effects in charged aza[10]annulene analogues with a non-planar carbon framework were examined.
- The intersystem crossing dynamics of multi-brominated eumelanin monomers were probed through transient absorption and surface hopping dynamics.
- The luminescence enhancement via through-space conjugation was examined in a system with crystalline butterfly architecture.
- Luminescence harnessing from a heavy-atom free organic charge-transfer co-crystal.
- The long-lived intramolecular charge transfer in a persubstituted perylenediimide was analyzed through transient absorption and computational methods.
- Room temperature phosphorescence was achieved in a crystalline chromophore containing a bifurcating halogen-halogen synthon.



R. S. Swathi
Professor

THEORETICAL CHEMISTRY

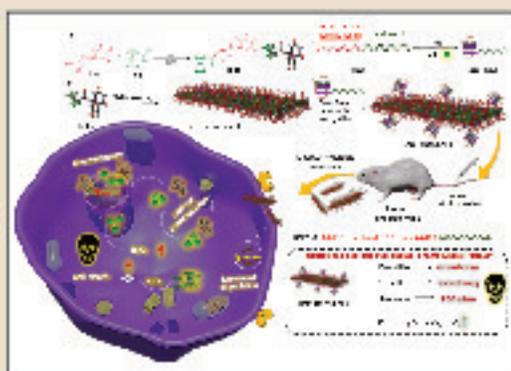
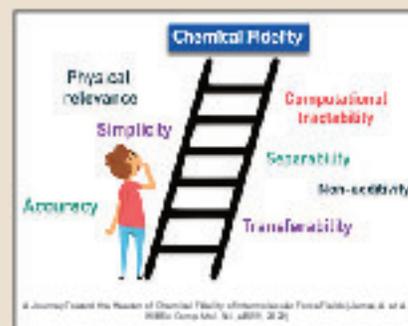
Optical Excitation in Metal Nanostructures

The group focuses on the study of optical excitations in metal nanostructures and their utility as substrates in surface-enhanced spectroscopy using classical electrodynamics. She employs analytical approaches and finite-difference time-domain (FDTD) simulations to probe plasmonic features in metal nanostructures. The FDTD simulations are employed as benchmarks for modeling the plasmonic properties of nanostructure aggregates. Quasi-static approximation and coupled dipole approximation are the group's favorites for plasmonics modeling.

Multiscale Modeling of Carbon Nanostructures

The group's objective is to probe adsorption on carbon-based substrates and encapsulation into carbon nanotubes and fullerenes for sensing, separation and storage applications. They employ multiscale modeling approaches for probing the interactions of atoms, ions, molecules and molecular clusters with the carbon-based materials like graphene, graphynes and carbon nanotubes. They are also interested

in developing empirical potential parameters for carbon materials that could yield reasonably accurate results in short computational times. They often employ the electronic structure calculations as a benchmark to develop accurate modeling approaches.



SUPRAMOLECULAR CHEMISTRY, CANCER THERAPY AND DNA NANOTECHNOLOGY

Cancer is undoubtedly one of the major threats to mankind. Prof. Reji's research group is particularly focused on the cancer diagnosis and the development of suitable therapeutic approaches for the treatment of cancer. A supramolecular approach for the design of assembly-disassembly-driven 19F ON/OFF nanoparticles, triggered by specific molecular recognition, for the detection of DNA binding cancer bio markers is recently developed by the group. This approach is universal in nature

and the group has demonstrated the selective detection of various cancer biomarkers including miRNA, ATP, thrombin, and telomerase. The group is also actively involved in the development of various approaches for the cancer treatment. Reji's group is particularly interested in the development of cancer microenvironment sensitive nanocarriers for the drug delivery applications. Recently, the group has reported different supramolecular approaches for the design of tumour microenvironment sensitive nanoparticles composed of artemisinin, glutathione-responsive and redox-active ferrocene and antisense DNA via a single-step assembly. The most remarkable feature of our design strategy is the glutathione-triggered cascade reactions of the NPs inside the cancer cell in a cooperative fashion. Cleavage of disulfide bonds of the NPs by the overexpressed glutathione in the tumour microenvironment leads to the following cascade chemodynamic therapy reactions: (i) glutathione-triggered uncaging of the ferrocene derivative to release amino ferrocene, which then undergoes reaction with endogenous hydrogen peroxide to produce OH^\bullet radicals and Fe^{3+} and (ii) the in situ reduction of Fe^{3+} by glutathione to form Fe^{2+} and the subsequent Fe^{2+} -triggered cleavage of the peroxide bond of artemisinin to form carbon-centred free radicals. Furthermore, disassembly of NPs releases antisense DNA, which efficiently downregulates the translation of Bcl-2 mRNA and thereby causes cell apoptosis.



Reji Varghese
Professor





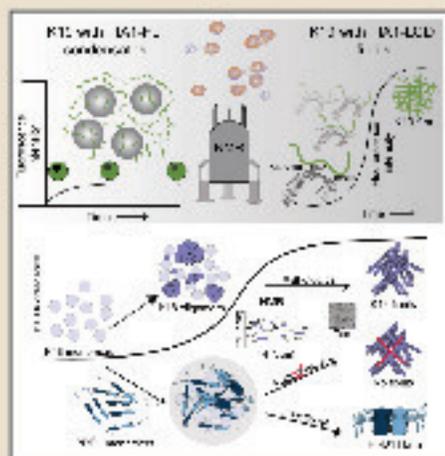
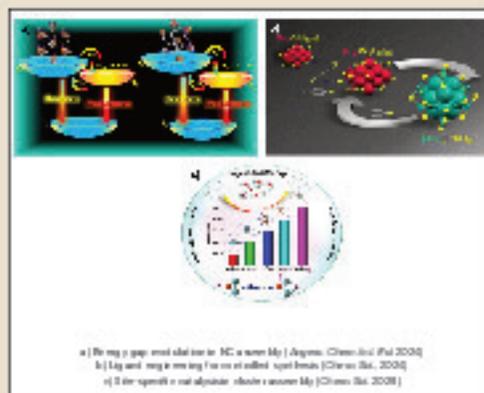
Sukhendu Mandal

Professor

METAL NANOCUSTERS (NCS), CLUSTER-ASSEMBLED MATERIALS (CAMS), METAL-ORGANIC FRAMEWORKS (MOFS), MATERIAL CHEMISTRY

Atom-precise metal nanoclusters are a bridge between the properties of metal complexes and metal nanoparticles. Their ultra-small size (<2 nm) gives rise to many unique physical and chemical phenomena with the structure-property relationship.

Here the group studies cluster-to-cluster transformation at the nanoscale, defect engineering of metal oxide/sulphide using metal nanocluster, synthesis of cluster assembled materials and their various applications, like oxygen reduction reaction (ORR), oxygen evolution reaction (OER), hydrogen evolution reaction (HER), etc. The group is also working on defect engineered metal-organic frameworks (MOFs), conductive MOFs and two-dimensional nanosheets and their applications.



BIOMOLECULAR NMR SPECTROSCOPY

The group works on the interface between solid and solution state. The lab focuses on developing and using NMR tools to study, and understand the structure, dynamics, and function of biomolecules. The group investigates how the tau protein, implicated in Alzheimer's disease, interacts with prion-like and RNA-binding proteins involved in stress granule dynamics and memory. A key focus is the interaction between tau and TIA1, a stress granule core protein. Using tau-K19, the group studied its interaction with full-length TIA1 (TIA1-FL) condensates and fibrils formed by its low-complexity domain (TIA1-LCD). NMR spectroscopy revealed weak interactions and reduced tau dynamics within TIA1-FL condensates, but strong binding to TIA1-LCD fibrils via the



Vinesh Vijayan

Professor

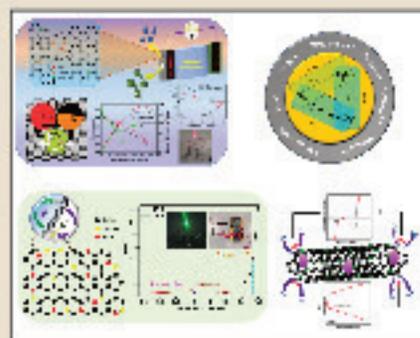
³⁰⁰VQIVYKPVDSLK³⁰⁸ and ³⁰³KCGS³²⁴ regions. These findings show that the structural state of TIA1 influences tau aggregation. The group also examined the interaction of tau with CPEB3, a functional prion-like protein linked to long-term memory. NMR relaxation studies showed that its first prion domain (PRD1) binds the ³⁰⁰VQIVYKPVDSLK³⁰⁸ segment of tau, inhibiting tau-K18 aggregation while enhancing PRD1 fibril formation. Further studies identified the PRD1-Q region as responsible for this inhibition. A synthetic 15-residue polyglutamine peptide mimicking this effect also inhibited tau aggregation, suggesting therapeutic potential. Overall the group's research reveals how prion-like proteins modulate tau aggregation and points to new strategies for targeting Alzheimer's disease.



A. Muthukrishnan
Associate Professor

ELECTROCATALYSIS FOR THE ENERGY CONVERSION AND STORAGE DEVICES

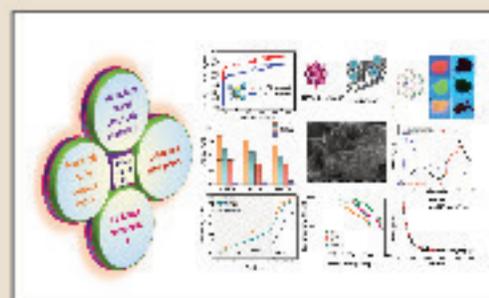
Electrocatalysts for the fuel cells are one of the highly studied areas of the materials electrochemistry. In particular, the oxygen reduction reaction (ORR) is studied with various electrocatalysts due to sluggish kinetics on the electrodes. The state-of-the-art platinum-based catalysts are commercially used in fuel cells and the developing of non-platinum group metal catalysts (NPGM) is proposed as alternatives to the large-scale commercialization. The design principles of NPGM or metal-free catalysts need the complete understanding of ORR mechanism and the active sites information.



The research team is focusing on the fundamentals of ORR and using kinetic analysis to describe the active sites and mechanism of the Fe-N/C and N-doped carbon catalysts. The boron and nitrogen-doped (B&N) few-layer graphite acts as an efficient oxygen electrocatalyst with a potential window of 0.735 V. The metal-free catalysts-coated carbon air electrode shows a power density of 136 mW cm⁻²

and a specific capacity of 795 mA h g_{Zn}⁻¹. Besides, the stability of catalysts is examined using the galvanostatic charge-discharge cycles, which are stable for >500 cycles (20 min per cycle) or 167 h with the highest zinc utilisation ratio (0.97). This study opens new avenues to explore more heteroatom(s)-doped carbon catalysts for their bifunctional activity towards metal-air battery applications.

Carbon alloy catalysts emerged as desirable alternatives for high-cost OER, HER, and ORR catalysts due to their improved activity and stability. A CoW-N/C alloy catalyst shows the best water-splitting performance and exhibits a cell potential of 1.79 V at 10 mA cm⁻², which is comparable with Pt/C and RuO₂ catalysts combination. Besides, this catalyst coated carbon electrode in zinc-air battery yields the maximum power density of 1113 mW cm⁻², which is better than the benchmark catalysts (Pt/C + RuO₂). The group is also working in perovskite based trifunctional catalysts. The GdCoO₃ perovskite on N-doped exhibits better ORR, OER and HER than many other Gd-based perovskites reported in the literature. The zinc-air battery performance was demonstrated with a power density comparable to that of benchmark catalysts. This study features the potential application of the Gd-based perovskites after partial substitutions in the A and/or B-site in electrocatalysis.



MATERIALS CHEMISTRY: POROUS MATERIALS & COMPOSITES, GAS SEPARATION, ELECTROCHEMICAL ENERGY STORAGE & LUMINESCENCE PROPERTIES.

Thirumurugan's research group explores new and novel materials for energy and sustainable development. In particular, the focus is on investigating coordination polymers, metal organic frameworks, nanocellulose composites of porous materials, redox active

vanadium oxide clusters and their nanocomposites for molecular (gas) storage-separation, optical and electrochemical energy storage properties. They have employed soft template based mesoassemblies of gemini surfactants to introduce mesopores in some of the well-known microporous MOFs, such as HKUST-1 and UiO-66. By inducing variations in the optimized nucleation and crystal growth conditions that are crucial for achieving a wide range of hierarchical porosity (HP). Such HP materials are used in small molecule gas and dye separation processes. Mixed matrix membranes of MOF@nanocellulose composites, have been explored for CO₂, alkane, N₂ gas separation applications. Materials that provide simultaneously optimal energy density and power density for the next generation electrochemical energy storage (EoS) devices are an important research focus. They have explored redox active vanadium based materials, such as layered vanadium formate (VF) coordination polymer and another Vanadium oxide cluster along with their composites of partially reduced graphene oxide (prGO), as anode materials for the Li-ion based EoS systems in the potential range of 0-3 V (vs Li⁺/Li).

They are exploring the design of MOFs, which are based on simple aromatic to polycyclic aromatic ligands to explore the metal and ligand centered emissions, energy/electron transfer processes including delayed luminescence.



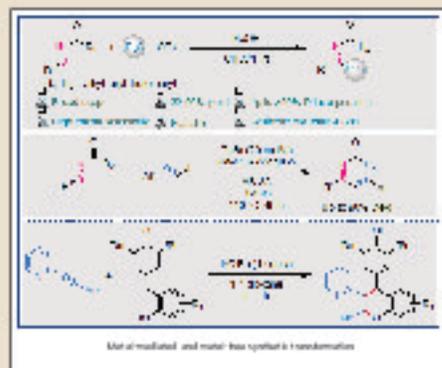
Thirumurugan Alagarsamy
Associate Professor



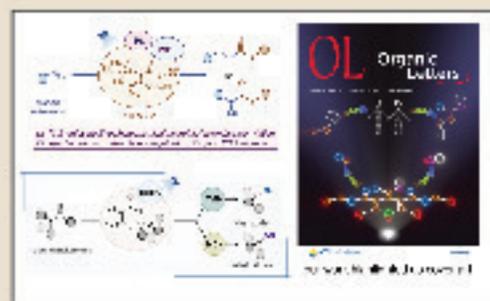
Alagiri Kaliyamoorthy
Associate Professor

DEVELOPMENT OF NEW SYNTHETIC METHODOLOGIES FOR ORGANIC SYNTHESIS AND CATALYSIS

Research interest of Dr. Alagiri's group are directed toward de novo organic synthesis focusing on developing new synthetic strategies. His group primarily works on activating less reactive pronucleophiles and subsequent C-C bond-forming reactions with various electrophiles. The development of metal-mediated and metal-free synthetic transformations, and cross-coupling reactions is also his area of research interest. To this end, the PI developed the copper-mediated regioselective imidation of 2-pyridones using NFSI as an imidating source. In addition, PI developed a transition-metal-free route for the direct trideuteromethylation of sulfenamides in the presence of a Brønsted base using CD₃OTf as the electrophilic trideuteromethylating agent. Furthermore, PI expanded the sulfenamide chemistry for the regioselective ring-opening of bicyclo[1.1.0]butanes (BCBs) with sulfenamides in the presence of a Lewis-acid and transition-metal catalyzed S-alkenylation of sulfenamides with alkenyl halides. Additionally, the PIs group has been actively involved in developing copper-catalyzed asymmetric 1,6-conjugate addition and propargylation reactions.



a Lewis-acid and transition-metal catalyzed S-alkenylation of sulfenamides with alkenyl halides. Additionally, the PIs group has been actively involved in developing copper-catalyzed asymmetric 1,6-conjugate addition and propargylation reactions.



SUSTAINABLE ORGANIC SYNTHESIS

The Sahoo Research Group in the School of Chemistry, IISER Thiruvananthapuram is pursuing research on the area of organic synthesis and catalysis, with an emphasis on sustainability. Recently, the group have contributed to the development of organic synthetic methods, where they have demonstrated the successful implementation of readily available

unactivated aliphatic ketone feedstock as a non-trivial Csp³ alkyl synthon via formidable inert C-C bond cleavage. In this regime, they have reported a catalytic technique for mild C-C bond azidation and cyanation of aliphatic ketones via proaromatic dihydroquinazolinones (Sahoo et al. *Org. Lett.* 2025, 27, 783–788). Very recently, aromaticity-driven thio(seleno)ester group transfer from novel 1,4-dihydropyridine thio(seleno)esters to alkene feedstocks was disclosed by the group, merging palladium and photoredox catalysis. In this process, photoactivation of dihydropyridine thio(seleno)esters is integrated with regioselective hydrometalation of alkenes, avoiding photoinduced Pd-C bond homolysis of organopalladium intermediates. Additionally, a regioselective hydroselenocarbonylation of an alkene is accomplished for the first time using a bench-stable selenoester reagent (Sahoo et al. *Org. Lett.* 2025, 27, 2832–2837). Moreover, the group demonstrated for the first time a photochemical branched hydrothiocarbonylation of vinyl arenes with bench-stable 1,4-dihydropyridine thioesters to furnish various thioesters in high regioselectivity. In this mild and scalable method, various thioesters can be obtained with good functional group tolerance, including late-stage thioesterification to deliver drug-conjugates. A branched hydroselenocarbonylation of styrene is also achieved with DHP-selenoester to afford the selenoester (Sahoo et al. *Org. Lett.* 2025, 27, 5014–5019).



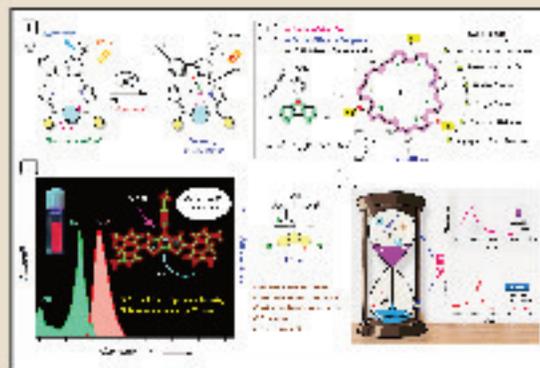
Basudev Sahoo
Associate Professor



S. Gokulnath
Associate Professor

MACROCYCLIC CHEMISTRY

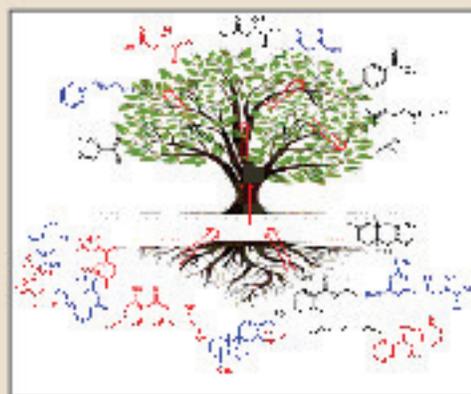
1. The first carbazole-embedded p-benzoporphyrinoid is synthesized by a [3 + 1] acid-catalyzed condensation between appropriate coupling partners. The macrocycle **1** exhibited orange emission and showed large Stokes shift of 5831 cm⁻¹. Intriguingly, it shows a selective affinity towards Hg²⁺ ion over other metal-ions in a reversible manner. Job's plot confirmed the 1:1 stoichiometry with unambiguous confirmation of both **1** and Hg²⁺ by single crystal X-ray analysis. *Chem. Commun.* **2024**, 60, 6957-6960



2. Next, a rigid dithienopyrrole (DTP) subunit was functionalized by taking advantage of the fused core which upon Lewis acid catalysed self-condensation afforded two structurally distinct expanded porphyrinoids namely [36]nonaphyrin (**S₆N₄**) and [48]dodecaphyrin (**S₈N₄**). The single crystal X-ray structure of **S₆N₄** revealed a perfectly planar conformation. Various spectroscopic and DFT analyses unambiguously confirmed strong antiaromatic character of **S₆N₄**. *Org. Lett.* **2025**, 27, 298-302.

3. In another work, a series of dithienopyrrole (DTP) embedded BODIPYs were synthesized and structurally characterized. These BODIPYs have strong absorption in the green region and broad emission in the red region with large Stokes shift ranging from 3100-4200 cm⁻¹. Interestingly, all three BODIPYs show intramolecular charge transfer interactions (ICT). Further, both BODIPYs (**bis** and **tris-BOD**) also exhibit excited state symmetry breaking (ES-SB). Single-crystal X-ray analysis unambiguously confirmed the exact structures of all three structurally distinct BODIPYs. *Org. Lett.* **2025**, 27, 298-302.

4. A template effect of aryl aldehydes in oxidative coupling reactions is realized for the first time in literature. Experimental and theoretical studies suggested that **1** is 32π antiaromatic and it undergoes proton-coupled electron transfer (PCET) to its 34π aromatic congener **H21-2H⁺** upon treatment with various protic acids. Single crystal X-ray structure revealed that H21 is highly planar and stabilized with several intermolecular H-bonding and F-F interactions, leading to a large 3D supramolecular arrangement and exhibits colorimetric sensing for fluoride and hydroxide anions. *Chem. Eur. J.* **2024**, 30, e202303326.



ASYMMETRIC TOTAL SYNTHESIS

Developed new synthetic protocol for enamines by a systematic investigation, solvent's influence and mechanistic aspects were explored.

A systematic investigation on chelation effect in Julia-Kociensky reaction was conducted. Quaternary salts were used as non-coordinating counter ions.

A new proline-based chiral auxiliary was developed for asymmetric acetate aldol reactions, and was applied in the total synthesis of citreochlorols.

The aromatic polyketides such as diaportinols and citreochlorols were synthesized for the first time and their absolute structures were

established.



Goreti Rajendar
Assistant Professor



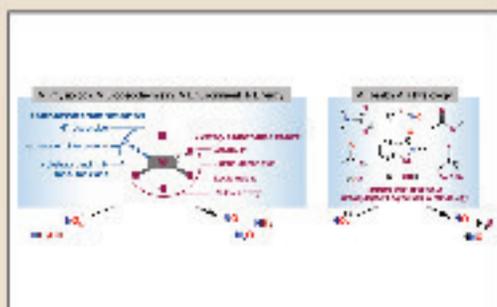
Ramesh Rasappan
Associate Professor

CROSS-COUPLING REACTIONS

The research group's aim is to synthesize alkyl organosilanes by cross-coupling reactions and utilize them as alkyl synthons, again employing them in cross-coupling reactions. The group developed new silylating reagents that are solid at room temperature and have an extended lifetime of up to several years. Employing this methodology, they successfully synthesized arylsilanes, enantiopure silanes, cyclic, tertiary and secondary alkoxy silanes, as well as vinylsilane.



The group employed modern metallophotoredox (nickel and HAT) catalysis to activate inert C-H bonds in unactivated alkanes, such as cyclohexane or aldehyde hydrogens, for further functionalization.



BIOINSPIRED INORGANIC CHEMISTRY

A series of coordination complexes to systematically tune the primary and secondary coordination sphere of the metal complexes has been isolated to gain insights into the interactions between thiol/phenol and nitrite leading to the generation of the reactive species prior to NO and HNO release.

The group's recent investigations have demonstrated the formation of (per)thionitrite species (SNO/SSNO) through the reaction of nitrite anion with carbon disulfide (CS₂) under ambient conditions. Comprehensive spectroscopic characterization including multinuclear NMR, UV-vis, and high-resolution mass spectrometry (HRMS) confirm the generation of these intermediates, which subsequently decompose to release NO and reactive sulfur species. Furthermore, the group has shown that nitrite reacts with various stable, biologically relevant thio-carbonyl compounds, such as thiocarbamates and thioacetates, to yield (per) thionitrite intermediates. In addition, the reaction of nitrite with selenocarbonyl derivatives has been found to produce nitrogen oxides, including NO and N₂O, likely via the formation of selenonitrite (HSeNO) as a key intermediate. Together, these findings reveal a novel, metal-free pathway for nitrite reduction to NO that proceeds through the formation of thionitrite and selenonitrite intermediates, offering new insight into the chemical basis of NO generation in biological systems.



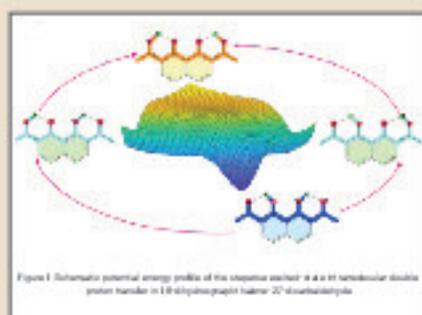
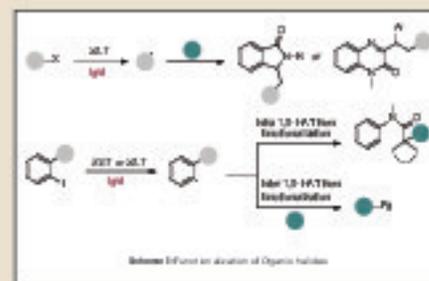
Subrata Kundu
Associate Professor



Veera Reddy Yatham
Associate Professor

PHOTOCATALYSIS

Carbon radicals are powerful synthetic intermediates in organic chemistry for the construction of carbon-carbon and carbon-heteroatom bonds. In the early days, metal-based reagents (Sn, Mn, Si) were employed for the generation of carbon radicals from organic halides through cleavage of C-X (X = Cl, Br, I) bonds through the halogen atom transfer (XAT) processes. Recently, with the advent of photoredox catalysis a novel carbon-based abstractor, the α -aminoalkyl radical, became an ideal intermediate to perform XAT processes due to the simplicity of the methods to access it, the broadness and commercial availability of the tertiary amine precursors required, and the improved environmental footprint. In this direction, the research group reported on the generation of alkyl and aryl radicals from Organic halides through XAT, single electron transfer (SET) or hydrogen atom transfer (HAT) followed by XAT and further applications in a variety of C-C bond formation reactions (Scheme 1).



THEORETICAL AND COMPUTATIONAL CHEMISTRY

The group's primary focus is to explore the mechanisms and timescales of the molecular excited-state single and double intramolecular proton transfer processes using computational tools. Details on how hydrogen bonding (N-H...O, O-H...O, S-H...O) drives proton transfer in different molecular systems are obtained by estimating the relaxed scan potential energy profiles and barrier energies associated with the proton transfer. Their rigorous theoretical approach includes the comprehensive examination of structure-property relationships.

for instance, solvent-dependent fluorescence emission from proton transfer tautomers, which help delectegain insights into molecular design for desired photophysical properties. The key findings are valuable for both fundamental and applied research, enabling novel pathways to develop materials for sensing, lasing and imaging technologies.



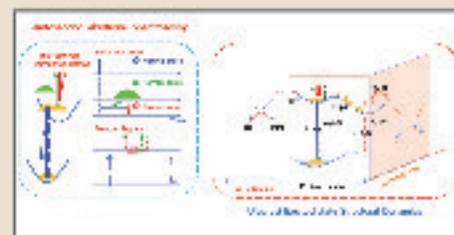
Vennapusa Sivaranjana Reddy
Associate Professor



Adithya Lakshmana
Assistant Professor

ULTRAFAST STRUCTURAL DYNAMICS, PROTON-COUPLED ELECTRON TRANSFER, EXCITED-STATE CHIRO-OPTICAL PROPERTIES, DEVELOPMENT OF MULTI-PHOTON, NON-LINEAR COHERENT SPECTROSCOPIC

The research interests are broadly in the direction of addressing the excited-state reaction dynamics that are mediated by fundamental processes such as electron transfer, proton transfer and proton-coupled electron transfer reactions. Such excited-state dynamics are typically described by employing femtosecond transient absorption and emission spectroscopic techniques. However, the focus is on a structural perspective, aiming to unravel the intricate structural dynamics associated with excited-state electron and proton transfer processes by employing the ultrafast coherent Raman and IR spectroscopic methodologies.





MEDICINAL CHEMISTRY

The central vision of Dr. Ayan Mukherjee's independent research program is to develop innovative chemical strategies to address the escalating global threat of antimicrobial resistance (AMR) essentially will integrate organic synthesis, medicinal chemistry, and computational drug discovery to systematically design and optimize small molecules targeting essential pathways in multidrug-resistant (MDR) bacteria, with particular emphasis on ESKAPE pathogens (*Enterococcus faecium*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, and *Enterobacter* species).

The research employ structure-based drug design, molecular docking, molecular dynamics, and ADME optimization tools in parallel with advanced synthetic chemistry to identify novel antibacterial scaffolds with favourable pharmacological profiles. A parallel focus involve developing antibiotic adjuvants that can potentiate existing antibiotics by targeting resistance mechanisms such as efflux, biofilm formation, and enzymatic degradation.

The long-term goal is to establish a multidisciplinary drug discovery platform that not only generates novel lead compounds but also provides mechanistic insights into bacterial resistance pathways. By combining organic synthetic capability with computational modelling and biological validation, the laboratory aims to contribute to the development of next-generation anti-infective therapies and provide training opportunities for students at the interface of chemistry and infectious disease research.



Ayan Mukherjee
Assistant professor



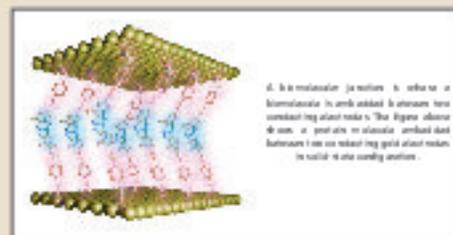
Jerry Alfredo Fereiro
Assistant Professor

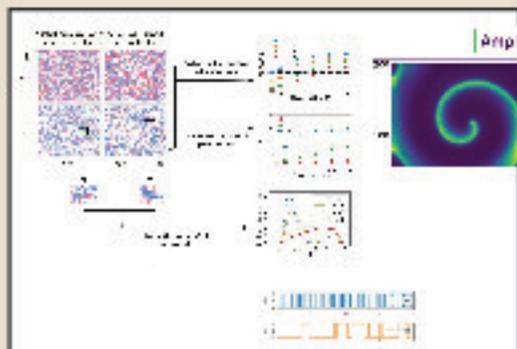
CHARGE TRANSPORT IN BIO-MOLECULAR SYSTEMS

Dr. Jerry Fereiro's principal research interests lie in the field of bio/molecular-electronics and interfacial charge transport. Other areas of interest also include surface functionalization, nano-fabrication, low temperature electric measurements, surface analysis and electrochemistry.

Integrating (bio)molecules into electronic junctions is a challenging research area, which combines nano-science and -technology, biophysics, and bio-electrochemistry. In addition to the principal aim of understanding electron transport through (bio)molecules, a potentially practical future goal is the use of molecules/proteins as building blocks to develop multi-functional electronic devices for biomedical, biofuel cells, and biosensing devices. As part of the effort to achieve this goal, I Jerry seeks to understand how the mechanism of electron transfer (ET) in the natural liquid surroundings of a protein compares to that of electron transport (ETp) in the solid-state, i.e., in dry proteins that retains only structural water.

It is generally recognized that the details of contact geometry and conformation are critical to the electronic behavior of the junction, and these may vary significantly for each molecule studied. Except for the special cases of inelastic electron tunneling spectroscopy (IETS) and tip-enhanced SERS, single-molecule devices and ensembles cannot be easily characterized spectroscopically in working junctions so it is difficult to determine the precise conformation and contact geometry





THEORETICAL CHEMISTRY, CHEMICAL AND BIOLOGICAL PHYSICS

Dr. Pushpita Ghosh's group pursues two complementary research directions focused on understanding spatiotemporal organization in nonequilibrium soft and active matter systems. One major thrust involved studying collective dynamics in systems of self-propelled particles and microbial assemblies. Using coarse-grained simulations and agent-based models, the group investigates how variations in particle morphology, motility,



Pushpita Ghosh
Assistant Professor

and propulsion noise influence emergent patterns and large-scale organization. These studies revealed that both structural diversity and dynamic fluctuations can act as regulatory factors, enabling transitions between disordered states and complex, ordered spatiotemporal structures.

The second research direction essentially on reaction-diffusion systems and their capacity to generate self-organized chemical patterns. Through detailed numerical analysis of classical activator-inhibitor models, the group examined the conditions that give rise to evolving spiral wave structures and other non-trivial morphologies. These efforts provide deeper insight into the interplay between local kinetics and spatial coupling in generating and sustaining complex patterns, relevant to both natural and synthetic systems. Together, these research activities highlight the group's broader goal of developing multiscale theoretical frameworks for modeling dynamic self-organization in chemically and physically driven systems.

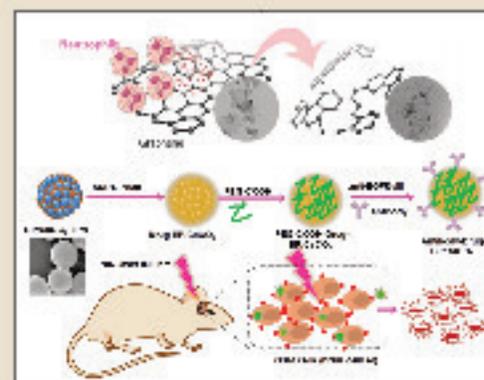
These multidisciplinary projects aim not only to advance scientific understanding but also to inspire and engage aspiring students and researchers in the realm of active matter research.



Rajendra Kurapati
Assistant Professor

BIOMATERIALS, NANO-IMMUNE INTERACTIONS, ANTIMICROBIAL COATINGS AND BIOPLASTIC

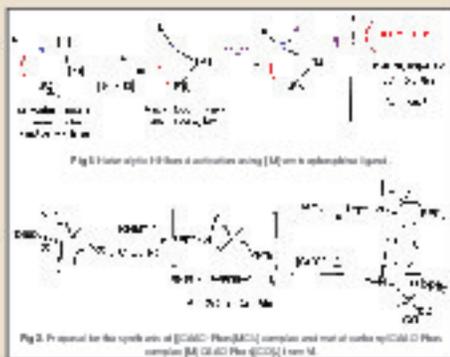
The interest of the group of Dr. Rajendra Kurapati lies at the interface of Materials Chemistry, Biology and Bioengineering. Nanomaterials have revolutionarily expanded the spectrum of biomedical applications. However, the long-term fate of these nanomaterials in the organism is not understood and their inertness prevents biodegradation. Subsequently, the clinical translation of this nanomedicine is seriously hampered. Keeping the "biodegradability of the nanomaterials" as a primary objective for biomedical applications, the group's major research will first focus on understanding the biodegradability or biotransformation of highly studied nanomaterials.



Biodegradation of Emerging 2D Nanomaterials: Biodegradability of pristine and surface-functionalized 2D materials will be carried out using neutrophils and macrophages including mouse models. The expected results could help to understand the *in vivo* biotransformation of 2D materials, thereby helping to design better biomaterials for potential applications such as degradable drug delivery and photothermal theranostic systems.

Biodegradable Drug Delivery Systems: Multifunctional biodegradable drug delivery systems will be developed using the "Safe-by-Design" approach. The group currently have a project from DBT entitled "Hybrid Black Phosphorus and CaCO₃ Nanoparticles for Synergistic Chemophotothermal Therapy (under Ramalingaswami Fellowship 2021-26).

Graphene Composite Antimicrobial Coatings: Antimicrobial and antifouling coatings will be developed using the inherent antimicrobial properties of 2D materials and antimicrobial peptides or polymers.



D-BLOCK ORGANOMETALLIC CHEMISTRY, SMALL MOLECULE ACTIVATION, DEVELOPMENT OF MOLECULAR CATALYSTS FOR HYDROGENATION

Reaction of the phosphine-amine (RuP-CH₂-N(H)R) ligand **1** with half an equivalent of ruthenium dimer [(p-cymene)Ru(μ-Cl)Cl]₂ in CH₂Cl₂ resulted in the formation of a red colored K⁺-P-N coordinated complex [(p-cymene)Ru(K⁺-P-PR₂CH₂NH(Ph))Cl₂] (**2**) in good yield. In the ¹H NMR spectrum, the -PCH₂ signal in **2** appears as a doublet which collapses into

a doublet upon ³¹P decoupling revealing ³J(H,P) and ²J(H,H) couplings. Very strong intra- as well as intermolecular hydrogen bonding between NH—Cl were found in the solid state with a distance of ~2.50 Å. Abstraction of chloride in **2** using KBAr_i (BAr_i = B(3,5-(CF₃)₂C₆H₃)₂) led to the formation of a light yellow colored cationic K⁺-P-N complex **3**. Here, the formation of a four membered ring Ru-P-C-N (69.68(5)°) is evident by NMR and X-ray crystallography. Benzaldehyde (1.72 mmol) was hydrogenated into benzyl alcohol (55 %) using complex **1** (1 mol%) in the presence of KOH (10 mol %) under H₂ (5 bar), 60°C for 4 h in CH₃CN. The electronic and steric of R and R' groups were found to have a significant impact on the stability, solubility (MeOH, CH₃CN, CDCl₃, CH₂Cl₂) and reactivity.

The synthesis and characterization of CAAC-supported Ir-complexes were successfully demonstrated. Free carbene ligand was generated in-situ by treatment of CAAC-precursor with LiHMDS or KHMDS in C₆D₆ at 298 K. The characteristic signal (iminium C(2)-H, δ 9.22 ppm, ¹H NMR (D₂O)) of cyclic iminium chloride **11a** is absent in the free carbene. In the ¹³C[¹H] NMR spectrum a highly deshielded carbon signal at δ 313.58 ppm was noted. Treatment of the in-situ generated free carbene with 0.5 equivalents of [Ir(COD)Cl]₂ resulted in the formation of [Ir(CAAC^{carb})(COD)(Cl)] (**11a**). In the ¹H NMR spectrum very distinct signals were observed for the Ir-COD ligand in the vinyl and allyl region.



Ramaraj Ayyappan
Assistant Professor



Soumen De
Assistant Professor

SUPRAMOLECULAR CHEMISTRY

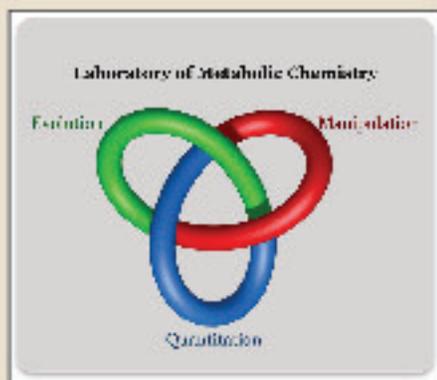
The research group operates at the cutting edge of dynamic supramolecular chemistry—an inherently interdisciplinary field that encompasses molecular switches and machines, as well as stimuli-responsive materials. The group is particularly focused on exploring the vast potential of dynamic systems, with an emphasis on the design and application of flexible, tunable BINOL-based building blocks.

These versatile scaffolds form the cornerstone of the work, enabling the construction of sophisticated chiral switches, molecular hosts, and adaptive architectures. These systems exhibit a range of advanced functionalities, including selective guest sequestration, catalytic activity, and sensing capabilities. Through a synergistic approach that combines synthetic and physical organic chemistry, the group designs and synthesizes molecular targets capable of self-assembly via diverse non-covalent interactions and dynamic covalent bonds.



The laboratory employs a comprehensive suite of experimental techniques, from classical synthetic methodologies to state-of-the-art spectroscopic analyses, allowing us to probe the structural and functional characteristics of our molecular systems. Complementing the experimental work, the group utilises advanced computational methods, particularly Density Functional Theory (DFT) calculations, to gain deeper insights into the emergent properties and dynamics of our constructs.

Ultimately, the research aims to expand the frontiers of dynamic supramolecular chemistry by uncovering new molecular functions and architectures with promising applications across catalysis, sensing, and materials science.



METABOLIC CHEMISTRY AND MASS SPECTROMETRY

Dr. Varma's laboratory focuses on metabolic chemistry, with a particular interest in uncovering the evolutionary pathways that have shaped contemporary metabolism. By integrating synthetic organic chemistry with mass spectrometry-based analysis, we aim the group aims to manipulate, and understand the underlying principles and adaptability of metabolic systems.

A central question driving the research is the evolution of cofactor chemistry. Cofactors—structurally conserved organocatalysts—are integral to a vast array of metabolic reactions. Despite their fundamental role, many aspects of



Sreejith Jayasree Varma
Assistant Professor

their origin and structural conservation remain unclear. For instance, the laboratory seek to understand:

- Why are these cofactor structures highly conserved across diverse species?
- Is this conservation a result of biosynthetic limitations, superior chemical utility, or merely a frozen evolutionary accident?
- Can metabolism tolerate modifications in the structure of these cofactors without compromising function?

In addition to evolutionary inquiries, Sreejith's laboratory is also interested in modulating metabolism to explore its flexibility and regulatory dynamics. By employing small molecules as tools to perturb metabolic networks, the group investigates how cells respond to such changes, particularly in terms of homeostasis, growth, and survival. This approach enables them to identify key regulatory pathways and understand how metabolic states are controlled and maintained.



Shyamalava Mazumdar
Emeritus Professor

BIOLOGICAL INORGANIC CHEMISTRY: REDOX PROPERTIES OF METALLO-PROTEINS

Prof. Mazumdar's research interests revolve around the study of redox metal centers in different metalloproteins and metalloenzymes such as the vital respiratory enzyme complex cytochrome c oxidase, the drug-metabolizing enzyme cytochrome P450 etc.

His group had earlier developed a strategy combining computational tools with experiments to enhance the substrate scope and enzymatic activity by rational engineering of certain important channels in the protein structure along the active site of the thermostable cytochrome P450. The evolved enzymes showed an improved catalytic rate of the enzymatic reaction for hexadecane hydroxylation with high regioselectivity (<https://doi.org/10.1039/D3SC02857G>).

His group has recently identified a unique ceruloplasmin that shows distinct redox potentials for the catalytic and electron-transfer properties of the copper centers in the protein. (<https://doi.org/10.1002/pepp.224387>).

The laboratory has also been involved in the study of bioremediation of toxic metal ions such as lead, arsenic, chromium etc., by laboratory grown non-pathogenic bacteria (<https://doi.org/10.1016/j.jemppol.2024.125066>).

Prof. Mazumdar plans to pursue research in some of these directions in collaboration with colleagues at the IISER Thiruvananthapuram. Efforts would be made to design and develop conducting oriented protein monolayer films for electron transfer studies. He also plans to design suitable scaffolds in collaboration with colleagues at the IISER to encapsulate the enzyme in a nano-porous material for catalytic applications of the enzyme in a confined space.

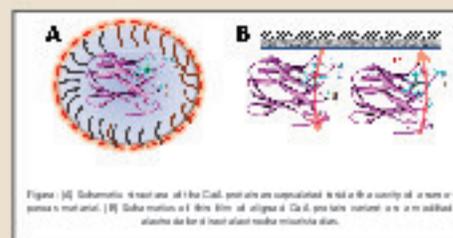
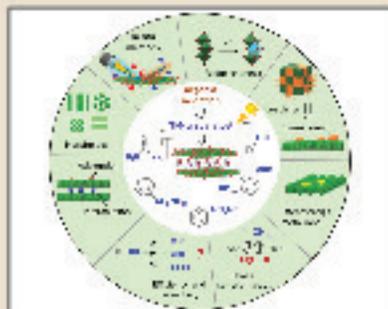


Figure: (A) Schematic representation of CuO particles encapsulated in the cavity of a protein structure. (B) Schematic representation of CuO particles interacting with a protein structure.



SELF-RECONSTRUCTION OF THE INORGANIC MATERIALS UNDER PHOTO AND ELECTROCHEMICAL REACTIONS

Electrochemical and photochemical reactions, encompassing processes like water splitting, carbon dioxide reduction, and organic small molecule transformations, form the cornerstone of devising sustainable methods for generating green feedstocks. However, many inorganic materials lack stability and tend to undergo self-reconstruction, leading to alterations in phase, oxidation states, and morphology of the active catalysts. Dr. Indranil Mondal's focus

was on elucidating this self-reconstruction phenomenon through in situ spectroscopic techniques, such as X-ray absorption (XAS) and Raman spectroscopy. The transformation of the (pre)catalyst is contingent upon various applied conditions, including pH, electrolyte ions, temperature, potentials, and light intensity, each exerting a significant influence on catalytic activity metrics such as turnover number, product selectivity, and conversion efficiency (Mondal's and co-workers, *Adv. Energy Mater.* 2022, **12**, 2200269; *J. Mater. Chem. A* 2025, **13**, 2327-2334; *ACS Appl. Energy Mater.* 2025, **8**, 5251-5258). For instance, during electro-oxidation, transition metal-based (pre)catalysts irreversibly transition in to corresponding (oxy)hydroxide phases. These phases manifest as layered structures comprising [metal-O_x] units, replete with numerous defects and characterized by low long-range order. Consequently, properties like electron-proton conductivity, bridging-oxo groups, and stable low-valent metal species vary from those observed in chemically synthesized (oxy)hydroxide compounds. In essence, attributing a reaction mechanism presupposes a predetermined understanding of the active catalyst's structure.



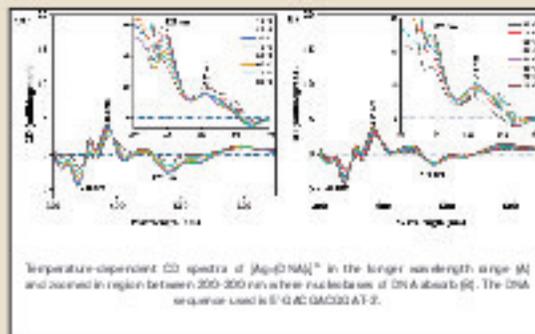
Indranil Mondal
SERB(ANRF)-Ramanujan
Fellow



K. R. KRISHNADAS
RAMANUJAN FACULTY
FELLOW

CHIRAL INORGANIC AND BIOMATERIALS

Research in Dr. Krishnadas's group focuses on unravelling stimuli-(temperature, pH, metal ions, etc.)-responsive dynamic chiral systems from inorganic and biomaterials. The group uses inorganic compounds as well as biomolecules such as DNA and proteins for the synthesis of such materials. These molecules possess inherent chirality and dynamism. The group aims to develop dynamic, chirally responsive materials derived from these templates across various length scales.



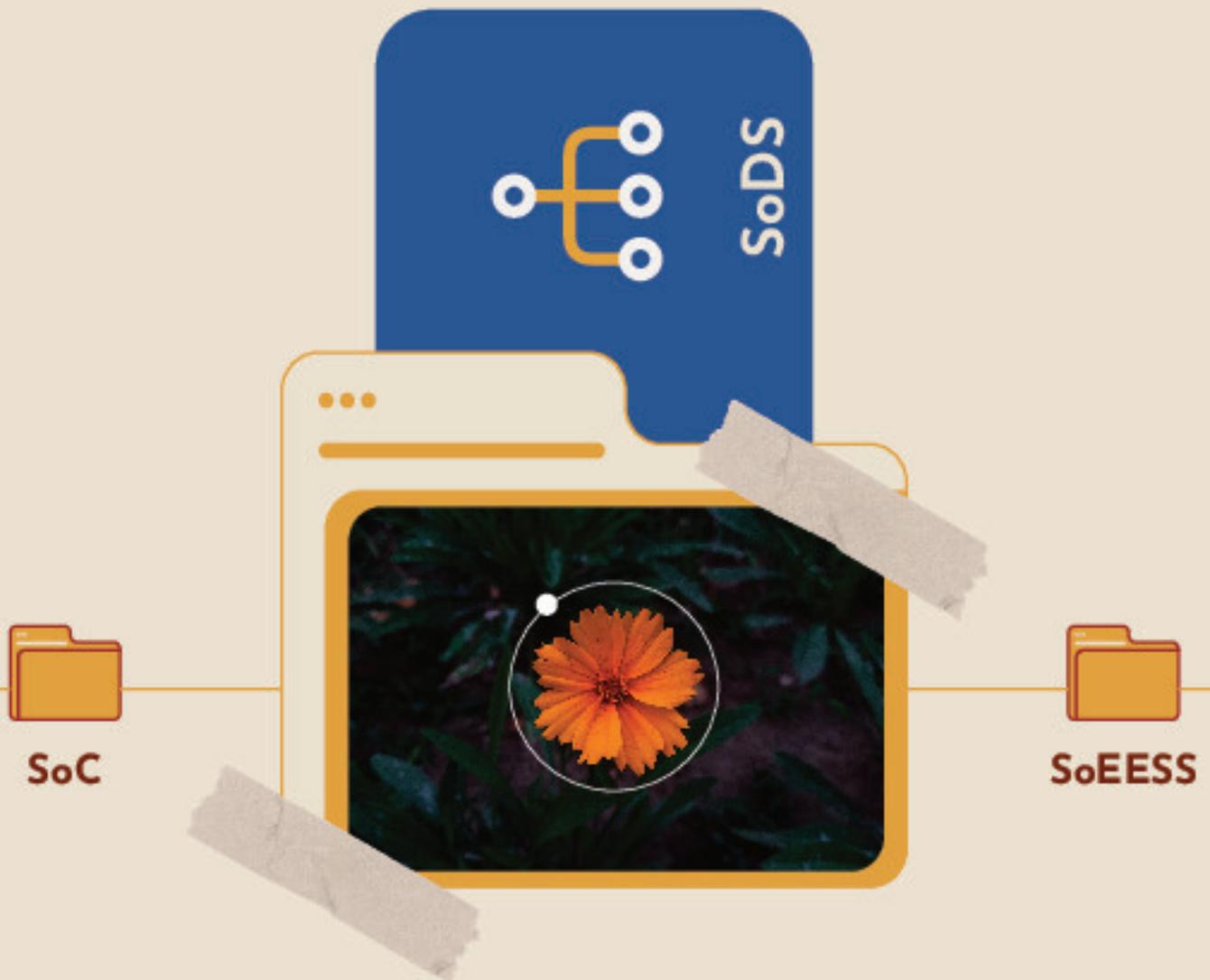
Currently the group is working to understand the dynamics of DNA-templated metal quantum clusters and metal nanoparticles using circular dichroism spectroscopy. The group demonstrated solution-phase structural dynamics of DNA-stabilized, atomically precise metal quantum clusters and plasmonic metal nanoparticles using circular dichroism spectroscopy. CD spectroscopy reveals that the nucleobase

packing is disrupted in [Ag₄(DNA)]⁺ while that is preserved in [Ag₄(DNA)]⁺ and bigger, plasmonic metal nanoparticles. CD spectroscopic measurements on unbound DNA, DNA-Ag⁺ complexes were carried out, and these experiments reveal that DNA in these clusters assumes a bent, horseshoe conformation in solution phase which is significantly different from the conformational state of the unbound DNA. These measurements demonstrate the potential of circular dichroism spectroscopy to understand the solution phase structural dynamics and chiroptical properties of DNA-stabilized metal nanoparticles.

Research Reports

03

School of Data Science





Alwin Poulose
Assistant Professor
(Grade-I)

LOCALIZATION, HUMAN ACTIVITY RECOGNITION, FACIAL EMOTION RECOGNITION, AND INTELLIGENT SYSTEMS

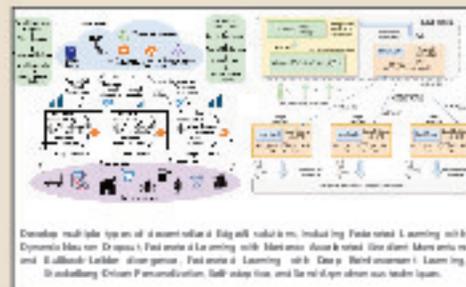
Dr. Poulose develops an intention prediction system that assists humans in intelligent living. Their approach starts with an indoor localization system in which the research focuses on creating an advanced localization system with a 10cm localization error. The localization research addresses critical challenges such as cumulative error from IMU sensors, RSSI signal subject to refraction and attenuation, localization in complex environments, and multi-user localization. They also conduct a research human activity recognition,

mainly focusing on the sensor and

camera-based HAR approaches. This research addresses the challenges, including the diversity of age, postural transitions, missing values or labeling errors, selection of appropriate datasets, and selection of sensors. This emotion recognition also plays a significant role in the human intention prediction system. This research focuses on facial expressions from a smartphone camera and emotion recognition from physiological signals (ECG and speech). The emotion recognition research addresses the main challenges, such as data augmentation, face occlusion, lighting issues, racial differences, and identifying children's feelings. This study also uses videos to investigate the development of human pose and eye-tracking systems for human intention prediction. This research outcomes are identifying human location, activity, expression, posture, and eye movements by implementing advanced deep learning models. The major applications of this human intention prediction system are ambient assisted living, intelligent and healthy living, healthcare, indoor navigation, and abnormal activity detection.



Our system gets better results than existing methods in terms of accuracy and generalization. It is worth noting that the system is designed to be robust to various challenges such as data augmentation, face occlusion, lighting issues, racial differences, and identifying children's feelings. This study also uses videos to investigate the development of human pose and eye-tracking systems for human intention prediction. This research outcomes are identifying human location, activity, expression, posture, and eye movements by implementing advanced deep learning models. The major applications of this human intention prediction system are ambient assisted living, intelligent and healthy living, healthcare, indoor navigation, and abnormal activity detection.



DECENTRALIZED FEDERATED LEARNING, QUANTIZED AND BINARIZED DEEP LEARNING MODELS, EDGE NETWORKS

The development of AI-based solutions is even more significant in urban, rural, and remote areas, where the growing adoption of AI, Internet of Things, and edge computing technologies is hindered by several real-world challenges, including the country's diverse and dynamic environment. This situation aligns with the vision

to develop multiple decentralized EdgeAI solutions, focusing on creating collaborative, distributed, and automated systems for rural and urban communities. As the country experiences rapid digital growth, issues such as limited infrastructure, unreliable power supply, inefficient resource management, and high energy consumption pose significant barriers to the deployment and maintenance of edge networks. The existing solutions developed various scalable, autonomous, fault-tolerant and self-organized decentralized EdgeAI solutions by integrating lightweight (Quantized and Binarized) deep learning models. As per the previous works, Dr. Adhikari's team developed multiple types of decentralized EdgeAI solutions, including Federated Learning with Dynamic Neuron Dropout, Federated Learning with Nesterov Accelerated Gradient Momentum and Kullback-Leibler divergence, Federated Learning with Deep Reinforcement Learning, Stackelberg-Driven Personalization, Self-adaptive, and Semi-Asynchronous techniques, etc. This solution overcomes various problems of real-time applications, including reduction of communication overhead and energy usage, enhancing model accuracy while handling non-IID data, heterogeneous devices, and other performance metrics. Further, they developed different lightweight and robust models, namely momentum-assisted Binary Neural Network and Quantized Deep Learning models, to minimize quantization error, achieve smoother weight updates, and maximize the bit entropy for real-time deployment. This will have a significant impact on improving digital inclusion and infrastructure in rural/urban areas, enabling more reliable and efficient services across sectors. The novelty of the proposed solutions is to develop different edge federation models by managing failures and promoting scalability in edge networks with an edge orchestrator that integrates AI-driven automation to enhance self-organization.



Mainak Adhikari
Assistant Professor
(Grade I)



Priyanka Majumder
Assistant Professor
(Grade-I)

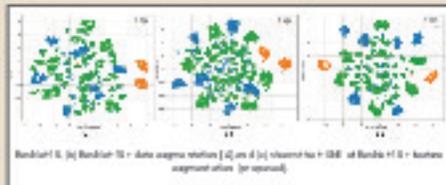
STATISTICAL INFERENCE, DESIGN OF EXPERIMENT, CLINICAL TRIALS, RELIABILITY THEORY, SURVIVAL ANALYSIS

Dr. Majumder's research area broadly lies in the field of Design of Experiments and Mathematical Theory of Reliability & Life Testing. In particular, cluster randomised trials, longitudinal data analysis, survival analysis, and stochastic orderings.

This year she has published two research works: one from clinical trials domain: where they have determined sample size requirements for each level for a four-level longitudinal cluster randomized trial via detecting the intervention effect over time. Optimal allocations accounting for subject attrition and cost constraints have been determined here. The effect of ignoring cluster levels in a four-level CRT, which is often the case in the absence of an appropriate four-level model, also studied in detail. Lastly, the proposed model has been illustrated via a real-life HIV prevention study conducted in the Bahamas. Another work is published from reliability theory domain: where they have explored the α -mixture model, a powerful tool for modeling the distributions of random samples from heterogeneous populations. They have conducted stochastic comparisons between two α -mixtures of survival/distribution functions in the sense of usual stochastic order, hazard rate order, and reverse hazard rate order, particularly when the sub-populations are derived from the location-scale family.

She has received a new project grant as a Co-PI from Telecom Technology Development Fund (TTDF), Department of Telecom (DOT), Government of India, and is continuing another project funded by SERB,

India.



DEEP LEARNING, IMAGE PROCESSING METHODS, MEDICAL IMAGING, IMAGE ANALYSIS.

Dr. Mathew's major research focus is in medical imaging with a focus on medical image reconstruction, regularization techniques, and deep learning. Contributions include quantitative susceptibility mapping (QSM) reconstruction in

MRI estimation of oxygen extraction fraction (OEF) from QSM and development of lightweight and energy efficient models for deployment. Additional work involves development of robust algorithms for breast cancer classification under limited data settings and real-time ultrasound imaging applications, particularly in nerve segmentation. Research interests encompass computational imaging methodologies, emphasizing regularization, compressed sensing, and deep learning for medical image reconstruction, while also extending to image analysis and other computational techniques tailored for clinical use. Current efforts are directed toward the development of end-to-end pipelines for OEF estimation, design of lightweight, computationally efficient deep learning models suited for point-of-care deployment. The broader objective is to advance biomedical computational imaging through both theoretical innovations and practical solutions, such as edge-device integration, to support clinicians in early and precise diagnosis.



Raji Susan Mathew
Assistant Professor
(Grade I)



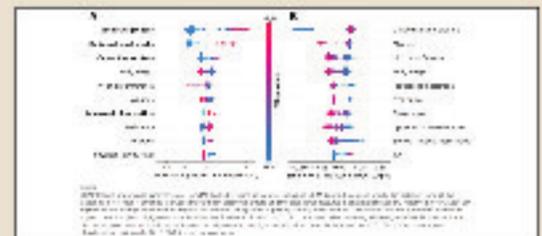
Saptarshi Bej
Assistant Professor
(Grade-I)

MACHINE LEARNING ALGORITHM DEVELOPMENT AND APPLICATIONS IN BIOMEDICAL SCIENCE

Dr. Bej's research focuses on advancing computational methods for analyzing complex biomedical and clinical datasets. He has developed a neural network-based Feature-type Distributed Clustering (FDC) framework using autoencoders (FDC-AE),

which outperforms traditional UMAP-based approaches in capturing structure within heterogeneous Clinical and Biomedical Routine Data (CBRD), especially in large-scale settings.

His work also critically reviews recent generative AI techniques for synthetic clinical data generation. These approaches, capable of modeling multi-table patient data, offer significant potential in privacy-preserving healthcare analytics, personalized medicine, and clinical research scalability.



In translational machine learning, Dr. Bej has applied supervised models to refine malnutrition diagnosis in chronic gastrointestinal disease. His analyses validate the GLIM criteria and identify additional anthropometric, compositional, and biochemical features, thereby improving diagnostic precision.

As a parallel line of exploration, Dr. Bej investigates neuromorphic computing for biomedical tasks. His studies on iontronic memtransistors (SG-IOMTs) suggest their promise for future low-power, brain-inspired computing in biomedical AI.

He has also introduced new metrics to evaluate logical and functional dependencies in synthetic tabular data and proposed MUDRA—an efficient multivariate extension of functional linear discriminant analysis—to tackle missing and fragmented multivariate time-series common in physiological data.

COPULA, DEGRADATION MODELLING, RELIABILITY THEORY, STATISTICAL INFERENCE

Dr. Ghosh's broad research area lies in the field of Applied probability and Statistics. Specifically in the field of Reliability Theory, Dependence Modelling using Copula and Stochastic Degradation Modelling. During the prescribed time period they have five published research articles. Their research contributions span across statistical methodology, stochastic modeling, wireless communication reliability, and fog computing. They introduced two classes of nonparametric tests for detecting departures from exponentiality toward Decreasing Mean Time to Failure (DMTTF) alternatives. One test family is built on a moment inequality framework, while the other leverages a quantile-based formulation of the mean time to failure. Both approaches offer exact and asymptotic properties, consistency, and improved power performance, supported by simulation studies and real data applications.

In another theoretical advancement, they studied stochastic comparisons between α -mixture models derived from location-scale families. By examining these models under various stochastic orders—including usual, hazard rate, and reverse hazard rate—they provided new insights into distributional behavior in heterogeneous populations.

In the domain of wireless communication, they addressed hardware ageing in Reconfigurable Intelligent Surfaces (RIS). They developed a statistical maintenance framework and a reliable communication model that account for both residual and non-residual hardware impairments, offering optimal strategies to extend system life and ensure transmission reliability.

Lastly, OptiFog, a cooperative fog-computing architecture, was proposed to predict fog node availability using a Markov chain model. This enables efficient task offloading, significantly reducing latency and improving fog-level scheduling performance.



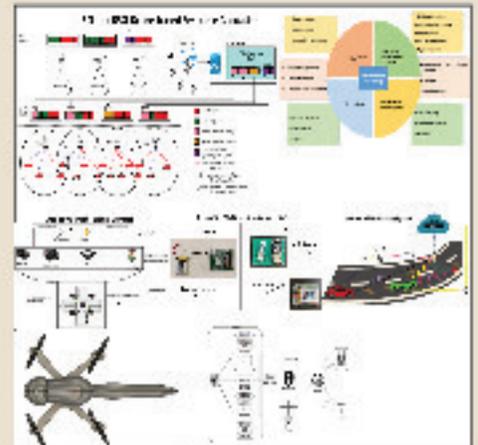
Shyamal Ghosh
Assistant Professor
(Grade I)



Suresh Chavhan
Assistant Professor
(Grade-I)

AI-DRIVEN NEXT-GENERATION COMMUNICATION AND NETWORKING SYSTEMS

Dr. Chavhan's research is at the forefront of AI-driven next-generation communication systems, with a strong focus on B5G/6G wireless networks, AI-assisted network slicing, and Edge intelligence for IoT. He integrates AI digital twins, and federated learning into real-time communication frameworks, targeting applications in autonomous vehicles, drone networks, and smart cities. His pioneering contributions include the development of AI-enabled Real-Time Location Systems (RTLS) using Ultra-Wideband (UWB) technology and the design of intelligent V2X communication systems to enhance pedestrian safety. He has also developed an Edge-AI-enabled adaptive traffic signal control system and an automated tool—combining a black-box tester and a security scanner agent deployed on



the target device itself—to identify generic security vulnerabilities and quantum-vulnerable cryptographic algorithms. Additionally, he is working on a dragonfly-inspired drone for pollination and Edge-AI-driven context-aware QoS optimization for B5G networks, along with predictive frameworks for V2X communication in smart cities.

Dr. Chavhan is the lead investigator of an industry-sponsored UWB-based RTLS project with Bosch Bangalore. He is currently executing funded projects, including the modeling of deformation behavior in carbon fiber-reinforced high-end thermoplastics under the Indo-Russian DST program, and real-time adaptive QoS optimization in 6G-enabled V2X communication for smart cities using Edge-AI under the ANRF scheme. His publications

in high-impact journals such as the IEEE Internet of Things Journal, IEEE Transactions on Consumer Electronics and the IEEE Systems Journal address real-world challenges in IoT, intelligent transport systems, and energy-aware networks. He has been recognized with prestigious awards, including the IEEE Systems Journal Best Paper Award and IEEE Madras Section's Publication Award. He is IEEE Senior Member and ACM Member. In addition, he serves on editorial boards and international technical committees. His interdisciplinary approach and commitment to translational research position him as a thought leader in intelligent and autonomous network systems for future digital infrastructure.

THEORETICAL COMPUTER SCIENCE: ALGORITHMS AND COMPLEXITY, GRAPH THEORY, AND COMBINATORICS

Dr. Antony's research lies at the vibrant intersection of Algorithms & Complexity, and Graph Theory, with a central focus on uncovering how structural properties of graphs shape computational complexity and algorithm design. A significant part of her work explores graph modification problems, particularly Subgraph Complementation and Seidel's Switching, where she has established complexity dichotomies that precisely delineate the boundary between tractable and intractable cases for several well-structured graph classes.

Her recent research deepens the connections between domination, coloring, and clustering in graphs through the study of CD-coloring, Total Domination, and Separated-Clusters. In this direction, they introduced the notion of *cd-perfectness*, a unified framework inspired by the classic concept of *perfectness* in graph theory, which enables both structural characterizations and efficient algorithms for important graph classes.

Complementing this, they have advanced the understanding of graph burning, a problem motivated by modeling the spread of information or influence in networks. Their work provides the computational complexity of obtaining burning number (measure of time required to completely burn a graph) and establishes tight upper bounds for burning numbers in various graph classes, thus making significant progress towards settling the longstanding Burning Number Conjecture. Furthermore, they have explored intriguing new variants, namely edge burning and total burning, providing complexity results and revealing their intricate relationships with classical graph burning, which resolves a key open question on total burning.

More recently, her research has turned towards the inversion number problem where their objective is to find the minimum number of inversions needed to make a digraph acyclic. At the heart of her research is a deep curiosity about how structural insights can drive the development of efficient algorithms and complexity classifications for hard combinatorial problems. Broadly, she strives to bridge theoretical advances with practical relevance, contributing to the foundations of graph algorithms and combinatorial optimization.



Dhanyamol Antony

*Assistant Professor
(Grade II)*



Photo: Parthiban, Electrical substations team, IISERTVM

Research Reports

04

School of Earth, Environmental
and Sustainability Sciences



SoEESS



SoDS



SoM



Anand N.
Assistant Professor
(Grade-I)

ATMOSPHERIC OPTICS, AEROSOLS, BOUNDARY-LAYER METEOROLOGY, FREE-SPACE OPTICAL COMMUNICATION

Dr Anand's research focuses on atmospheric optical propagation. Their group integrates in situ, balloon-borne, and satellite observations of the lower atmosphere, along with radiative transfer modelling, are used to study the effects of atmospheric turbulence and aerosols on terrestrial and satellite-to-Earth Free-Space Optical (FSO) communication links. In their recent publication in JGR Atmospheres (2025), the group reported the vertical distribution of black carbon aerosols over a Central Indian site, using a series of high-altitude balloon flights. Their results revealed distinct highaltitude aerosol layers during both winter and summer seasons. Further analysis of air traffic movements and trajectory analysis showed a significant contribution, from short and longhaul aircraft emissions to these elevated aerosol layers. In another study published by the group in JASTP (2025), they examined 2019 Australian bushfire event led to the addition of a large amount of atmospheric aerosols, which, combined with drought-enhanced surface albedo, increased outgoing shortwave radiation at the top of the atmosphere. Their results indicate that the impact of the black summer event on the aerosol loading is higher than previously reported.

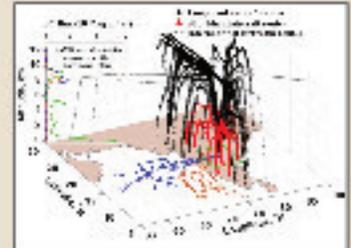


Figure 10. 3D vertical distribution of black carbon aerosols over a Central Indian site, showing distinct highaltitude aerosol layers during both winter and summer seasons.

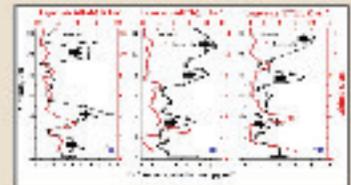
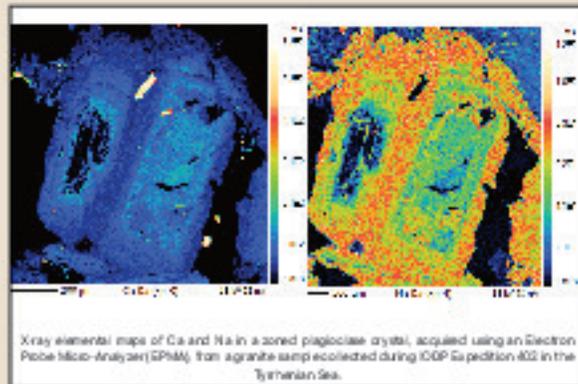


Figure 11. Trajectory analysis of air traffic movements and aerosol layers during the 2019 Australian bushfire event.

shortwave radiation at the top of the atmosphere. Their results indicate that the impact of the black summer event on the aerosol loading is higher than previously reported.



X-ray elemental maps of Ca and Na in a zoned plagioclase crystal, acquired using an Electron Probe Micro-Analyzer (EPMA), from a granite sample collected during IODP Expedition 402 in the Tyrhenian Sea.

IGNEOUS PETROLOGY, GEOCHEMISTRY, AND MINERALOGY

Special emphasis in Dr. Ashutosh's lab is placed on the study of the Panjal Traps in the Kashmir Valley, which erupted 290 million years ago, and the Rajahmundry Traps of Andhra Pradesh, which erupted 66 million years ago. II. Alkaline magmatism and their geodynamic implications. Their group investigates alkaline rocks host precious and rare-metal mineralization critical for modern



Ashutosh Pandey
Assistant Professor
(Grade I)

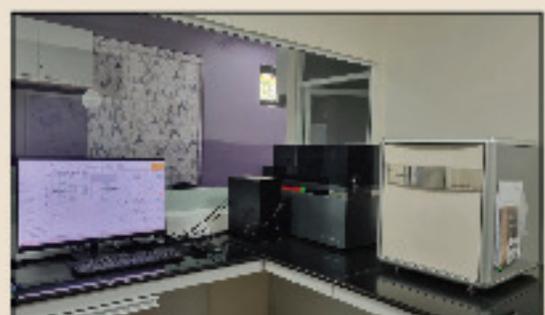
technologies. The lab focus to understand the genesis of alkaline magmatism from Southern India (Kerala and Telangana) and their geodynamic implications. III. Geodynamic evolution of Tyrhenian Continent-Ocean Transition (COT). The lab also conducts research on the exhumed mantle samples recovered from drilling in the Tyrhenian Sea by the research vessel JOIDES Resolution during the International Ocean Discovery Program (IODP) Expedition 402. This work aims to provide significant insights into the origin of Earth's mantle heterogeneity, the mechanisms involved in continent break-up, and the emergence of oceans.



Bhavya P. S.
Assistant Professor
(Grade-I)

MARINE BIOGEOCHEMISTRY, AQUATIC POLLUTION, STABLE ISOTOPE BIOGEOCHEMISTRY

Marine biogeochemistry, Aquatic Pollution, Stable isotope biogeochemistry. Dr. Bhavya's lab focuses on understanding the challenges marine scientists face lies in navigating the enigmatic qualities of the ocean, its ever-shifting dynamics, and its inherent unpredictability, particularly in the context of rapid changes in the climate. The lab emphasizes the importance of documenting how the ocean responds to environmental variations, enabling researchers to monitor and assess the combined effects of natural processes and human-induced influences. Their group employs stable

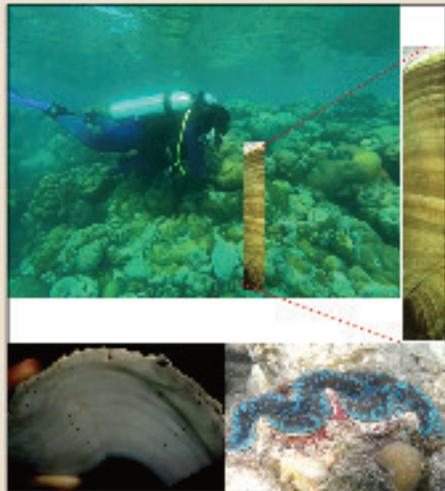


Establishment of the stable isotope laboratory, equipped with a stable isotope ratio mass spectrometer and CDB analyzer.

isotopic techniques to trace environmental processes and quantify metabolic rates in marine phytoplankton. Additionally, investigations extend into the microscopic analysis of metabolic rates at the cellular level to identifying the key contributors to the carbon and nitrogen cycling within aquatic ecosystems.

Key research interests of the group:
 Nitrogen and carbon cycling in aquatic ecosystems.
 Stable isotope techniques (N and C).

Isotopic food web in the aquatic and terrestrial environments.
 Impacts of climate change on the phytoplankton, primary production, and N₂ fixation.
 Anthropogenic influence on coastal and estuarine ecosystems.
 Cell-specific N₂ fixation and symbiotic relationships of diatoms and diazotrophs.



PALEOCLIMATE RECONSTRUCTION, GEOCHEMISTRY, EXTREME EVENTS, OCEAN-ATMOSPHERE TELECONNECTION PROCESSES

Dr. Fousiya's lab focuses on Paleoclimate reconstruction, Geochemistry, Extreme events, and Ocean-atmosphere teleconnection processes. The lab uses Coral Porites and Giant clam shell as natural archives to generate high resolution records of Past environmental conditions and Extreme Events. Specimens collected from regions such as Lakshadweep Island provide valuable material for reconstructing seasonal temperature variations and sea-surface salinity changes through stable isotope analyses. Sectioned Tridacna shells, with their clearly defined growth bands, allow detailed reconstruction of past climate events over recent centuries.

Key research area of the group
 I. High resolution Paleoclimatic reconstruction.

using stable isotope & geochemistry, focusing on climate change and its impact on marine calcifiers (corals and giant clams).

- II. Holocene sea-level changes, radio carbon dating to understand past climate shifts, and environmental variations using carbon, oxygen, and nitrogen isotopes in mangrove sediments.
- III. current project attempts to investigate coral bleaching, extreme events, and anthropogenic influences on marine ecosystems through geochemical tracers, microstructural, and heavy metal pollution from the Lakshadweep region, Arabian Sea.
- IV. Examines stable isotopic characteristics of daily precipitation in the Indian Peninsular region to understand monsoon variability and teleconnection processes



Fousiya A. A.
 Assistant Professor
 (Grade-I)



Pramitha M.
 Assistant Professor
 (Grade-I)

ATMOSPHERIC SCIENCE

Dr. Pramitha's lab focuses on Atmospheric Science, with a particular emphasis on understanding the dynamics and chemical composition of the middle atmosphere. The lab aims to investigate key atmospheric processes, including the behaviour of various wave modes in both tropical and extratropical regions and their influence on major circulation patterns such as the stratospheric Brewer-Dobson Circulation and the Quasi-Biennial Oscillation.

The research group also studies how the tropopause inversion layer varies with latitude and how its structural characteristics can be used to quantify Hadley cell metrics. Another important aspect of the lab's work involves examining how atmospheric chemical composition changes under different atmospheric phenomena.

To achieve these objectives, the lab integrates multiple approaches, including ground-based observations, satellite measurements, reanalysis datasets, and climate-model simulations.

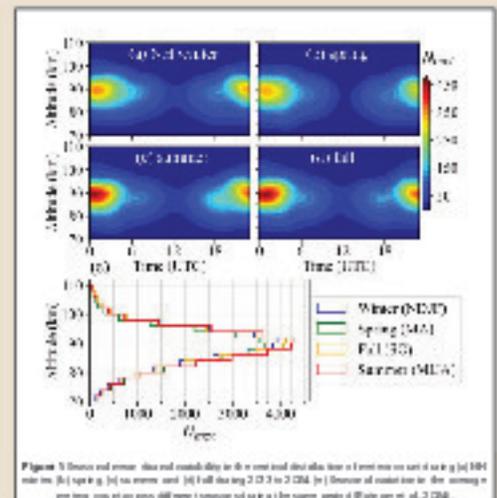
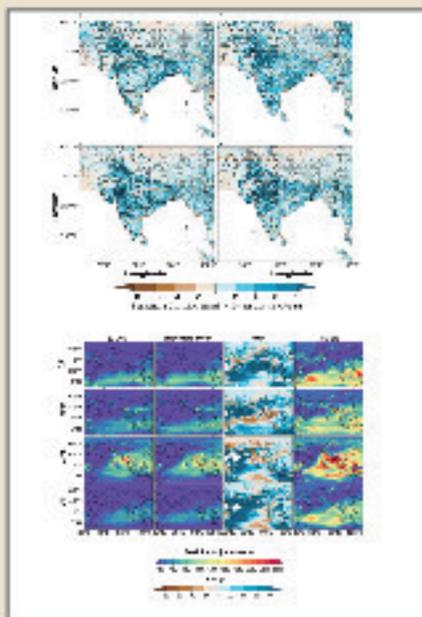


Figure 3. Ozone and water vapor variability in the mid-latitude stratosphere. (a) Ozone (DU) and (b) Water Vapor (ppmv) for the period 2010-2014. (c) Ozone (DU) and (d) Water Vapor (ppmv) for the period 2015-2019. The color scale on the right indicates values from 0 to 150. The legend indicates the seasonal cycle: Winter (NDJF), Spring (MAM), Fall (SON), and Summer (JJA).



LAND-ATMOSPHERE INTERACTION AND CLIMATE MODELING, HYDROLOGY, AND AGRICULTURE

Dr Prasanth's lab focuses on Land-Atmosphere Interaction and Climate Modeling, Hydrology, and Agriculture. The key component of the lab's work involves analysing Vegetation Cover Trends across India: Significant FCOVER increases across most Indian agro-climatic zones over the past 20 years, particularly during the monsoon season, detected via Sen's slope and Mann-Kendall test, except in the island region. The lab also explore Climate-Vegetation Dynamics by employing MLR model and Pearson correlation techniques. These analyses reveal strong links between FCOVER and climate variables, aiding sustainable land management specially in regions with sparse vegetation areas. In addition the lab has introduced a comprehensive Novel Ranking Methodology: ranking method (RM3) to evaluate GCMs across multiple variables and pressure levels, this approach enhances the enhancing regional downscaling accuracy and reduces model selection uncertainties. Using Model Performance Insights: The lab identifies HadGEM3-GC31-MM, EC-Earth3-Veg, and EC-Earth3-CC as top performing models, while MCM-UA-1-0 and KIOST-ESM Show weaker performance. The RM3 framework effectively minimizes biases, leading to improved precipitation simulations and more reliable climate-impact assessments.



Prasanth Valayamkunnath
Assistant Professor
(Grade I)

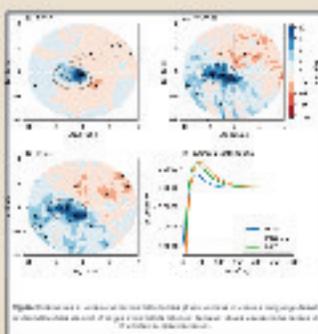
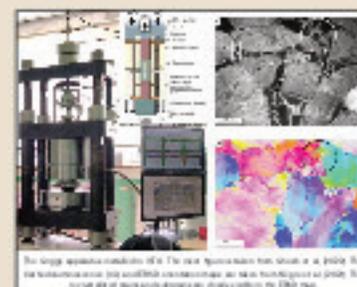


Subhajit Ghosh
Assistant Professor
(Grade-I)

STRUCTURAL GEOLOGY, RHEOLOGY, ROCK DEFORMATION EXPERIMENTS, MATERIAL CHARACTERIZATION

Dr Subhajit's lab focuses on Structural geology, Rheology, Rock deformation experiments and Material characterization

- The research group integrates field-based and experimental rock deformation (High Pressure and High Temperature) to understand how microstructures and creep processes observed in exhumed rocks relate to stress, temperature, and strain rate conditions deep within the Earth.
- The central objective of the group is to constrain the rheology and flowlaws of different geomaterials such as quartz, feldspar, diopside.
- The lab also investigates the role of secondary mineral and fluid fractions on the processes of strain localization. Additionally, the group focus to understand and is date the relative contribution of different weakening processes in the subsequent evolution of fault-zone material properties.
- The lab employs a combination of laboratory-based and numerical modelling techniques and tectonic reconstructions (geological mapping, cross-sections etc.) to quantify the deformation and forces associated with large-scale geodynamic processes.



TROPICAL METEOROLOGY & MONSOON DYNAMICS

Dr. Vishnu's lab focuses on Tropical Meteorology & Monsoon Dynamics With an emphasis on understanding the behaviour of monsoon related weather systems, the influence of large scale climate factor and the response of tropical storms to a warming climate.

Research Theme

- Monsoon Low-Pressure Systems:** The lab investigates climate driven shifts and interannual-decadal variations in monsoon low-pressure systems, with a focus on their impact on hydrological extremes.
- Seasonal Extremes of the Indian Summer Monsoon:** The research Explores about the relationship between seasonal extremes of the Indian summer monsoon and Indo-Pacific climate factors.
- The lab also examines how Tropical weather vortices respond to different warming scenarios and assesses their implications for vulnerable



Vishnu S. Nair
Assistant Professor
(Grade I)

coastal regions.

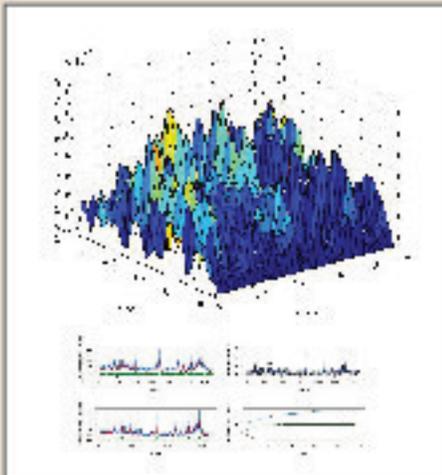
- Tropical Storms and Convergence Zones:** Lab also Examine the two-way interaction between prolonged convergence zone movement and offer insights into the genesis of monsoon low-pressure systems.
- Weather System Tracking:** Utilizing advanced model simulations, the lab works on climate models to track weather systems to enhance research outcomes and improve forecast accuracy for the genesis, track, and intensity of low-pressure systems in weather prediction models.

Research Reports

05

School of Mathematics





NUMERICAL FUNCTIONAL ANALYSIS
FUNCTIONAL ANALYSIS
MATHEMATICAL FINANCE/
FINANCIAL ENGINEERING
MATHEMATICAL BIOLOGY/
ONCOLOGY; PDES
MACHINE LEARNING AND DATA
SCIENCE RESEARCH



Rajan M. P.
Professor

Numerical Functional Analysis/ Functional Analysis/PDEs: The research focus on solving inverse and ill-posed problems. The idea is to get stable approximate solution for problems that are ill-posed in nature. Also work on, a certain class of parameter identification problems in PDEs that are non-linear in nature; Singular perturbations problems in PDEs

Financial Engineering/Mathematical Finance: This multidisciplinary research area focus on developing financial models that integrates financial theory, the methods of engineering, the tools of mathematics

and the practice of programming. The volatility estimation is one of the interesting and challenging areas in Financial Engineering for both academicians and practitioners. Our interest is to use more sophisticated models to estimate the volatility from the real time data.

Mathematical Biology/Oncology: The research focus upon studying the tumour modelling and treatment of Cancer through a mathematical approach.

Machine Learning and Data Science Research: Data science research is an interdisciplinary field that make use of mathematics, statistics and computer science applicable to various domain such as Banking, Financial Services and Insurance (BFSI), Health Care, Genetics and many scientific areas. Data plays a big role in the modern digital world. Machine Learning and Artificial Intelligence are modern techniques used to discover hidden truth behind the data. The research focus upon developing new algorithms in this direction.



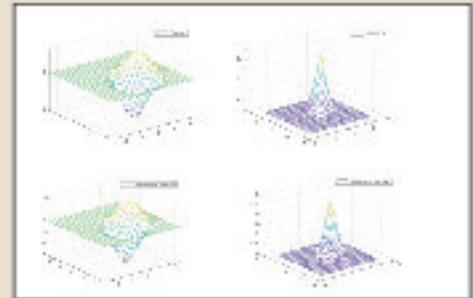
P. Devaraj
Professor

HARMONIC ANALYSIS

The research deals with the analysis of certain convolution operators on locally compact groups. For a given compactly supported measure on a locally compact group, the convolution of a continuous function with a measure gives the local moving averages of the function considered. The main focus of the analysis has two parts namely, analysing the range of such operators and providing suitable methods for reconstruction of continuous functions from their local moving averages.

Certain computational aspects of above research focuses upon reconstruction of the analog signals from their digitized versions called samples (or local weighted average samples) over various signal classes like shift invariant spaces and spline spaces.

Besides these, another research includes the duality principle in Gabor analysis.



STOCHASTIC PARTIAL DIFFERENTIAL EQUATIONS, ANALYSIS AND CONTROL OF FLUID FLOW PROBLEMS, LIQUID CRYSTALS AND FERROMAGNETISM

Our work in stochastic partial differential equations arises mostly from fluid dynamics, magnetisation and other physical problems (e.g. Navier-Stokes equations, magneto-hydrodynamic systems, Landau-Lifshitz-Gilbert equations in ferromagnetism, nematic liquid crystal model, Schrodinger equation, viscoelastic fluids etc.) driven by Wiener or Levy processes. We study existence, uniqueness, regularity, large deviation, control and other statistical properties of these kind of problems using tools from stochastic analysis, harmonic analysis, non-linear functional analysis, differential geometry and PDE theory. In recent times, our team is working on understanding the phase transition phenomena in the ferromagnetic materials below the critical temperature.



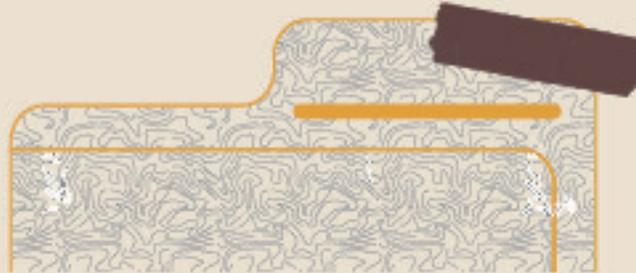
Utpal Manna
Professor



Viji Z. Thomas
Professor

COMMUTATIVE ALGEBRA, HOMOLOGICAL ALGEBRA, GROUP THEORY

In the past few years, we have been working on Schur's exponent conjecture, which states that for a finite group G , the exponent of the second homology of G with integer coefficients divides the exponent of G . We have proved Schur's exponent conjecture in several cases. We have also given bounds on the size of Schur multiplier of special p groups improving all previously known bounds for this class and thereby addressing a question of Berkovich.



CONTROL THEORY, PARTIAL DIFFERENTIAL EQUATIONS, FLUID FLOW MODELS

Our research group is looking at optimal control problems for fluid flow equations. In particular, we are looking at coupled systems where the Cahn-Hilliard equation is coupled with dynamics equations like Navier-Stokes' equation (CHNS), Brinkman (CHB) equations etc. The main theme of our work is to prove the existence of optimal control for a suitable control problem subjected to given equations. Currently, we are exploring boundary control problems where the well-posedness of the equation needs to be addressed before considering control problems. We have recently studied the existence, uniqueness and regularity of one such system, namely the local CHNS system with regular potential. Similar questions for the CHB system are being analyzed. Controllability for these equations is a completely open question and we are also investigating these problems.



Dharmatti Sheetal
Associate Professor



Geetha Thangavelu
Associate Professor

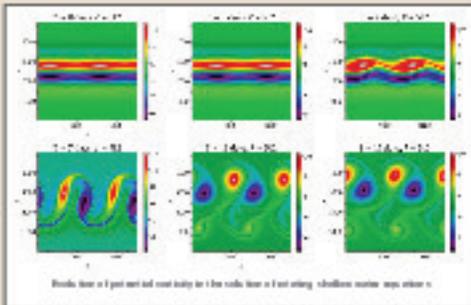
REPRESENTATION THEORY

My research lies in the representation theory of finite groups and finite-dimensional algebras, with a particular focus on modular representation theory of diagram algebras such as Brauer and partition algebras, along with their generalizations. These algebras frequently arise in the context of Schur-Weyl duality and play a central role in understanding the invariant theory of certain groups from the representation theory of diagram algebras.

I also study Hecke algebras, Ariki-Koike algebras, and quantum analogs of diagram algebras, exploring their rich structure and applications within both mathematics and mathematical physics. Another significant strand of my work involves Schur algebras, especially those that appear as centralizer algebras in Schur-Weyl duality. Our recent efforts focus on developing a deeper understanding of various Schur algebras associated with diagram algebras.

From the perspective of mathematical physics, I investigate connections with the Yang-Baxter equation—originally formulated in statistical mechanics and now influential across areas such as quantum groups, knot theory, quantum computing, and integrable systems. A key tool in this domain is the *fusion procedure*, a technique for constructing new solutions to the Yang-Baxter equation from known ones. I use different forms of the fusion procedure to study the representation theory of diagram algebras.

More recently, my research has turned toward the **homological stability** of diagram algebras. This involves applying tools from homological algebra and ring theory to understand how the (co)homological properties of these algebras behave as their defining parameters grow. This work aims to reveal deeper structural patterns and long-range stability phenomena within families of diagram algebras.



FINITE VOLUME SCHEMES

My research focuses on high-order, structure-preserving numerical schemes for multiscale Euler-type systems arising in plasma physics and fluid dynamics. Emphasis is placed on asymptotic preservation, energy stability, and well-balanced properties under singular limits such as the quasineutral, anelastic, and congestion regimes. The proposed semi-implicit Runge-Kutta methods and finite volume schemes ensure robust and accurate simulations across regimes, without resolving small-scale stiffness, thereby advancing



K. R. Arun
Associate Professor

reliable computational tools for modelling compressible flows with complex physical constraints.

K. R. Arun and N. Crouseilles and S. Samantary. High Order Asymptotic Preserving and Classical Semi-implicit RK Schemes for the Euler-Poisson System in the Quasineutral Limit. *J. Sci. Comput.* 100 (2024), no. 1, Paper No. 24, 34 pp.

K. R. Arun and M. Kar. An energy stable well-balanced scheme for the barotropic Euler system with gravity under the anelastic scaling. *Numer. Methods Partial Differential Equations* 41 (2025), no. 1, Paper No. e23168, 23 pp.

K. R. Arun, A. Krishnamurthy and H. Mahama. An asymptotic preserving and energy stable scheme for the Euler system with congestion constraint. *Appl. Math. Comput.* 495 (2025), Paper No. 129306, 19 pp.

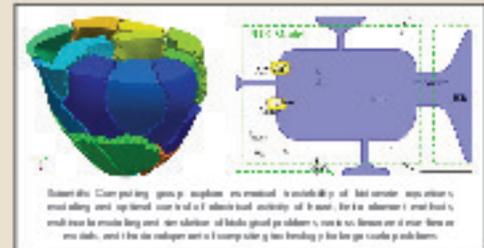
K. R. Arun and R. Ghorai. An asymptotic preserving scheme for the Euler-Poisson-Boltzmann system in the quasineutral limit. *Comput. & Math. Appl.* 185 (2025), 28 pp.



Nagaiah Chamakuri
Associate Professor

OPTIMAL CONTROL OF PDES, NUMERICAL ANALYSIS AND SCIENTIFIC COMPUTING, COMPUTATIONAL BIOLOGY AND HIGH-PERFORMANCE COMPUTING (HPC), SCIENTIFIC MACHINE LEARNING

Our research focuses on the theoretical and computational exploration of PDE constrained optimization within the realms of monodomain/bidomain models prevalent in cardiac electrophysiology. These models encompass mixed control-state constraints. The monodomain model, consisting of coupled reaction-diffusion equations with cubic nonlinearity and an ordinary differential equation, forms the basis of our investigation. The bidomain model includes an elliptic PDE and a nonlinear parabolic PDE with reaction terms from ODEs. We develop numerical methods for simulating cardiac electrophysiology, focusing on ventricular fibrillation. Three strategies are compared: fully coupled, traditional decoupled, and a novel partitioned approach. Our main contribution is a partitioned bidomain method using spectral deferred correction for stability and speed. To handle high memory demands



from ionic models, we use a compile-time sparse matrix technique. This approach efficiently solves the nonlinear PDE and the ODE systems governing ionic dynamics. We derive the first-order necessary optimality condition utilizing Pontryagin's minimum principle, further augmenting the cost function with a non-smooth term to induce sparsity in the optimal control. Establishing the existence of optimal control, we studied into the twice Fréchet differentiability of the control-to-state operator. Hamiltonians pertinent to the problem are defined, and Pontryagin's principle for optimal control is derived through Ekeland's variational principle. We concluded by presenting a comprehensive proof of the sufficient second-order optimality condition with mixed control-state constraints. Numerical solutions are attained via finite element and projected gradient methods, with an analysis of control sparsity achieved by varying regularization parameters.



LINEAR ALGEBRA & MATRIX ANALYSIS

Sachindranath's research interests are in linear algebra and matrix analysis. His current interests are in the following topics: (1) numerical linear algebra, mainly on location & perturbation of eigenvalues of quaternion matrix polynomials (2) linear preserver problems (3) problems concerning regular functions of a quaternion variable and (3) other core problems in linear algebra and matrix analysis. More specifics can be found in the arXiv page or ORCID page (0000-0002-4033-4932).

**Sachindranath
Jayaraman**

Associate Professor



CATEGORY THEORY, DIFFERENTIAL GEOMETRY

Main focus of research is connection structure over Lie groupoid torsors and stacks.



Saikat Chatterjee

Associate Professor



ALGEBRAIC GEOMETRY

Currently, my research focused on Wobbly bundles in various contexts and the study of endomorphisms of Fano manifold with special properties. More precisely, I am trying to study the conjecture on the endomorphism of Fano Manifolds.

Sarbeswar Pal

Associate Professor



COMPLEX DYNAMICS AND ERGODIC

Holomorphic, non-invertible dynamical systems of the Riemann sphere are surprisingly intricate and very captivating. Our research interests focus mainly on such complex dynamical systems. We have contributed towards various aspects in finer analysis of Julia sets of maps: polynomials, rational functions and closed. We also work on systems of holomorphic etc, both open correspondences, correspondences generated by a finite rational semigroup, ergodic theory and other related areas.

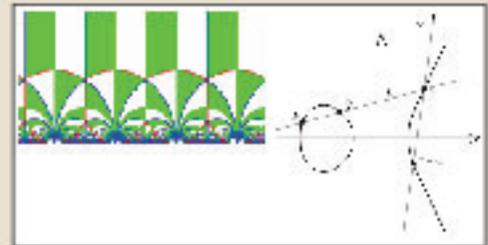


Shrihari Sridharan
Associate Professor

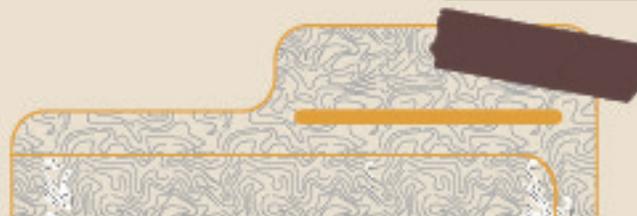


NUMBER THEORY, GRAPH THEORY AND COMBINATORICS

My primary areas of interests are Arithmetic Geometry (Elliptic curves, modular forms & Galois representations), Analytic, Algebraic and Additive number theory. Secondary areas of interests are Graph Theory and Combinatorics.

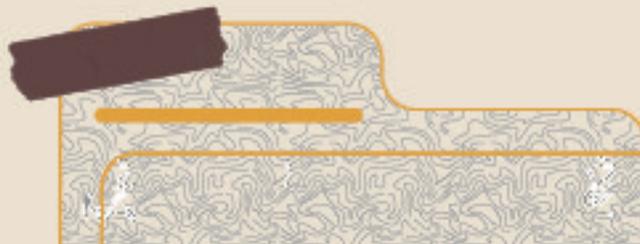


Srilakshmi K.
Associate Professor



ELLIPTIC PARTIAL DIFFERENTIAL EQUATIONS

Recently, we have developed a keen interest in studying elliptic problems that involve double-phase operators, specifically the p - q Laplacian and fractional p - q Laplacian. Our focus lies in establishing the qualitative properties of solutions to these problems. This encompasses investigating the existence, uniqueness, and multiplicity of solutions for nonlinear problems that incorporate double-phase operators. Furthermore, we are actively exploring parameter estimates, regularity results, and other related aspects.



Dhanya Rajendran
Assistant Professor



Dond Asha Kisan
Assistant Professor

NUMERICAL ANALYSIS, FINITE ELEMENT METHODS

Our research interest includes studying the finite element methods (FEM), adaptive FEM, stabilized FEM, and convergence analysis of these methods for the second-order elliptic partial differential equations. Finite element methods are elegant and powerful techniques used to compute the numerical solution of initial and boundary value problems. Furthermore, adaptive FEM is a well-known algorithm for computing numerical solutions with minimal computational effort. The main aim of my research work is to establish a priori and a posteriori finite element analysis for various elliptic equations and validate it with numerical simulations.



ALGEBRAIC NUMBER THEORY AND SIEVES

My primary research interest lies in tackling problems that arise in Algebraic number theory using techniques from Global class field theory, Sieve theory and Multiplicative number theory. I have worked on problems related to finding Euclidean domains among rings of integers, Artin's primitive root conjecture, Linnik's problem, Hasse failures and Analogues of the Brun-Titchmarsh theorem.



Jyothsna S.
Assistant Professor



FUNCTIONAL ANALYSIS AND OPERATOR THEORY

1. Ashish Kujur and Md. Ramiz Reza, *Toeplitz Operators on the Dirichlet Space and the Brown Halmos Operator Identity*, *Banach Journal of Mathematical Analysis*, Volume 19, article 42, (2025), <https://doi.org/10.1007/s43037-025-00434-5>



Mohammed Ramiz Reza
Assistant Professor



COMMUTATIVE ALGEBRA

Main area of interest is prime characteristic methods in commutative algebra and its interaction with combinatorics.



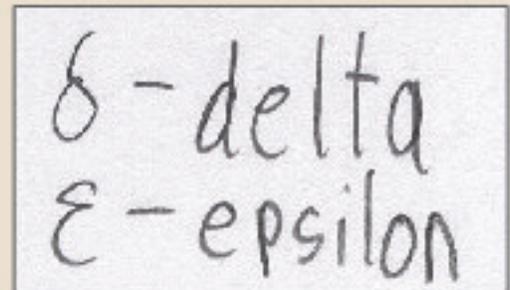
Mitra Koley
Assistant Professor



Samya Kumar Ray
Assistant Professor

ANALYSIS

My broad areas of research are functional analysis and harmonic analysis. My principle area of research is analysis on noncommutative L_p -spaces. Primarily, I am interested in establishing noncommutative analogues of classical results in harmonic analysis, ergodic theory and functional analysis. I am equally interested in purely classical problems in operator theory, harmonic analysis and functional analysis. More specifically, my current interests lie in the study of noncommutative maximal ergodic inequalities for actions of semisimple Lie groups and individual ergodic theorems, noncommutative maximal inequalities for ball averages on symmetric spaces, noncommutative Calderón-Zygmund operators, isometries between noncommutative L_p -spaces, Parrot-like homomorphisms, von Neumann inequality and connection to random matrices, Grothendieck inequality and Banach space geometry, joint p -polynomial boundedness and column-row property on operator spaces. In past, I have also worked on functional calculus of Ritt operators, multivariate



Halmos similarity problem, dilation on commutative and non-commutative L_p -spaces and Matsaev's conjecture, isometric embeddability between noncommutative L_p -spaces and column-row property. I use various tools from operator algebras, operator space theory, probability theory, Fourier analysis and geometry of Banach spaces in my research.

HYPERBOLIC CONSERVATION LAWS, HIGH-ORDER SCHEMES, CONSERVATION LAWS WITH DISCONTINUOUS FLUX, FLOW IN POROUS MEDIA

The Lax-Wendroff method is a single step method for evolving time dependent solutions governed by partial differential equations, in contrast to Runge-Kutta methods that need multiple stages per time step. We develop a flux reconstruction version of the method in combination with a Jacobian-free Lax-Wendroff procedure that is applicable to general hyperbolic conservation laws. The method is of collocation type, is quadrature free and can be cast in terms of matrix and vector operations. Special attention is paid to the construction of numerical flux, including for non-linear problems, resulting in higher CFL numbers than existing methods, which is shown through Fourier analysis and yielding uniform performance at all orders numerical results up to fifth order of accuracy for linear and non-linear problems are given to demonstrate the performance and accuracy of the method.

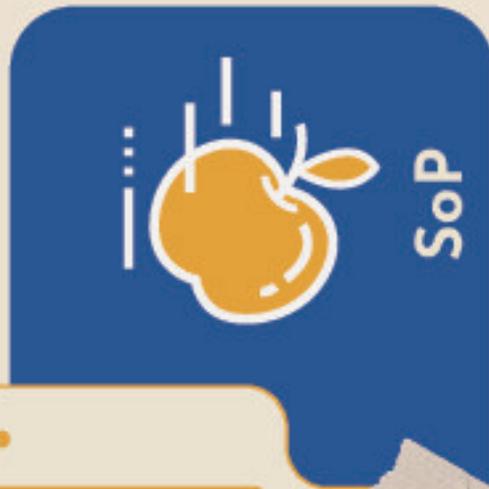


Sudarshan Kumar K.
Assistant Professor

Research Reports

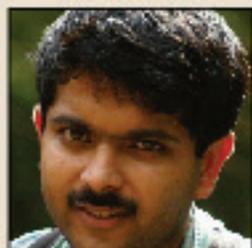
06

School of Physics



SoM



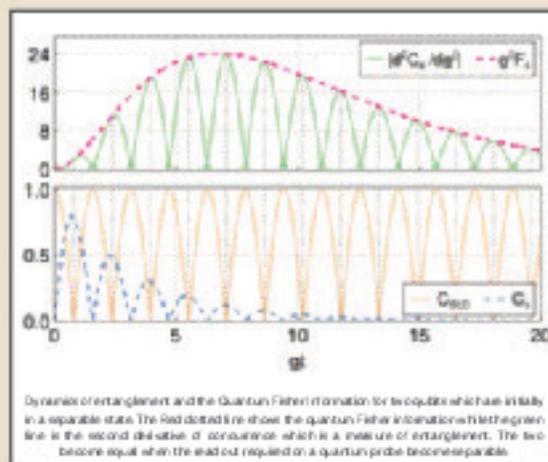


Anil Shaji

Professor

QUANTUM COMPUTING, INFORMATION THEORY AND QUANTUM TECHNOLOGIES. OPEN QUANTUM DYNAMICS, SIMULATION OF MOLECULAR SYSTEMS ON QUANTUM COMPUTERS, QUANTUM BIOLOGY.

The Quantum Cramer Rao bound furnishes the ultimate limits on the precision that can be obtained in a measurement process. The bound is phrased in terms of the quantum Fisher information while, in practice, achieving the bound involves using quantum resources like entanglement and



Dynamics of entanglement and the Quantum Fisher information for two qubits who have initially in a separable state. The red dotted line shows the quantum Fisher information with the green line is the second derivative of concurrence which is a measure of entanglement. The two become equal when the read out required on a quantum probe becomes separable.

quantum coherence. One of the key directions of research taken up in the past year involves finding a direct connection between the quantum Fisher information and measures of entanglement.

Another research area that was pursued was modelling the evolution of quantum fields using present-day quantum computers. Using the light-cone formulation of the theory we showed that it is possible to simulate simple field theories on a few qubits and extract useful and measurable quantities out of the simulation.

Identifying the resources that make mixed state quantum computing possible was another of research taken up by the group during the past year. We traced how quantum correlations flow through a ladder shaped quantum cluster state as measurements are done progressively on the quantum bits that are part of the large cluster state.

Other areas of research pursued by the group included simulation of solid-state physics models on currently available quantum hardware with the aim of detecting signatures of quantum chaos in the form of scars in such states. The group is continuing research into the theory of non-Markovian open quantum dynamics and generating a simple catalog of the consequences of various simplifying assumptions that are necessarily made when mathematically describing such dynamics. As support to the ongoing project in IISER TVM on building a few-qubit quantum computer using silicon quantum dot-based qubits, theoretical support in terms of materials and device modeling is also done in the group. One-sided device-independent quantum key distribution, non-classical correlations in three party scenarios, machine learning for improving quantum gates in specific architectures etc. are other related projects taken up the group members.

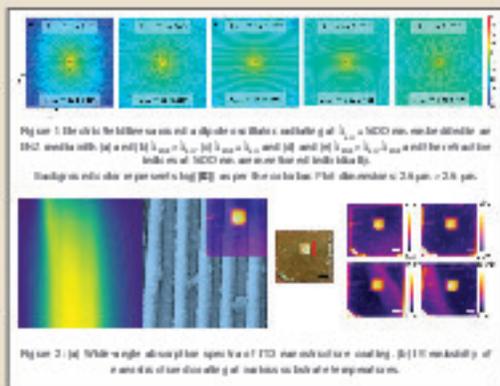


Fig 1: The left to the right we see the intensity profile of $k_x = 0$, $k_x = \pi/2$, $k_x = \pi$, $k_x = 3\pi/2$, and $k_x = 2\pi$ respectively. The color scale is in units of 10^{-4} W/m². The right to the left we see the intensity profile of $k_x = 0$, $k_x = \pi/2$, $k_x = \pi$, and $k_x = 3\pi/2$ respectively. The color scale is in units of 10^{-4} W/m².

Fig 2: (a) Intensity profile of the ITO nanowire. (b) Intensity profile of the ITO nanowire. (c) Intensity profile of the ITO nanowire. (d) Intensity profile of the ITO nanowire.

EXPERIMENTAL CONDENSED MATTER PHYSICS

Prof. Joy Mitra's research group investigates fundamental physical phenomena at surfaces and interfaces using advanced spatially and temporally resolved spectroscopic, electrical, and optoelectronic techniques. A key focus is on light-matter interactions in epsilon-near-zero (ENZ) systems, where materials like indium tin oxide (ITO) exhibit unique electromagnetic responses near their zero-permittivity regime. His group has demonstrated the use of nanostructured ENZ coatings for wide-angle, band-selective infrared absorption

and efficient thermal emission—paving the way for applications in sensing, energy harvesting, and thermal management. Parallely, the group explores the physics of two-dimensional materials, especially transition metal dichalcogenides (TMDCs). Through strategies such as strain engineering and domain patterning, they have enhanced TMDC properties, including charge mobility, valley polarisation, and photoluminescence. Functional ion irradiation is also employed to tailor their optoelectronic and catalytic behaviour. Using advanced tools the group probes nanoscale charge and plasmonic dynamics to innovate in quantum and infrared optoelectronics.



Joy Mitra

Professor

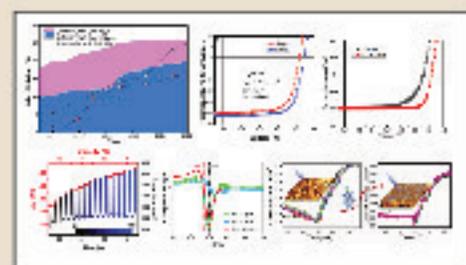
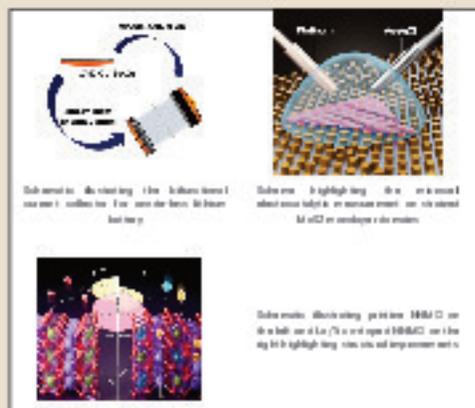


M. M. Shaijumon
Professor

ENERGY STORAGE AND CONVERSION, RECHARGEABLE BATTERIES, 2-D MATERIALS

Dr. Shaijumon's group is involved in research on materials science and physics of various energy storage and conversion systems that will have huge impact on our society. The group's work is mainly focused on two areas: (i) 2-dimensional layered nanomaterials and (ii) High performance energy generation and storage systems, with a focus on experimental analyses to understand the underlying physical phenomena in these systems. During 2024-2025, our research efforts have been focused on both energy conversion and storage studies. In one of the recent efforts, we demonstrated a conceptually new 'bifunctional current collector' system by using the CVD-grown $\text{Cu}_2\text{Se}/\text{Cu}$ foil, which is electrochemically tuned to act as a protective current collector for lean lithium metal anode, and as binder/conductive

additive-free cathode for lithium storage. In another attempt, we developed a strategy to address structural instability and phase transformations in P2-type $\text{Na}_{2/3}\text{Ni}_{1/3}\text{Mn}_{2/3}\text{O}_2$ (NNMO) through La/Ti co-doping at the sodium/transition metal (TM) site. In another recent work, we demonstrated a new approach to induce biaxial strain into CVD-grown MoS_2 monolayers by draping it over an array of patterned gold nanopillar arrays (AuNAs) as an efficient strategy to enhance its HER activity. We have been actively collaborating with several of my colleagues in different topics such as optoelectronics devices and organic electrode materials.



PHOTOINDUCED FREE CARRIER GENERATION, RECOMBINATION AND OPTOELECTRONIC PROPERTIES OF DEVICES MADE USING ORGANIC, ORGANIC-INORGANIC HYBRID, 2D, NANO AND QUANTUM MATERIALS.

Achieved an efficiency of ~16.4% for organic solar cells utilizing 2-mercapto benzimidazole as interfacial modifier in non-fullerene based organic solar cells and 25% for perovskite solar cells. Charge carrier dynamics in organic and perovskite solar cells are studied by various characterization techniques.

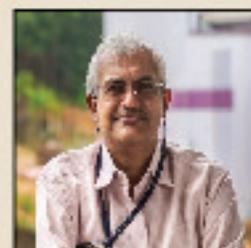
Achieved an efficiency of 14% and a transparency of 13% in semi-transparent triple cation mixed halide perovskite solar cells and 20% for wide bandgap perovskite solar cells.

Fabricated semi-transparent organic solar cells of 9% and transparency of 30% and studied the charge carrier dynamics.

Studied the origin of anomalous illumination sensitive dark current behavior in organic photodetector and adopted interface engineering to tackle it.

Investigated how the photogeneration and injection of charges alters the dielectric properties of a semiconductor using equilibrium photo-capacitance measurements and Lorentz resonance.

Analyzed the stability of FAPBI₃ based perovskite solar cells through low temperature measurements.



Manoj A. G. Namboothiry
Professor

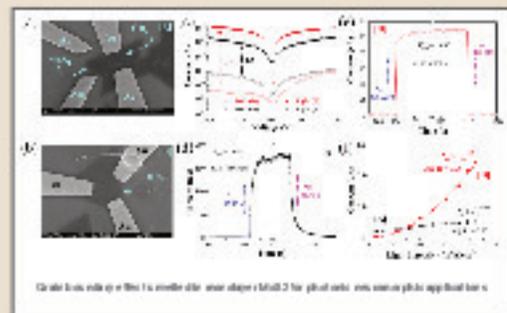
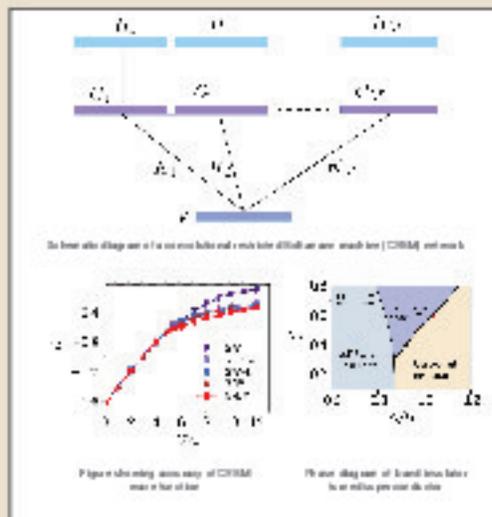


Amal Medhi
Associate Professor

CONDENSED MATTER PHYSICS (THEORY)

Dr. Amal Medhi's research group is focused mainly on physics of strongly correlated electrons in condensed matter systems. Strong electronic correlations in materials give rise to a hosts of novel phenomena which are fascinating yet very challenging for theoretical study. Our efforts have been to understand systems using various computational techniques, such as machine learning (ML) quantum Monte Carlo, slave-particle theory etc. We explored whether it is possible learn the ground state wave function of a fermionic many-body lattice Hamiltonian such as the Hubbard model which is at the heart of condensed matter theory, using ML techniques based on artificial neural-

networks. Recently, we have proposed a new convolutional restricted Boltzmann machine (CRBM) based variational wave function for the fermionic Hubbard model. The resulting neural-network quantum state (NQS) is shown to outperform several other well-known variational wave functions for the model. We also examined the superconducting properties of the model away from half-filling using an RBM correlated wave function. In other lines of works, we used the variational Monte Carlo (VMC) method to study the ground state superconducting properties several interesting systems such as hydrogen doped nickelates, a superconductor-metal bilayer, band insulator turned superconductor etc and obtained a number of interesting results.



MATERIALS ENGINEERING AND DEVICE PHYSICS

Our research activities at IISER Thiruvananthapuram span a multidisciplinary spectrum integrating low-dimensional materials, molecular systems, and device engineering toward cutting-edge electronic and optoelectronic applications. Notably, the development of an ultrasensitive CsPbBr₃ photodetector demonstrated a novel synergy between asymmetric contact geometry and self-powered operation, advancing

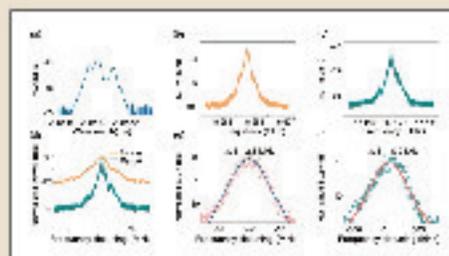
photodetection strategies (Phys. Rev. Appl. 22(4), pp.044015, 2024). In the domain of neuromorphic hardware, titanium carbide MXene-based thin-film memristors were reported with adaptive learning behavior, highlighting their versatility for future AI hardware (ACS Appl. Mater. Interfaces 16(16), 20693–20704, 2024). Investigations into layered materials revealed intriguing properties like negative differential resistance and superionic conduction due to water anchoring effects (J. Phys. Chem. Lett. 15(32), 8167–8176, 2024), while strategies for large-area growth of 2D ReS₂ via PTDA-assisted seeding were also explored (AIP Conf. Proc., 2024). The synthesis of a triradical-containing Pd(II) complex enabled resistive switching and spin-polarized transport, contributing to analog neuromorphic capabilities (Mater. Horiz. 12(1), pp.246–257, 2025). Further, a side-gated iontronic memtransistor was developed, offering fast energy-efficient operation suited for neuromorphic systems (Small 21(8), pp.2408175, 2025). Finally, a molecular memristor based on a singlet tetra-radical Ni(II) complex showcased reconfigurable learning behaviors, bridging molecular chemistry with functional device physics (Adv. Funct. Mater. pp.2502728, 2025). Collectively, these works illustrate a forward-looking approach to material-device co-design for next-generation memory, logic, and sensory platforms.



Bikas C. Das
Associate Professor

diagnosis, and therapeutic treatments. The research areas of interest can be broadly sub-grouped:

- Photoacoustic imaging (both microscopy and tomography) from experimental and numerical aspects
- Light sheet fluorescence microscopy (LSFM) (also known as Selective Plane Illumination Microscopy (SPIM))
- Optical coherence tomography Microscopy (OCTM)
- Laser speckle contrast (LSC) imaging
- Pre-clinical validation studies in animal and disease models, and human subject (volunteers)
- Artificial intelligence (AI) and/or deep-learning (DL) for image reconstruction



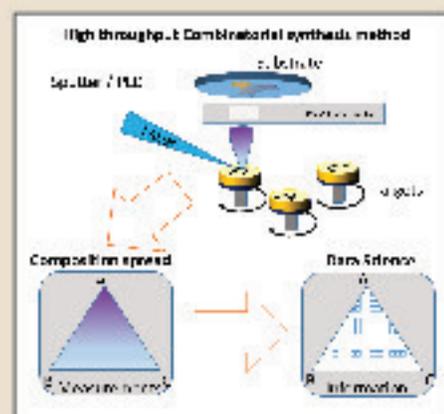
NONLINEAR OPTICS, FREQUENCY COMBS

Over the past year, my group demonstrated Brillouin lasing in the microresonators at a wavelength of 2000 nm [PRResearch 06, 023062 (2024)] and Brillouin laser pumped frequency combs at a wavelength of 2000 nm [APL Photonics 09, 10 (2024)]. We demonstrated multi-Stokes generation and wavelength tuning of the Brillouin laser. Using the microresonator Brillouin laser, we generated frequency combs. We

demonstrated wavelength tuning of frequency combs by tuning the pump wavelength by Brillouin shift.



Ravi Pant
Associate Professor



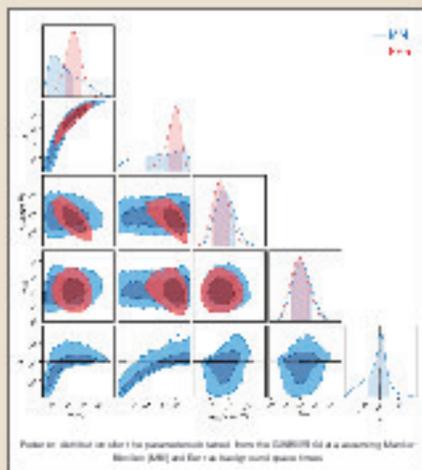
WIDE BANDGAP MATERIALS AND DEVICES

A collaborative research between IISER Thiruvananthapuram and National Institute for Materials Science, Japan established through DST-JSPS with an objective to control the physical properties of Ga₂O₃, a promising power semiconductor, helped to initiate thinfilm combinatorial research in India. For tailoring the physical properties of Ga₂O₃, we alloy with In₂O₃. Generally, this involves a multi-step process of preparing several samples with various compositions and evaluation of the relevant properties of each of them. But, here we synthesized the alloy in a single step process by making a thinfilm composition spread of individual

oxides and investigate the physical properties. This synthesis process is called as Combinatorial synthesis process. Through the collaborative program, we were able to access advanced technology for materials screening and an advanced combinatorial synthesis equipment is now being developed at IISERTVM through another Indian project entitled 'Non-volatile resistance switching memory on SiC for harsh environment applications' sanctioned by SERB, to the tune of INR 37,77,400/-, for a period of 3 years. In parallel, efforts are being made to sustain the research on Diamond and SiC with an aim towards practical-device applications.



Somu Kumaragurubaran
Associate Professor



COSMOLOGY AND GRAVITATIONAL WAVE ASTRONOMY

Dr. Soumen Basak's research work is primarily focused on the observation of the CMB, the afterglow of the Big Bang, and the analysis of cosmological and astrophysical data sets. His recent research work is devoted to investigating the best options for detecting signatures of Gravitational waves in the CMB polarization from the multi-frequency observations of the sky. He is primarily interested in the scientific content of the B-modes of CMB polarization, the level of primordial power in cosmological Gravitational Waves as well as the Gravitational Lensing of the CMB in particular. His group is currently involved in the activities "Foreground Working Group" of the CMB-Bharat (<http://cmb-bharat.in>) satellite mission to forecast the potential of this mission. Dr. Basak has an ongoing

collaboration with Laser Interferometer Satellite Antenna (LISA) and has access to the considerable resources of the consortium. The objective of LISA (<https://lisa.nasa.gov>) is to detect Gravitational waves from astrophysical sources (such as supermassive black holes, extreme mass ratio inspiral) unseen by the preceding ground-based mission (LIGO-Virgo <https://www.ligo.org>). Currently, Dr. Basak's group participates in the activities of the "Artefact Working Group" of LISA. The primary objective of this working group is to investigate the impact of scheduled and unscheduled gaps in the data on the analysis of the Massive Black Hole Binary (MBHB) signal.



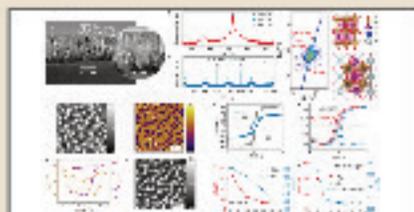
Soumen Basak
Associate Professor



NONEQUILIBRIUM PHYSICS

The main emphasis of Sreedhar Dutta's research group is on topics in Nonequilibrium Physics and Effective Field Theories. One of the major activities currently pursued by the group is towards establishing appropriate framework to describe periodically driven macroscopic systems and to investigate thermodynamics of such systems. Motivated to understand the asymptotic behavior of periodically driven thermodynamic systems, the group has studied the prototypical example of underdamped Brownian particle, in harmonic and anharmonic potentials, subjected to periodic driving. In particular, they have developed a perturbative scheme suitable to analyse driven Langevin systems under low viscous drives.

Sreedhar B. Dutta
Associate Professor



Magnetoelectric coupling in vertically aligned nanocomposites.

1. NON-VOLATILE MEMORY (NVM) FOR ENERGY-EFFICIENT NEUROMORPHIC COMPUTING. 2. QUANTUM MATERIALS FOR NEXT GENERATION QUANTUM TECHNOLOGIES. 3. MAGNETO-CALORIC MATERIALS FOR SOLID STATE REFRIGERATION.

Dr. Tuhin Maity's Functional Materials and Device group's research focuses on spintronics, quantum materials, and multifunctional complex oxide thin films, aiming to develop next-generation, low-power electronic, memory, and quantum technologies. His work leverages interface and three-dimensional strain engineering in thin film, superlattice, and vertically aligned nanocomposite architectures to activate emergent ferroic coupling. His group recently demonstrated room-temperature ferroelectricity and self-biased magnetoelectric coupling in $\text{SmFeO}_3\text{-NiFe}_2\text{O}_4$ nanocomposites, along with exchange bias persisting to room temperature, which advances prospects for



Tuhin Subhra Maity
Associate Professor

magnetolectric RAM. His group also reported a twisted magnetocaloric effect in $\text{SmCaCoMnO}_5\text{-Sm}_{1-x}\text{Ca}_x\text{MnO}_5$ arising from strong exchange bias, enabling pathways toward self-cooled spintronic hardware.

In the domain of quantum materials, Dr. Maity's group has epitaxially grown the quantum spin-liquid candidate $\text{Ba}_2\text{CuSb}_2\text{O}_7$, confirming (001)-textured growth and the absence of magnetic ordering down to 400mK despite a large antiferromagnetic Curie-Weiss temperature. These findings establish thin-film QSLs as promising platforms for future quantum devices. The group is also working on the magnetic and transport properties of magnetic semiconductors.



Vinayak Kamble
Associate Professor

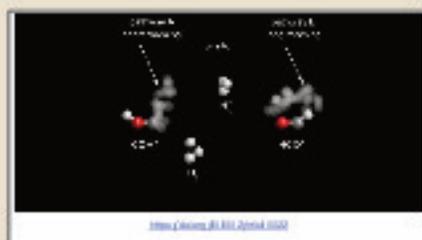
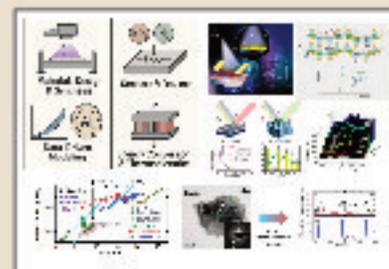
SMART MATERIALS AND DEVICES

Dr. Vinayak Kamble's research group at IISER Thiruvananthapuram focuses on the design and development of multifunctional materials and device architectures for sensing, energy, and emerging electronics.

Their recent granted patent and associated application outline a novel hydrogen gas sensing system featuring a robust fabrication strategy underscoring their translational vision. The group's expertise in gas sensing is reflected in the development of $\text{MoO}_3\text{-MoSe}_2$ heterostructure-based self-powered sensors (Small, 2025) and optical hydrogen sensing using CuCo_2O_4 photonic crystals (J. Mater. Chem. A, 2025), combining nanostructured materials with in-situ spectroscopy for mechanistic insight.

Broadening the scope, their work spans bimetallic nanocluster transformations (Chem. Sci., 2025), solution-phase syntheses of 2D bismuth selenide films (Eur. J. Inorg. Chem., 2024), and predictive modeling of thermoelectric properties in doped ZnO systems (ACS Appl. Energy Mater., 2024). The team is also exploring bio-integrated sensing paradigms through AI-assisted glycaemic index estimations (Food

Chem. X, 2025). Further extending their materials platform, recent efforts in tuning magnetic properties in oxygen-deficient V_2O_5 nanoparticles (J. Phys.: Condens. Matter, 2024) demonstrate interest in defect induced transport based functionalities. This body of work highlights the group's interdisciplinary approach, integrating solid-state and device physics, and data-driven insights to engineer next-generation sensors and functional materials for sustainable technologies.



EXPERIMENTAL ATOMIC AND MOLECULAR PHYSICS: ULTRAFAST MOLECULAR DYNAMICS

Dr. Krishnendu's research group is aiming to experimentally visualizing ultrafast molecular dynamics in atmospherically and Astro chemically relevant systems using time-resolved techniques. Utilizing the Cold Target Recoil Ion Momentum Spectroscopy setup, we investigate processes such as Intermolecular Coulombic Decay triggered

by electron impact ionization, by measuring the full 3D momentum of coincident ions and electrons. Through multi-dimensional data analysis, we aim to uncover how energy redistributes and structures evolve during these interactions. Additionally, we are advancing towards implementing attosecond pulse-train generation via high-order harmonic generation (Nobel Prize 2023) to further probe ultrafast dynamics.

We have also addressed a key limitation in Velocity Slice Imaging experiments, where background gas from an effusive molecular beam introduces artefacts during high magnification of momentum images. By implementing effective background subtraction and employing a supersonic molecular beam target, we significantly reduced these artefacts, enabling clearer visualization of charged particle-molecule interactions. Current investigations include (a) Tri hydrogen forms through two distinct competing pathways, each characterized by different fragmentation dynamics and energy releases, with isotopic substitution revealing a significant dynamical isotope effect, (b) structural retrieval via electron impact Coulomb explosion imaging, (c) dissociative electron attachment, and (d) absolute cross section measurements through electron impact ionization.



Krishnendu Gope
Assistant Professor



Mathew Arun Thomas
Assistant Professor

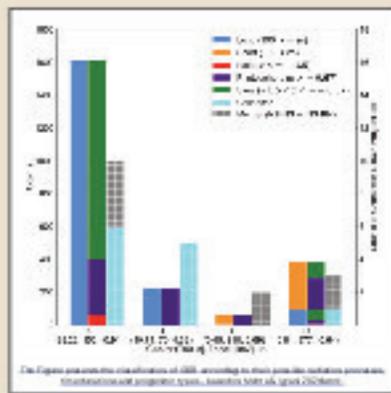
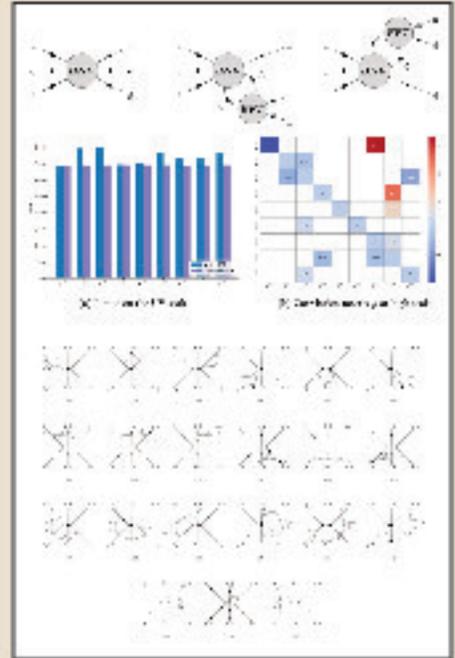
PARTICLE PHYSICS THEORY, BARYON NUMBER VIOLATION, FLAVOUR PHYSICS, DARK MATTER

Dr. Mathew Arun Thomas' research in the year 2024-2025 focused mostly on the following topics: Renormalization Group evolution of operators that are responsible for baryon number violation; The recent identification of possible $\pi\pi$ neutron-antineutron ($n\bar{n}$) oscillation candidate events at Super-Kamiokande has renewed the interest in $\Delta B = 2$ transitions. In this work we analyze the Renormalization Group (RG) running of mass dimension-9 six-quark operators, in MS scheme, that generate processes like $n\bar{n} \rightarrow \pi^0\pi^0$, deuteron decay, $n\bar{n}$ oscillations etc, evolving them from the electroweak scale to baryon number violating scale ($O(10^3 \text{ TeV})$). Our goal is to systematically account for the influence of potential new physics at intermediate energies ($>O(10 \text{ TeV})$), especially given the fact that Large Hadron Collider has not ruled out new physics beyond $\sim 10 \text{ TeV}$. To facilitate further studies,

we also provide a Python script that performs RG evolution of the BNV Wilson coefficients in the presence of generic bosonic new physics at any intermediate energy scale. It can be modified easily to meet the needs of the user to investigate the running of the BNV Wilson coefficients. We then compare the result with the experimental bound from the neutron-antineutron oscillation process and constrain the scale of baryon number violating new physics.

Correlating dinucleon decay and induced nucleon decay: Baryon number violation in the visible sector induced by anti-baryonic dark matter provides a viable mechanism for low-scale baryogenesis. Two of the most sensitive probes of this scenario are neutron decay processes such as $n \rightarrow \text{invisible}$ and $n \rightarrow \pi^0 \text{invisible}$. In this work, we discuss the generation of di-nucleon decay processes such as $n\bar{n} \rightarrow \nu\nu$ and $n\bar{n} \rightarrow \pi^0\pi^0$ at one-loop, arising from the operators responsible for induced nucleon decays. While nucleon decay rates in this model depend on the local dark matter density, di-nucleon decay processes do not, providing a complementary probe of the new physics.

Dark Matter: We study the axion portal between the visible and the dark sector, where the dark matter is charged under an abelian extension of the Standard Model. In general, such models are anomalous and are rendered gauge invariant by a Stückelberg axion through Wess-Zumino/Green-Schwarz mechanism. Scenarios such as this naturally exist in TeV scale string theory completions of Standard Model. This axion mixes with other Goldstone bosons in the model to give a physical axi-Higgs which becomes massive upon breaking the anomalous gauge group. Such axi-Higgs fields charged under the anomalous symmetry act as mediators for the dark matter annihilation to Standard Model particles and can lead to an efficient freeze-out mechanism. Here, we show that the Stückelberg axion, and the resultant axi-Higgs, with its appropriate shift symmetry cancels the quantum anomalies and also generates the observed relic density for the dark matter. Moreover, we show that the relevant parameter space in our model, where photon production dominates, is safe from FermiLAT, Cherenkov Telescope Array, and H.E.S.S. indirect detection experiments.



ASTRONOMY AND ASTROPHYSICS

Dr. Shabnam Iyyani's research group employs a diverse range of methodologies, including data analysis of GRBs from space telescopes like Fermi, Swift, and AstroSat; spectral modeling; polarisation analysis in hard X-rays; hydrodynamic simulations of jet-medium interactions; machine learning-based GRB classification; and multi-messenger observational studies.

During this period, my research has resulted in 5 publications and 4 manuscripts under review. A major focus has been on spectro-polarimetric studies of GRB prompt emissions using Fermi and AstroSat data. Notably, our analysis of GRB 180427A revealed two distinct emission components with different polarization levels—thermal and non-thermal—providing insights into their physical origins. We also localised previously

unlocalised GRBs (e.g. GRB 201009A) and constrained their polarisation properties. Spectral studies revealed unconventional emission mechanisms in GRBs like GRB 131014A, where inverse Compton scattering was identified as the dominant process, challenging the traditional Band function model. Another significant study on GRB 230204B demonstrated spectral evolution from sub-photospheric to synchrotron emission, supported by comprehensive multi-wavelength follow-up, including optical and long-term radio observations.

In theoretical work, we proposed that velocity shear in structured GRB jets can naturally explain both positive and negative spectral lags, addressing longstanding questions about high-energy photon delays. Additionally, leveraging machine learning, we applied nested Gaussian Mixture Models to GRB catalogs, identifying four distinct GRB classes with implications for understanding their progenitor systems and emission diversity.



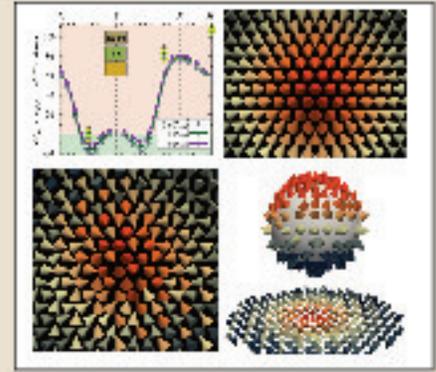
Shabnam Iyyani
Assistant Professor



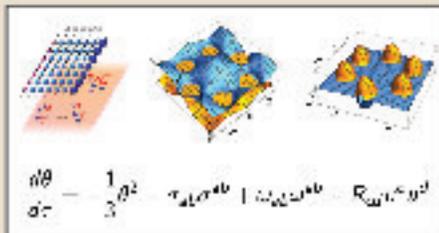
Souvik Paul
Assistant Professor

COMPUTATIONAL CONDENSED MATTER PHYSICS.

Dr. Souvik Paul's research group at IISER TVM focuses on materials modeling using first-principles density functional theory. Currently, we explore topological quasiparticles, particularly skyrmions, in 2D magnets. In 2020, during my postdoc, we demonstrated that beyond Heisenberg exchange, multi-spin higher-order exchange interactions are crucial for stabilizing isolated skyrmions in transition-metal ultrathin films, as published in prestigious *Nature Communications*. We recently extended this work by showing that these higher-order interactions can stabilize skyrmions on a noncollinear ground state for the first time, paving the way for spintronic devices based on these new class of skyrmions.



In another study, we showed that the creation and annihilation of isolated skyrmions in ultrathin films can be controlled by an external electric field, published in prestigious *npj Computational Materials* (2020). This approach avoids Joule heating effects from current-driven processes, offering a more energy-efficient way to manipulate skyrmions. To make this applicable in real devices, we studied the impact of electric fields on magnetic interactions in freestanding transition-metal trilayers. Our findings reveal that these interactions change linearly with the electric field, and we explain this behavior through electronic structure analysis. This research helps to identify promising trilayers when placed on the surface of heavy metal, creates thin films, where we can study the stability of skyrmions via electric field.



THEORETICAL CONDENSED MATTER PHYSICS.

Dr. Suraj S Hegde's research group is dedicated towards building descriptions of matter and its phenomena in terms of structures of quantum mechanics. We study systems with topological phases such as superconductors, quantum Hall effects, Weyl-semimetals and also open quantum systems. We use analytical methods assisted by numerics. Symmetry, geometry and topology are



Suraj S. Hegde
Assistant Professor

the overarching themes in most of the studies and also enable us to relate to phenomena from other disciplines such as black hole physics.

Since the beginning of my tenure at IISER TvM from Aug 2024, my group has focussed on two key directions - 1) Topology in open quantum systems - We have shown the explicit signature of the interplay of band and spectral topologies on the open quantum dynamics in a topological system. Currently, we are studying the appearance of 'exceptional topological phases' of the Haldane model with imaginary gauge fields coming from non-reciprocal hopping. 2) Quantum geometry - In a collaborative work we have obtained the projected operator dynamics and revealed the appearance of quantum geometric terms. We are also studying the presence or absence of geodesic focusing of the geodesics on the quantum geometric manifolds of ground states of the quantum Ising model.

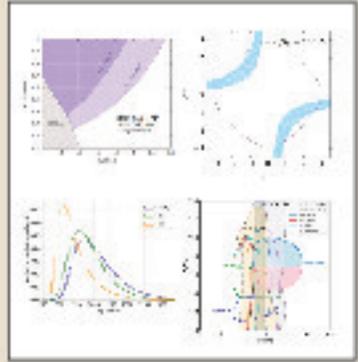




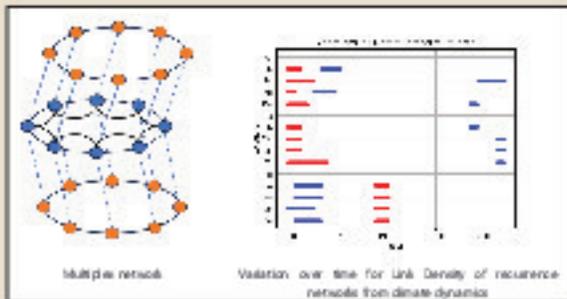
Tanumoy Mandal
Assistant Professor

PARTICLE PHYSICS PHENOMENOLOGY

Dr. Tanumoy Mandal's research group is focusing on cutting-edge investigations in Particle Physics Phenomenology. In 2012, the discovery of the Higgs Boson at the Large Hadron Collider (LHC) marked a significant milestone, completing the particle spectrum within the Standard Model of particle physics. The Standard Model, a theory developed from a bottom-up approach based on the experimental results, is remarkably consistent with collider experiments so far at the energies hitherto probed. However, some theoretical shortcomings of the Standard Model (like the gauge hierarchy problem, strong CP problem etc.) as well as some observational evidences (like dark matter, dark energy, matter-antimatter asymmetry, neutrino mass etc.) motivate us to build theories beyond the Standard Model with high-scale validity whose low-energy effective versions must correspond to the Standard Model. The signatures of these new theories, if they exist within the reach of the collider energies, would show up either directly as new resonances or indirectly as deviations from the Standard Model predictions of some observables. My research at



I focuses on the phenomenology of new theories. A large magnetic field can exist inside the compact stars where the color superconducting (CSC) matter can be found. Thus, the study of the CSC phase in presence of magnetic field is important to explain and predict some astrophysical signatures. We studied the effect of strong magnetic field and temperature on chiral and diquark condensates in a two-flavor color superconductor using the NJL model. We found that a strong magnetic field can change the nature of the phase transitions. We also investigated the effect of electric and color charge neutrality conditions on CSC matter. We observed hints of the Clogston-Chandrasekhar limit in CSC matter in extreme conditions.



NONLINEAR DYNAMICS AND COMPLEX SYSTEMS

Prof. Ambika's research is focused on analyzing and understanding complex systems using dynamical systems theory, complex networks and measures of their complexity from observational data.

My research group studies possible emergent states and critical transitions in the dynamics of



G. Ambika
Honorary Professor

coupled systems on complex networks and how that can be tuned for achieving desired dynamical behaviour. The most recent and novel study from my group includes the role of time scales and pattern of connections or interactions in multiplex and multi time scale network of systems. We showed that tuning the time scales can recover synchronised oscillations from suppressed states or chimeras in interacting heterogeneous systems. This technic is shown to control relay systems remotely in multiplex networks with unidirectional inter layer coupling.

We studied the dynamics of Indian climate system and effects of global warming using data of temperature and relative humidity from 15 different locations in India spread over different climate zones. The study brought out differences in climate dynamics in urban, rural and mountainous locations and could relate the major changes in dynamics over the years to reported climate shifts during strong El Nino and La Nina events.

Along with collaborators from IUCAA, Pune and IISER TVM, I study the dynamics underlying data from astrophysical objects and dynamical systems to look for transitions and their predictions. This also helps to classify very large number of sources very effectively.

Recently we showed how the recurrence measures obtained by reconstructing dynamics from data could be linked with machine learning algorithms for feature identification. This helps to classify large number of data sets based on the nature of their dynamics.





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Collaborative Publications between School of Biology, Chemistry and Physics

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Collaborative Publications between School of Biology and Data Science

- Muralidharan, A., Swaminathan, A., & Poulouse, A. (2024). Deep learning dives: Predicting anxiety in zebrafish through novel tank assay analysis. *Physiology & Behavior*, 287, 114696. <https://doi.org/10.1016/j.physbeh.2024.114696>
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Collaborative Publications between School of Chemistry and Physics

- Alishan, Y., Joseph, A., Pillai, A. B., Aparna, R. K., Sarkar, R., Chakraborty, S., Mandal, S., & Namboothiry, M. A. G. (2024). Metal Nanoclusters for Interface Engineering and Improved Photovoltaic Performance in Organic Solar Cells. *ACS Nano*, 18(52), 35383–35392. <https://doi.org/10.1021/acsnano.4c12256>
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- Sujilkumar, S., Hari, A., & Hariharan, M. (2025). Through-space conjugation driven luminescence enhancement in crystalline butterfly architectures. *Chemical Communications*, 61(16), 3331–3334. <https://doi.org/10.1039/D4CC05351F>
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 - Titus, T., Vishnu, E. K., Garai, A., Dutta, S. K., Sandeep, K., Shelke, A., Ajithkumar, T. G., Shaji, A., Pradhan, N., & Thomas, K. G. (2024). Biexciton Emission in CsPbBr₃ Nanocrystals: Polar Facet Matters. *Nano Letters*, 24(34), 10434–10442. <https://doi.org/10.1021/acs.nanolett.4c01186>

Collaborative Publications between School of Data Science & Mathematics

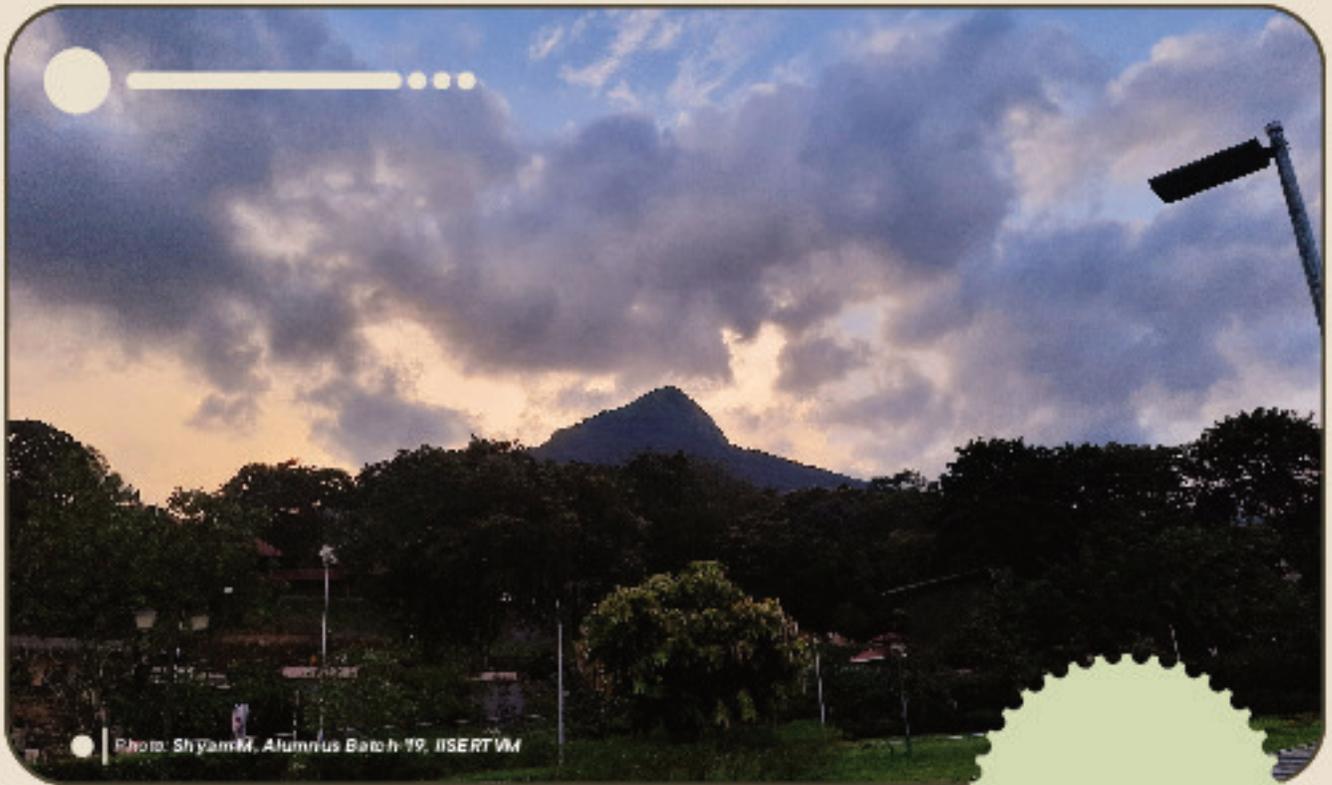
- Sibi, H., Biju, J., & Chowdhury, C. (2024). Advancing 2D material predictions: Superior work function estimation with atomistic line graph neural networks. *RSC Advances*, 14(51), 38070–38078. <https://doi.org/10.1039/D4RA07703B>

Collaborative Publications between School of Data Science & Physics

- Lalitha, M. M., Banerjee, S., Jayaraj, A., Kamath, A., Divakaran, D., Yadav, V., Lakavathu, M., Sajimon, J., Anil, P., Shaljumon, M. M., Singh, N. S., & Kurapati, R. (2024). Two-Dimensional Materials/Biopolymer-Based Antimicrobial Coatings to Thwart Biofilm Formation on Medical Implants. *ACS Applied Bio Materials*, 7(10), 6332–6342. <https://doi.org/10.1021/acsabm.4c00725>

Collaborative Publications between School of Earth, Environmental and Sustainability Sciences & Physics

- Hegde, R., Anand, N., Satheesh, S. K., & Krishna Moorthy, K. (2024). Modeling the atmospheric refractive index structure parameter using macro-meteorological observations. *Applied Optics*, 63(16), E10. <https://doi.org/10.1364/AO.519025>
- Hegde, R., Anand, N., Satheesh, S. K., & Moorthy, K. K. (2024). A model for atmospheric optical turbulence using low-frequency measurements. *Optica Imaging Congress 2024 (3D, AOMS, COSI, ISA, pCA-OP)*, PTh4E.3. <https://doi.org/10.1364/PCAOP.2024.PTh4E3>



Awards & Recognitions...

SCHOOL OF BIOLOGY



Awards & Recognitions

Sl. No.	Name of Faculty member	Month & Year	Title of Award/ Recognition	Award/Recognition received for
1	Anirban Guha	Dec, 2024	Jack Kimmel International Grant [24-JK-01] from TREE Fund's Board of Trustees, IL 60563	For the research proposal entitled "Good functional and early warning indicators of urban mangrove health"
2	Anirban Guha	Dec, 2024	Panelist	INDIA MANGROVE CONCLAVE-2024, NIOT, Chennai, Discussion Session-Climatic Change & Coastal Resilience
3	Anirban Guha	Jun, 2024	Equipment Grant from the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF)	To support the ongoing research on mangrove ecophysiology in collaboration with IIST and CIFOR scientists
4	Jishy Varghese	2014-ongoing	Executive Committee Member	Indian Drosophila Board (Indian Drosophila Research Society)
5	Jishy Varghese	2024	Jury member	TNQ Inspiring Science Awards 2024
6	Jishy Varghese	2025	Panelist	Panel Discussion on Women in Science, on International Women's Day 2025, Organised by The Indian Physics Association, Breakthrough Science Society at Priyadarshini Planetarium, Thiruvananthapuram
7	Nishana Mayilaadumveettil	Feb-25	Panelist	'PG Student Interactive Session' for the 37th Kerala Science Congress (KSC) at Kerala Agricultural University, Thrissur, Kerala
8	Nishant KT	Sep-24	Chairperson of jury panel for the Inspiring Science Award (Cell Press)	Chairperson of the jury panel for the Inspiring Science Award (Cell Press) for the best published scientific paper in the Life Sciences from India
9	Nitin Uttam Kamble	Apr-24	Monogram Early Career Excellence Award (2024).	For significant work on starch granule initiation in wheat from the Monogram Network. (https://monogram.ac.uk/index.php/2024/09/24/from-seed-to-starch/). The Monogram Network consists of UK based researchers with an active interest in small grain cereal and grass (including the C4 energy grasses) research.

Sl. No.	Name of Faculty member	Month & Year	Title of Award/ Recognition	Award/Recognition received for
				Monogram includes both basic and more applied research.
10	Poonam Thakur	November, 2024	Jury member	For Inspiring Science Award
11	Poonam Thakur	2024-27	Executive Committee Member	Indian Academy of Neuroscience
12	Sandhya Ganesan	2024	Commendation for teaching, IISER Thiruvananthapuram	
13	Sandhya Ganesan	2024	Selected for Bangalore Microscopy Course, NCBS, Bangalore	Bangalore Microscopy Course includes lecture-based and hands on modules on microscopy techniques and is taught by highly experienced researchers and leaders in microscopy.
14	Sandhya Ganesan	2025	Invited to be a part of the jury of 2025 TNQ Inspiring Science Awards	TNQ Inspiring Science Awards aims to select best published scientific work in life sciences from students/researchers in India in an effort to recognize and inspire quality science.
15	Satish Khurana	Jan-25	Elected member of Guha Research Conference (GRC), India	For contribution in the field of molecular regulation of hematopoietic development and function.
16	V. Stalin Raj	14/01/2025 (3 years)	Expert Committee member for Life Sciences	Subject Expert Committee for Life Sciences - 1, Animal Sciences, Pharmacology, Nanobiotechnology, and Microbiology, under the Prime Minister Early Career Research Grant (PMECRG) program of Anusandhan National Research Foundation (ANRF).
17	V. Stalin Raj	27-10-2024	ICMR Member of Project Screening Committee	ICMR Project Screening Committee: ICMR proposals submitted under the Investigator-Initiated Research Proposals for Small Extramural Grants (Infectious Diseases). 27/10/2024
18	Ullasa Kodandaramalah	Jan-25	Fellowship of Indian Academy of Sciences	Elected as Fellow of Indian Academy of Sciences
19	Hema Somanathan	November 2024	Jury, Inspiring Science Award, Cell Press	

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Fellowships

Sl. No.	Name of Faculty member	Month & Year	Fellowship Title & Duration of Fellowship	Description
1	Kamalakaran Vijayan	01-04-2024	DBT-Wellcome Trust Intermediate Fellow / 5 years	This fellowship aims to understand how apicomplexan parasites rewire the host signaling network.
2	Nitin Uttam Kamble	Dec-24	Young Associates of Maharashtra Academy of Sciences (2024)	For work on the factors associated with seed quality and nutrition in crops.
3	Poonam Thakur	December, 2024	Scientific Meeting Grant from the Company of Biologists	For organization of the No Garland Neuroscience conference at IISER- Thiruvananthapuram
4	Poonam Thakur	January, 2024	BIOSANTEXC Discovery fellowship	To visit ENS-Lyon, France
5	Vijay Jayaraman	Dec 2023 onwards	Ramalingaswami Re-entry fellowship	Given to about 60 early career fellows to start their independent research laboratory in India
6	Hema Somanathan	June 2024	Foreign Associate, Academy for Natural Sciences, Medicine and Technology, Sweden (Term : Life)	



Photo: Parthiban, Electrical substations team, IISERTVM



Sl. No.	Name of Faculty member	Name of Journal and Duration of editorial assignment	Description
1	Anirban Guha	Frontiers in Forests and Global Change [Role - Review Editor for Forest Ecophysiology, 2020-till date]	This journal publishes the latest, most critical research in the major disciplines that comprise forest science – spanning from molecules to ecosystems to the biosphere, and from the pure-basic research to the highly applied [2.7 Impact Factor]
2	Kamalakaran Vijayan	ACS Infectious Diseases / Early career editorial member	ACS Infectious Diseases is the first journal to highlight chemistry and its role in the multidisciplinary and collaborative field of infectious disease research. With editors well-versed in both chemistry and the biology of infectious diseases, the journal aims to bridge the gap between these two disciplines.
3	Nishant K.T	YEAST (Publisher: John Wiley & Sons Ltd, USA), Editor since 2021 till date	The journal publishes original articles covering the most significant research developments with unicellular fungi.
4	Nishant K.T	Journal of Genetics (Publisher: Indian Academy of Sciences, Bangalore), Editor since 2018 till date	Among the oldest English language journals in genetics, it covers all areas of genetics and evolution, including molecular genetics and molecular evolution.
5	Nitin Uttam Kamble	The Plant Cell (Jan 2024- Dec 2025)	The Plant Cell is a leading international society journal that publishes novel research of special significance in plant biology, especially in the areas of cellular biology, molecular biology, biochemistry, genetics, development, and evolution. The Plant Cell is a publication of the American Society of Plant Biologists (ASPB). Journal Impact Factor: 11.1 (5-yr); 10.0 (2-yr).
6	Poonam Thakur	Frontiers in Cellular Neuroscience (2023-2025)	Guest Editor for special issue- Glial Cells in Health and Disease: Impacts on Neural Circuits and Plasticity
7	Hema Somanathan	Editorial board member, Current Opinion in Insect Science	<i>Current Opinion in Insect Science</i> is a systematic review journal that provides specialists with a unique and educational platform to keep up to date with the expanding volume of information published in the field of Insect Science.
8	Hema Somanathan	Advisory Committee member, Journal of Comparative Physiology A	Dedicated to understanding physiological mechanisms at organismal, cellular and molecular levels.

Sl. No.	Name of Faculty member	Name of Journal and Duration of editorial assignment	Description
9	Sandhya Ganesan	ACS Infectious Diseases, peer-review of submitted articles	Journals whose scope includes microbiology, infectious diseases, host-pathogen interaction, microbial virulence and pathogenesis.
10	Sandhya Ganesan	ASM Spectrum, peer-review of submitted article	
11	Sandhya Ganesan	Virulence, peer-review of submitted article	
12	Sandhya Ganesan	ACS Infectious Diseases, one of the guest editors for a special issue with the theme of 'Infectious Diseases Research in the Global South' (one year)	
13	Sandhya Ganesan	ACS Infectious Diseases, ACS Webinars, Invitation to Moderate a Webinar for World Tuberculosis Day	
14	Ullasa Kodandaramaiah	Evolutionary Journal of the Linnean Society	Publishes original papers on all aspects of the evolutionary biology of diverse organisms and ecological systems. We encourage submissions across disciplinary divides, from genetics, through palaeontology and systematics to behaviour.
15	Ullasa Kodandaramaiah	Journal of Biosciences	The Journal of Biosciences (JB) covers all areas of biology and publishes research in the form of articles and short communications, and opinions as reviews, perspectives and commentaries. JB publishes research that has broad implications and of general interest with a focus on underlying mechanisms.
16	Ullasa Kodandaramaiah	Current Science	Current Science, published every fortnight by the Association in collaboration with the Indian Academy of Sciences, is a leading science journal from India that helps researchers advance in various science disciplines.
17	Vijay Jayaraman	Journal of Biological Chemistry Early career reviewer	

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Invited Talks

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
1	Amrutha Swaminathan	Using zebrafish to understand behaviour and neurodevelopmental disorders	Jan-25	Tata Institute of Fundamental Research, Mumbai	Part of the Zebrafish Facility Management and Research Methodologies Workshop
2	Amrutha Swaminathan	Understanding the contribution of immune factors to stress-responsive behaviour	Nov-24	Indian Academy of Neurosciences Meeting, NIMHANS, Bangalore	
3	Amrutha Swaminathan	Understanding how immune factors regulate the development of behaviour	October 2024	Indian Zebrafish Investigators Meeting, Institute for Life Sciences, Bhubaneswar	
4	Amrutha Swaminathan	Coming full circle back to chromatin	October 2024	Asian Epigenomics Meeting, JNCASR, Bangalore	
5	Anirban Guha	Chlorophyll Fluorescence – The Plant Glow	15-Jan-25	IIT Palakkad	For a two-day workshop on Leaf Gas Exchange and Fluorescence
6	Bandan Chakraborty	A Cell Geometry-Based Mechanism for Controlling Organ Shape During Plant Morphogenesis	December 7, 2024	Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand, India	International Conference on Emerging Trends in Translational Bioinformatics
7	Jishy Varghese	Drosophila as a model to study nutrient homeostasis	Jan-25	Central University of Kerala, Kasargod	National Workshop on Drosophila as a tool for research and education
8	Jishy Varghese	How to spark curiosity about Biology among students?	June, 2024	St. Thomas Residential School, Thiruvananthapuram	Workshop for Biology teachers in high school and junior college
9	N. Sadananda Singh	Genome assemblies to understand indigenous and hybrid cattle breeds	12-03-2025	BRIC-Institute of Bioresources and Sustainable Development (IBSD)	To discuss genome assemblies for comparative genomics.
10	Ramanathan Natesh	<i>Cryo-Electron Microscopy and 3 Dimensional Image processing Society of India : overview of current cryoEM status in India and activities of CEM3DIP Society of India</i>	05-Apr-24	IIT Delhi, New Delhi	4th Annual Symposium of CEM3DIP Society of India. SATHI Summit Single Particle CryoEM and Cellular Tomography

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
11	Ramanathan Natesh	Structural Genomics with revolution in cryo electron microscopy	17-Nov-24	GATC Lite: South, Avoki Hotel & Resort, Trivandrum	Annual International Genomics Analysis & Technology Conference: Satellite (South) GATC Lite 2024.
12	Ramanathan Natesh	Targeting the DNA damage repair and Transcription regulation in AMR	26-Feb-25	Jamia Millia Islamia, New Delhi	Drug Discovery 2025: Emerging Trends and Future Prospects @ CIRBS, Conference Hall, organised by Centre for Interdisciplinary Research in Basic Sciences, Faculty of Life Sciences, Jamia Millia Islamia, New Delhi, India.
13	Ramanathan Natesh	Structure, function and mechanistic studies of transcription regulators in Mycobacterium spp.	19-Mar-25	Bose Institute, UAC campus, Kolkata	22nd Transcription Assembly Meeting 2025 (TAM2025)
14	Nishana Mayiladumveetil	'Alterations in chromatin architect disease and development'	June 7-9, 2024	IISER Pune.	"Frontiers of DNA and Chromatin Dynamics (FDCD)" meeting
15	Nishana Mayiladumveetil	'A Short Story on Sibling Rivalry Among Two Chromatin Organizer Proteins'	September 9-20, 2024	International Centre for Theoretical Sciences (ICTS), Bangalore	Meeting on 'Interdisciplinary Aspects of Chromatin Organization and Gene Regulation' held from (https://www.youtube.com/live/CyJoODCQAEs).
16	Nishana Mayiladumveetil	"Chromatin Architecture in Crisis: How Altered Organization Drives Disease"	December 13-17, 2024	Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore	Chromosome Instability Conference
17	Nishana Mayiladumveetil	"Altered three-dimensional chromatin organization as a driver of tumorigenesis"	March 27 - 28, 2025	The Institute of Mathematical Sciences, Madras	"Aspects of Gene and Cellular Regulation Meeting"
18	Nishant K.T	Effect of heterozygosity on genetic recombination	Feb 6-8, 2025	Indian Association for The Cultivation of Science (IACS), Kolkata.	4th International symposium "Interdisciplinary approach to biological Sciences-2025" (IABS-2025)
19	Nishant K.T	Regulation of LOH frequency and distribution in <i>S. cerevisiae</i>	Dec.13-17, 2024	JNCASR Bangalore	6th International Conference on Chromosome Stability
20	Nishant K.T	Heterozygosity alters the binding of recombination proteins to meiotic chromosomes in the baker's yeast	Oct 4, 2024	IIT Guwahati	Journal of Genetics mini-symposium

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
21	Nitin Uttam Kamble	Distinct biochemical mechanisms are involved in the initiation of A- and B-type starch granules during wheat grain development	6th March 2025	The Young Investigators' Meeting (YIM) at Courtyard by Marriott, Agra	
22	Poonam Thakur		Feb. 2025	National Symposium on Mass Spectrometry-based Lipidomics organized by RGCB-Thiruvananthapuram	
23	Poonam Thakur		Feb. 2025	Frontiers Symposium in Biology organized by IISER-Thiruvananthapuram	
24	Poonam Thakur		January, 2025	India Science Festival organized by Foundation for Advancing Science and Technology at Fergusson College, Pune	
25	Poonam Thakur		November, 2024	Indian Academy of Neuroscience annual meeting at NIMHANS, Bengaluru, India	
26	Poonam Thakur		October, 2024	Methods in Creating Chemical Models of Disease Workshop organized by Department of Biochemistry, University of Kerala	
27	Poonam Thakur		September, 2024	Society of Neurochemistry India annual meeting at Panjab University, Chandigarh, India	
28	Poonam Thakur		August, 2024	Dean George Thottappily memorial lecture at Sahrdaya College of Engineering & Technology, Thrissur, Kerala	

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
29	Poonam Thakur		July, 2024	Annual Meeting of the Luxembourg-German-Indian alliance on neurodegenerative disorders and therapeutics in Kochi, Kerala, India	
30	Poonam Thakur		June, 2024	Department of Neurosurgery, University Medical Centre, Freiburg, Germany	
31	Ravi Maruthachalam	Exploiting uniparental genome elimination for accelerated plant breeding and genetics	31-05-2024	ENS Lyon, France	Invited talk in an Indo-French plant biology workshop co-organized by ENS and IISER: Improving growth and productivity under changing environmental conditions
32	Ravi Maruthachalam	Exploiting uniparental genome elimination for accelerated plant breeding and genetics	06-06-2024	College of Agriculture, Vellayani, Kerala Agricultural University	Invited talk in the international seminar on spices KAU 2024 (ISSK 2024) (Spices: Innovative and Green Technologies for Sustainability)
33	Ravi Maruthachalam	Understanding and exploiting uniparental genome elimination for accelerated plant breeding and genetics	18-10-2024	New phytologist workshop, Sheraton Grand Bangalore Hotel at Brigade Gateway	Invited talk in the journal 'New Phytologist' organized a workshop for Indian plant biologists'
34	Ravi Maruthachalam	Epigenetic control of single-parent progeny production in plants	22-11-2024	NCBS, Bengaluru, Karnataka	Invited talk
35	Ravi Maruthachalam	Disruptive innovations in plant breeding	08-01-2025	AP Shinde Symposium Hall, IARI-NASC, Pusa Campus, New Delhi	Invited talk in the National Symposium on Hybrid Technology for Enhancing Crop Productivity (NSHT)
36	Ravi Maruthachalam	Epigenetic control of single-parent progeny production in plants	31-01-2025	School of Life Sciences, University of Hyderabad, Telangana	Invited talk in the International Conference on Developments in Plant Biology and Biotechnology (ICDPBB 2025)
37	Sabari Sankar Thirupathy	Conflict of the molecular titans	20-03-2025	MIT Manipal	2nd International Conference-SymBiot'25
38	Sabari Sankar Thirupathy	The conflict between genome duplication and gene expression	10-01-2025	CSIR-IMTECH	

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
39	Sabari Sankar Thirupathy	Genomic order and disorder by replication-transcription collisions	13-12-2024 to 17-12-2024	JNCASR Bangalore	6th International Conference on Chromosome Stability
40	Sabari Sankar Thirupathy	Replication-Transcription collisions in bacteria	07-06-2024 to 09-06-2024	IISER Pune	Frontiers of DNA and Chromatin Dynamics
41	Sandhya Ganesan	"Innate and cell-autonomous immune response against vacuolar pathogens: Lessons learnt from <i>Coxiella burnetii</i> "	October 17, 2024	IISc, Bangalore	Invited talk as part of the Immunocon, annual meeting of Indian Immunology Society
42	Sandhya Ganesan	"Principle and applications of confocal microscopy"	November 28, 2024	University of Kerala, Karyavattom campus	Invited talk as part of the Confocal microscopy training at CLIF, University of Kerala
43	Sandhya Ganesan	"Exocytosis driven by lysosome-adapted pathogens shapes infection process"	January 20-22, 2025	CCMB, Hyderabad	Invited talk as part of the 6th meeting of the Autophagy India Network
44	Sandhya Ganesan	"Cellular avengers: Lessons we learn from host defenses against intracellular bacterial pathogens"	March 3, 2025	Department of Microbiology, School of Life Sciences, St Joseph's University, Bangalore	Invited talk as part of the conference "Microcosmos 1.0- Emerging Innovations in Microbiology"
45	Sandhya Ganesan	"Cellular avengers: Lessons we learn from host defenses against intracellular bacterial pathogens"	March 17, 2025	JNCASR, Bangalore	Invited talk as part of the Indo-Belgium Networking meeting on Mycobacterial research and Advanced Biomaterials
46	Sanu Shameer	Studying crassulacean acid metabolism (CAM) using multiphase Flux Balance Analysis	3rd December 2025	IIT Bombay	In this talk, I explored how Crassulacean acid metabolism (CAM) leaves maintain cytosolic proton balance, especially during the large daytime efflux of protons from vacuoles. Using a novel 12-phase, charge- and proton-balanced flux balance analysis (FBA) model of a mature CAM mesophyll cell, we revealed that the mitochondrial phosphate carrier plays a key role consuming over 50% of cytosolic protons during the day to support ATP production. The model also highlighted how mitochondrial

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					pyruvate export supports gluconeogenesis, with GAPDH contributing to proton consumption. These findings shed new light on the central role of mitochondria in both energy metabolism and proton homeostasis in CAM plants.
47	Satish Khurana	Proliferate or not: A stem cell's dilemma Developmental stage dependent impact on function	18-01-2025	NIMS CENTRE FOR GENOMIC MEDICINE, Neyattinkara, Trivandrum, Kerala - 695123	The talk was based on the work carried out in the field of adult hematopoiesis.
48	Satish Khurana	Splenic hematopoietic stem cells: A new paradigm in hematopoiesis	Nov. 4th-9th 2024	Meeting of the Guha Research Conference (GRC), Kaziranga, Assam	The talk described our recent work that identified a new niche for hematopoietic stem cells in spleen.
49	Satish Khurana	Molecular regulation of adult hematopoiesis: developmental lessons to learn	Sept. 22nd-26th 2024	InStem, Bengaluru	The talk was based on our work conducted on the metabolic aspect of emergence of hematopoietic system in mammalian system.
50	Satish Khurana	Molecular regulation of hematopoiesis: what is in the location?	July 4th-7th 2024	IIT Gandhinagar, Gujarat	This talk summarized the work from my group that was based in spatial distribution of hematopoietic stem cells in transient niches that appear during mammalian development.
51	V. Stalin Raj	Understanding the entry mechanisms of RNA viruses and vaccine development.	22/11/24.	Duke University, Singapore.	The talk was based on the entry mechanisms of coronaviruses
52	V. Stalin Raj	Development of Novel Adeno Viral Vector Platform for Vaccine Delivery.	29/10/24.	ICMR, Delhi.	The talk is novel indigenous adenovirus vector development
53	V. Stalin Raj	Insights from the Coronavirus Outbreaks: Strengthening Pandemic Preparedness	February 14-15, 2025.	EMBO satellite meeting, IISER Tirupati.	
54	V. Stalin Raj	Deciphering Coronavirus Entry Pathways and Cellular Trafficking for Novel Therapeutic Strategies.	28/02/2025.	6th International Conference on Genome Biology (ICGB-6) & 56th Aqua-Terr Annual Day MKU, Madurai, Tamil Nadu	

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
55	V. Stalin Raj	Emerging and re-emerging viral pathogens: Vaccine development:	04-04-2025	Department of Zoology. Jamal Mohamed College, Trichy	
56	V. Stalin Raj	MERS-Coronavirus: From Discovery to Intervention.	06-03-2025	PU-IQAC & DEPARTMENT OF ZOOLOGY jointly organize FACULTY DEVELOPMENT PROGRAM (FDP) ON INNOVATION IN ZOOLOGY TOWARDS BIOMEDICAL SCIENCES. Periyar University, Salem	
57	Ullasa Kodandaramaiah	How evolution may explain why you are reading this	02-12-2024	TIFR Hyderabad	
58	Ullasa Kodandaramaiah	Striking Inter-Population Divergences in Host use in a Butterfly	06-03-2025	Ventura, California	2025 Gordon Research Conference in Speciation
59	Yashraj Chavhan	Bacteria evolve macroscopic multicellularity by the genetic assimilation of phenotypically plastic cell clustering	18-Oct-24	University of Lucknow	Invited talk at the 5th Annual Meeting of the Indian Society of Evolutionary Biologists (ISEB)
60	Hema Somanathan	Left in the dark Nocturnal pollinators and the plants they service in a changing world.	March 2025	Centenary Symposium of the Company of Biologists, UK.	
61	Hema Somanathan	Bee matters and Bees matter	20 February 2025	Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu)	
62	Hema Somanathan	Ecology in action: Teaching for impact	18 March 2025	SP College, Kashmir University, Srinagar	

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Awards & Recognitions

Sl. No.	Name of Faculty member	Month & Year	Title of Award/Recognition	Award/Recognition received for
1	Kana M Sureshan	Jan-24	JC Bose Fellowship	
2	Pushpita Ghosh	May-July 2025	International Faculty Fellow, Cluster of Excellence RESOLV – EXC 2033 (ID: 390677874)	RESOLV Board has approved the application for an IF Fellowship for Ass. Pushpita Ghosh (IISER Thiruvananthapuram, Kerala, India) in the period from May 01, 2025 to July 31, 2025. This includes the visit to the Theoretical Chemistry Division and collaborative work at the Lab of Lars Shafer at Ruhr University, Bochum.
3	R. S. Swathi	June 2024	Featured in the fourth book in SHE IS series (SHE IS - Women in Chemistry)	Collection of real-life stories of 75 women from India who are inventing and innovating in chemistry and its subsidiary fields. Many of these women are from Tier 2 and Tier 3 cities in India, where access to opportunities is limited. They have endured, overcome, and managed to excel through sheer grit, determination, perseverance, and focus.

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Fellowships

Sl. No.	Name of Faculty member	Month & Year	Fellowship Title & Duration of Fellowship	Description
1	Kana M Sureshan	01-Jan-25	Fellow of Indian National Science Academy	
2	Pushpita Ghosh	October, 2024	International visiting faculty fellowship, in the period from May 01, 2025 to July 31, 2025.	
3	Sukhendu Mandal	December & 2024	Indian National Science Academy (INSA)	Associate Fellow of the Indian National Science Academy (INSA)

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Editorial Assignments

Sl. No.	Name of Faculty member	Name of Journal and Duration of editorial assignment	Description
1	Basudev Sahoo	ChemCatChem (2025-2028)	ChemCatChem is a catalysis journal covering the whole spectrum of catalytic chemistry, including homogeneous, heterogeneous, chemo- and biocatalysis. Our scope spans from chemical synthesis to energy and environmental applications. According to the Journal Citation Reports, the journal has a 2023 impact factor of 3.8.
2	Kana M Sureshan	IAB Member : Angewandte Chemie IAB Member : Angewandte Chemie Novit IAB Member: Chemical Society Reviews IAB Member: Chemistry Europe	
3	R. S. Swathi	Associate Editor, Bulletin of Material Science (2023-till date)	Bulletin of Materials Science, published by the Indian Academy of Sciences in association with Springer Nature, is a bi-monthly journal publishing unique contributions across the materials science.
4	R. S. Swathi	Editorial Advisory Board Member, ACS Applied Optical Materials (2023-till date)	ACS Applied Optical Materials, published by ACS, is an international and interdisciplinary forum to publish original experimental and theoretical, including simulation and modeling, research in optical materials.
5	R. S. Swathi	Editor, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy (2024- till date)	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, published by Elsevier, is an interdisciplinary journal which spans from basic to applied aspects of optical spectroscopy in chemistry, medicine, biology, and materials science.

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Invited Talks

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
1	Alagiri Kaliyamoorthy	"Development of New Carbon-Carbon and Carbon-Heteroatom Bond Forming Reactions Using Heteroarene Derivatives as the Feedstock"	06 December 2024	IIT Bombay	ISCHA 2024 Conference
2	Alagiri Kaliyamoorthy	Exploration of Heteroarene-Based Pronucleophiles for 1,6-Conjugate Addition Reactions	03 March 2025	Jaypee Palace, Agra	"XXIV NOST – Organic Chemistry Conference"
3	R. S. Swathi	Global Optimization of Atomic and Molecular Clusters Bound to Carbon Nanostructures: A Swarm Intelligence Approach	21 March 2025	IISER Berhampur	Multifunctional Materials, Photonics, Bioscience and Artificial Intelligence (MPBA 2025) (All IISERs-University of Buffalo-SUNY meet)
4	R. S. Swathi	Global Optimization of Atomic and Molecular Clusters using Swarm Intelligence	28 February 2025	IISER Thiruvananthapuram	International Research Training Group 2991 Start-up Conference: Photoluminescence in Supramolecular Matrices
5	R. S. Swathi	Global Optimization of Atomic and Molecular Clusters Bound to Carbon Nanostructures: A Swarm Intelligence Approach	15 February 2025	IISER Thiruvananthapuram	2nd International Conference on Main Group Synthesis and Catalysis (ICMGSC-2025)
6	R. S. Swathi	Global Optimization of Atomic and Molecular Clusters Bound to Carbon Nanostructures: A Swarm Intelligence Approach	20 December 2024	JECRC University, Jaipur	61st Annual Convention of Chemists (ACC 2024)
7	R. S. Swathi	On Assessing the Carbon Capture Performance of Graphynes with Swarm Intelligence	19 December 2024	TIFR, Mumbai	Conference on Advances in Chemistry for Energy and Environment (CACEE)

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
8	R. S. Swathi	Optical Control of Hot Spots in Nanolens-like Nanosphere Heterotrimers for SERS	15 December 2024	IISER Thiruvananthapuram	The 12th International Symposium on Dynamic Exciton (ISDyEX)
9	R. S. Swathi	Global Optimization of Atomic and Molecular Clusters Bound to Carbon Nanostructures: A Swarm Intelligence Approach	13 December 2024	IISER Kolkata	Physics and Chemistry of Atomic, Molecular and Condensed Matter Systems (PCAMC-2024)
10	R. S. Swathi	Global Optimization of Atomic and Molecular Clusters Bound to Carbon Nanostructures: A Swarm Intelligence Approach	5 December 2024	JNCASR Bengaluru	International Winter School 2024 on Frontiers in Materials Science
11	R. S. Swathi	Optical Control of Hot Spots in Nanolens-like Nanosphere Heterotrimers for SERS	8 September 2024	IISc Bangalore	Structure and Dynamics of Materials. Celebrating 95 years of Raman Spectroscopy
12	R. S. Swathi	Quantum Sieving using One-atom-thick Carbon Membranes	21 May 2024	Online	Quantum Enables Science and Technology-QUEST-2024
13	Reji Varghese	Mitochondria targeting DNA nanoparticles for organelle-specific ROS generation	12 January 2025	CEFIPRA	
14	Reji Varghese	Circularly polarised luminescence enabled highly specific detection of potassium ions using DNA-based sensors	27 April 2024	IIT Bombay	
15	Reji Varghese	Mitochondria targeting DNA nanoparticles for organelle-specific ROS generation	3 February 2025	University of Rajasthan	
16	Pushpita Ghosh	“Spatiotemporal dynamics and emergent orders in chemical and biological systems”	20-22 March 2025.	“Inter IISER NISER Chemistry Meet (IICNM 2025), at IISER Pune”	
17	Pushpita Ghosh	“Spatiotemporal dynamics and emergent orders in chemical and biological systems”	31 January-2 February, 2025	Frontier Symposium in Chemistry, IISER Thiruvananthapuram	

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
18	Pushpita Ghosh	"Diverse morphology and motility induced collective dynamics within bacterial collectives bacterial collectives"	7 January 2025	Aditi Simha Memorial symposium on Soft matter and biological Systems" at IIT Madras	
19	Pushpita Ghosh	"Spatiotemporal dynamics and emergent orders in chemical and biological systems"	9-11 December 2024	Chemical Science-LIF Symposium-2024	
20	Pushpita Ghosh	Spatiotemporal dynamics and emergent order in bacterial collectives	22-25 October 2024	SoPhyC-2024" at IIT Bombay.	
21	Pushpita Ghosh	"Diverse morphology and motility induced collective dynamics within bacterial collectives bacterial collectives"	1-3 July 2024	Meeting On Statistical Physics and Complex Systems 2024 at IIT Kharagpur	
22	Pushpita Ghosh	Spatiotemporal dynamics of bacterial collectives	12-14 June 2024	Soft Matter Young Investigator's meet" (SMYIM) 2024 at Kodaikanal, Tamil Nadu	
23	Basudev Sahoo	Enabling C-B Bond Making and Breaking of Organoboron Compounds By Copper and Photoredox Catalysis	14-18 July 2024	Jaypee Hotel, Agra, India	30th International Conference on Organometallic Chemistry (ICOMC)
24	Basudev Sahoo	Catalytic C-C Bond Functionalization of Ketone-derived Dihydroquinazolinones	18-20 March 2025	IIT Indore, India	Indo-German Conference: Sustainable Chemistry - III
25	Basudev Sahoo	Photocatalytic C-C Bond Functionalization of Ketone-Derived Dihydroquinazolinones	20-22 March 2025	IISER Pune, India	Inter IISER-NISER Chemistry Meet (IINCM'25)
26	Y. Adithya Lakshmana	Early-time Structural Dynamics upon Photoexcitation: A Multifaceted Spectroscopic Perspective	8 September 2024	SDM/IISc Bangalore	

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
27	Y Adithya Lakshmana	Ultrafast Structural Dynamics in Molecular Adducts Featuring Photo-initiated Proton-coupled Electron Transfer	14 December 2024	ISDyEx at Hyatt Regency, Trivandrum	
28	Y. Adithya Lakshmana	Ultrafast Structural Dynamics in Molecular Adducts Featuring Photo-initiated Proton-coupled Electron Transfer	21 December 2024	ACC-(ICS) at JECRC, Jaipur	
29	Y. Adithya Lakshmana	Ultrafast Structural Dynamics in Molecular Adducts Featuring Photo-initiated Proton-coupled Electron Transfer	20 March 2025	IINCM-2025, IISER Pune	
30	Jerry A. Fereiro	"Solid State Electrochemistry: From Devices to Application"	30- 31 January 2025	Nirmalagiri College, Kannur	International conference on Interdisciplinary Studies and Advancement in Chemical Science, ISACS 2025.
31	Jerry A. Fereiro	Nanofabricated Protein devices as solid-state Gas sensors	29-30 November 2024	University of Kerala, Trivandrum	Symposium on Emerging Nanotechnologies for Sensing Optimization and Recognition Systems, SENSORS 2024
32	Jerry A. Fereiro	Protein -electronics a solid-state approach	3-5 April 2025	Kannur University, Payyanur Campus.	New Horizons in Material Science, NHMS-2025
33	Jerry A. Fereiro	Molecular electronics: Fundamentals to applications	20-22 December 2024	National Institute of Science Education and Research (NISER)	Perovskite India International Conference HyPe- 2024
34	Jerry A. Fereiro	Nanofabricated Protein devices as solid-state Gas sensors	5-6 March 2025	St Xaviers college, Thumba	"National Conference on Material Science for Sustainability-PADARTHA 2025"
35	Dr Rajendra Kurapati	Biodegradability of Graphene Family Materials	24- 27 October 2024	Institute of Nano Science and Technology, Mohali	International Conference on Smart Materials for Sustainable Technology (SMST-2024), organized by the Institute of Nano Science and Technology, Mohali and IIT BHU via the Society for Interdisciplinary Research in Materials and Biology (SIRMB)

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36	Dr Rajendra Kurapati	Biodegradability of Graphene Family Materials and Biomedical Applications	25 October 2024	IISER Mohali, Chemistry Dept.	Invited talk
37	Dr Rajendra Kurapati	Graphene and Functionalized Chitosan Coatings to Prevent the Biofilm-associated Corrosion on Medical Implants	20-23 November 2024	Chennai Trade Center	CORCON 2024, Asia's largest Conference on Corrosion, organized by AMPP India Chapter or NACE International India Section.
38	Dr Rajendra Kurapati	Graphene and Functionalized Chitosan Coatings to Prevent the Biofilm-associated Corrosion on Medical Implants	20-23 November 2025		TransMed Tech Conference 2024, Trivandrum, organized by Sree Chitra Tirunal Institute for Medical Sciences & Technology and Biomaterials Society of India
39	Dr Rajendra Kurapati	Functional Materials: Immune Cells Interactions and Biomedical Applications.	31 January-2 February, 2025	IISER TVM, Chemistry Dept.	5th FS CHEM, Invited Talk
40	Dr Rajendra Kurapati	Biological and Environmental Degradation for Two-Dimensional Materials	31 January-2 February, 2025	the University of Calicut, Kerala	Frontiers in Chemical Sciences 2025
41	Dr Rajendra Kurapati	Functional Materials: Immune Cells Interactions and Biomedical Applications	20-21 March, 2025	IISER, Berhampur	UB-IISER Workshop on Convergence of Multifunctional Materials, Photonics, Bioscience and Artificial Intelligence" (MPBA 2025) from 20th to 22nd March 2025 at IISER, Berhampur.
42	Dr Rajendra Kurapati	Biodegradability of Nanomaterials and Biomedical Applications	28 February 2025	Dept of Advanced Biomedical Sciences, Università degli Studi di Napoli "Federico II", Italy	Invited talk at Dept of Advanced Biomedical Sciences Università degli Studi di Napoli "Federico II"
43	Ramaraj Ayyappan	Development of Hydrogenation Catalysts using α -P,N-Ligated-Ru Complexes	7-8 March 25	Thiagarajar College Madurai 625009	
44	Ramaraj Ayyappan	Screening of $[(\eta^6\text{-cymene})\text{Ru}(\text{k}1\text{-P-N})\text{Cl}_2]$ Complexes for Hydrogenation Reactions	14-18 July 25	Jaypee convention center, Agra	Poster presentation

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45	Ramesh Rasappan	Organosilanes: Synthesis and Application of Solid Silylzinc Reagents in Cross-Coupling Reactions	25 March 2025	ACS Spring Meet	
46	Subrata Kundu	Phenol/Thiol-Nitrite Interactions at First-row Late Transition Metals	20-22 February 2025	AFMA-2025, BITS Pilani, Goa Campus	
47	Subrata Kundu	Phenol/Thiol-Nitrite Interactions at First-row Late Transition Metals	03-05 February 2025	FCS 2025, University of Calicut	
48	Subrata Kundu	Lewis acidic activations of thiol/phenol and their implications in the transformations of nitrite	09-12 February 2025	ICMGSC-2025, IISER Thiruvananthapuram	
49	Subrata Kundu	Phenol/thiol-nitrite Interaction at First-row Late Transition Metals.	14-17 December 2024	MTIC XXL, IIT Kharagpur	
50	Subrata Kundu	Phenol/thiol-nitrite Interaction at First-row Late Transition Metals	01-06 December 2024	AsBIC 11, Guilin, China	
51	Shyamalava Mazumdar	Computationally guided Rational design of the heme active site in a bacterial Cytochrome P450	23 June 2024	"13th International Conference on Porphyrins and Phthalocyanines (ICPP-13) in Niagara Falls & Buffalo, New York from June 23 to 28, 2024"	
52	Kana M Sureshan	Invited Lecture, Lattice Dynamics: Characterization & Applications, A.	20 August 2024	ACS Fall 2024 meeting, Denver, CO, US	
53	Kana M Sureshan	Invited Lecture, General Topics in polymer chemistry	21 August 2024	ACS Fall 2024 meeting, Denver, CO, USA	
54	Kana M Sureshan	Plenary Lecture, 3rd International Conference on Noncovalent Interactions (ICNI-III)	18 June 2024	Belgrade, Serbia	
55	Kana M Sureshan	Invited Lecture, Indo-German Workshop on Supramolecular Systems	19 September 2024	Goa, India	

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56	Kana M Sureshan	Plenary Lecture at Asian Crystallographic Association meeting	04 December 2024	Kuala Lumpur, Malaysia	
57	Kana M Sureshan	Distinguished Lecture at CoE International Conference on Molecular Mterials and Functions	11 December 2024	IIT Madras	
58	Kana M Sureshan	Keynote Lecture at Conference on Advances in Chemistry for Energy and Environment (CACEE-2024)	16-21 December 2024	TIFR Mumbai	
59	S. Gokulnath	Conformationally Locked and Protonation Induced Helical Chirality in Cyclo[2]dipyrrins Linked with Anthracene Subunits	23-29 July 2024	Buffalo, USA (Virtual)	
60	S. Gokulnath	Recent Advances in Chemistry Explorations for Sustainability	13-14 February 2025	Periyar University, Salem	
61	S. Gokulnath	Towards Ion-Sensors and Black Dyes Based on Macrocyclic Systems: Serendipity or Targeted Discovery?	24-25 March 2025	CUTN, Tamilnadu	
62	S. Gokulnath	Carbazole-based Macrocycles: Synthesis, Structure, Sensing and Photophysical Properties (Online mode)	06-07 December 2024	CUK, Kerala	
63	K. George Thomas	"Photon Purity in Semiconductor Nanocrystals"	9 August 2024	CAMRIE, IISER TVM	Invited talk in the workshop on Quantum Materials and Devices 2024 (QMD24).
64	K. George Thomas	"Emergent Chiroptical Properties in Assembled Molecules and Materials: From Native Chirality to Global Chirality"	24 September 2024	University of Wurzburg	"Invited talk at the Institute of Organic Chemistry & Center for Nanosystems Chemistry, Universität Würzburg"

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
65	K. George Thomas	"Exciton and Biexciton Dynamics in Semiconductor Quantum Dots"	25-27 September 2024	Nuremberg, Germany	Plenary talk at the 13th SolTech Conference organized jointly with Bayreuth, Erlangen-Nuremberg, Wurzburg, and the Technical and Ludwig Maximilian Universities
66	K. George Thomas	Exciton and Biexciton Dynamics in Semiconductor Quantum Dots	22-25 October 2024	IIT Bombay	"Invited talk at the Physical Chemistry Symposium – 2024 (SoPhyC-2024) organized by the Society of Physical Chemistry (SoPhyC)"
67	K. George Thomas	Exciton and Biexciton Dynamics in Semiconductor Quantum Dots	9-13 November 2024	IISER Berhampur	"Key note talk in the 16th "International Conference on Frontiers of Polymers and Advanced Materials" (ICFAM 2024) "
68	K R Krishnadas	Dynamic Chiral Response in DNA-templated Metal Clusters	02 February 2025	DST-JSPS-IIT Madras	DST-JSPS workshop on Atomically Precise Materials for Sustainability, Invited Short Talk
69	Mahesh Hariharan	Molecular Spectroscopy, Science Academies Lecture Workshop on "Current Trends in Chemistry"	12-13 April, 2024	Kongu Engineering College	
70	Mahesh Hariharan	Greek Cross (+) Aggregate, National Conference on Recent Trends in Materials Science and Technology (NCMST-2024)	26 June, 2024	IIST, Thiruvananthapuram	
71	Mahesh Hariharan	Can we see a single molecule?, Orientation Programme for 1st Year BSc Students	9 July, 2024	Mar Ivanios College, Thiruvananthapuram	
72	Mahesh Hariharan	Null Excitonic Interactions in Greek Cross Aggregate, 24th International Conference on Photochemical Conversion and Storage of Solar Energy (IPS-24)	28 July – 2 August 2024	International Conference Center Hiroshima, Japan	
73	Mahesh Hariharan	Basics of Transient Absorption Spectroscopy	18- 20 October, 2024	FCSXV Online Workshop	

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
74	Mahesh Hariharan	Transient Absorption Spectroscopy: Applications, FCSXV Meeting	16-18 November, 2024	IIT Bombay	
75	Mahesh Hariharan	A Bottom-Up Approach to Explore Structure and Property in Eumelanin, OWLS-17	18-21 November, 2024	IIT Bombay	
76	Mahesh Hariharan	Molecular Spectroscopy, Transition 2025	13-14 March, 2025	Central University of Tamil Nadu	
77	Mahesh Hariharan	A Bottom-Up Approach to Explore Structure and Property in Eumelanin, SPS-March Meeting	21-22 March, 2025	JNU, Delhi	



Photo: Parthiban, Electrical substations team, IISERTVM

SCHOOL OF DATA SCIENCE

Awards & Recognitions

Sl. No.	Name of Faculty member	Month & Year	Title of Award/ Recognition	Award/Recognition received for
1	Mainak Adhikari	April 2024	IEEE Senior Member	The novelty of the proposed solution is to develop different edge federation models by managing failures and promoting scalability in edge networks with an edge orchestrator that integrates AI-driven automation to enhance self-organization.
2	Mainak Adhikari	January 2025	INAE Senior Member	The Indian National Academy of Engineering (INAE) has several awards that recognize outstanding achievements in various engineering fields.

SCHOOL OF DATA SCIENCE

Fellowships

Sl. No.	Name of Faculty member	Month & Year	Fellowship Title & Duration of Fellowship	Description
1	Priyanka Majumder & Shyamal Ghosh	March 2025	Project grant from Telecom Technology Development Fund (TTDF), Department of Telecom (DOT), Government of India for a duration of 3 years	Project grant as Co-PIs from Telecom Technology Development Fund (TTDF), Department of Telecom (DOT), Government of India for the project titled "Zero touch Realization of Decentralized Federated Learning for Real Time Applications in 6G assisted Edge Networks"
2	Mainak Adhikari	March 2023-June 2025	Robust and Collaborative Fog-aided Federated Learning Framework for Enhanced Resiliency of Real-time Applications (ANRF Startup Grant- 2 Years)	Project grant as a PI from ANRF, Government of India. Here, we plan to develop a Robust and Collaborative Fog-aided Federated Learning device for farmers to manage the water irrigation of Paddy fields remotely.

Sl. No.	Name of Faculty member	Month & Year	Fellowship Title & Duration of Fellowship	Description
3	Mainak Adhikari	March 2025	Zero touch Realization of Decentralized Federated Learning for Real Time Applications in 6G assisted Edge Networks (DoT TTDF Grant- 3 Years)	Project grant as a PI from Telecom Technology Development Fund (TTDF), Department of Telecom (DOT), Government of India. Here, we plan to develop zero-touch, sustainable, and AI-assisted solutions for 6G-assisted edge networks.
4	Mainak Adhikari	March 2025	Artificial Intelligence for supporting Integrated Sensing and Secured Communication in 6G assisted Edge Networks (DoT TTDF Grant- 3 Years)	Project grant as a PI from Telecom Technology Development Fund (TTDF), Department of Telecom (DOT), Government of India. Here, we plan to develop integrated sustainable and AI-assisted secured solutions of 6G-assisted edge networks.

SCHOOL OF DATA SCIENCE



Editorial Assignments

Sl. No.	Name of Faculty member	Name of Journal and Duration of editorial assignment	Short description about the journal
1	Mainak Adhikari	IEEE Journal of Biomedical and Healthcare Informatics (SCIE)	The IEEE Journal of Biomedical and Health Informatics (JBHI) is a peer-reviewed publication focused on the intersection of information technology, computer science, and health/biomedicine.
2	Mainak Adhikari	IEEE Sensors Journal (SCIE)	The IEEE Sensors Journal is a bi-weekly, peer-reviewed scientific journal published by the IEEE Sensors Council, focusing on research related to sensors and sensing phenomena. It covers the theory, design, fabrication, manufacturing, and applications of devices that sense and transduce physical, chemical, and biological phenomena, with an emphasis on the electronics and physics aspects of sensors and integrated sensor-actuators.
3	Mainak Adhikari	IEEE Internet of Things Journal (SCIE)	The IEEE Internet of Things Journal (SCIE) is a peer-reviewed academic journal published by the Institute of Electrical and Electronics Engineers (IEEE) that focuses on the Internet of Things (IoT). It covers research on various aspects of IoT, including system architecture, enabling technologies, communication and networking, services, applications, and the social implications of IoT.

Sl. No.	Name of Faculty member	Name of Journal and Duration of editorial assignment	Short description about the journal
4	Suresh Chavhan	International Journal of E-Health and Medical Communications (3 years)	The International Journal of E-Health and Medical Communications (IJEHMC) is a peer-reviewed scholarly journal that focuses on the latest advancements in e-health technologies, telemedicine, healthcare informatics, and medical communications. It publishes original research, case studies, and review articles related to the application of ICT (Information and Communication Technologies) in healthcare systems, with a particular emphasis on improving patient care, healthcare delivery, and medical education through digital innovation.
5	Suresh Chavhan	IEEE Consumer Technology Society's Technical Committee member for 2 years	The IEEE Consumer Technology Society (CTSoc) is a professional society of IEEE dedicated to advancing the theory, design, and implementation of consumer electronics and emerging technologies. It supports innovation in areas such as smart homes, wearables, digital health, AR/VR, IoT, AI-powered devices, and automotive consumer technologies. Through conferences, publications (like the IEEE Consumer Electronics Magazine and IEEE Transactions on Consumer Electronics), and technical committees, CTSoc fosters collaboration among researchers, engineers, and industry leaders worldwide.

SCHOOL OF DATA SCIENCE



Invited Talks

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
1	Shyamal Ghosh	Moment inequality for decreasing mean time to failure distributions with hypothesis testing application	15-12-2024	King's College London, London, UK	18th International Joint Conference on Computational and Financial Econometrics and Computational and Methodological Statistics (CFE-CMStatistics 2024) Hybrid Conference, King's College London, London, UK, 14th - 16th December, 2024.

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
2	Shyamal Ghosh	Moment inequality for decreasing mean time to failure distributions with hypothesis testing application	28/12/2024-29/12/2024	CUSAT, Kerala	In Annual Conference of INTERNATIONAL INDIAN STATISTICAL ASSOCIATION (IISA2024 CONFERENCE) during 27-31 December 2024, given a talk and chaired a session.
3	Priyanka Majumder	Statistical power and sample size requirements to detect an intervention by time interaction in four level longitudinal cluster randomized trials	15-12-2024	King's College London, London, UK	18th International Joint Conference on Computational and Financial Econometrics and Computational and Methodological Statistics (CFE-CMStatistics 2024) Hybrid Conference, King's College London, London, UK, 14th - 16th December, 2024. (Given talk via online mode)
4	Priyanka Majumder	A stochastic comparison study on replacement policies	28/12/2024-29/12/2024	CUSAT, Kerala	In Annual Conference of INTERNATIONAL INDIAN STATISTICAL ASSOCIATION (IISA2024 CONFERENCE) during 27-31 December 2024, organised a session, given a talk and chaired a session.
5	Priyanka Majumder	A stochastic comparison study on replacement policies	14/12/2024	University of Kerala	Tenth International Conference on Statistics for the Twenty-First Century – ICSTC-2024 at University of Kerala during December 13 to 16, 2024
6	Mainak Adhikari	Challenges in Academic Publication: Meet the Editor	17/01/2025-18/01/2025	SCMS Social Sciences Research Colloquium 2024-25	The panel discussion provided a platform for academicians, researchers, and scholars to interact with renowned editors and distinguished academicians to gain insights into the publication process and explore the evolving landscape of academic publishing.
7	Raji Susan Mathew	Optimizing Quantitative Imaging: Deep Learning Meets Data Consistency	03-07-2024	IISc Bangalore	The talk was part of the SPCOM 2024 invited session "Medical Imaging".
8	Raji Susan Mathew	AI for Medical Imaging	11-09-2024	St. Thomas Residential School, Thiruvananthapuram	An orientation class for the school students.
9	Dhanyamol Antony	Switching classes: Characterisation and computation	28-03-2025	IIT Delhi	Mathematics Department Seminar



Sl. No.	Name of Faculty member	Month & Year	Title of Award/Recognition	Award/Recognition received for
1	Ashutosh Pandey	Aug 2024	National Young Geoscientist Award 2024	Awarded by the Ministry of Mines, Government of India for outstanding contribution in the field of Geoscience (below 35 years)
2	Ashutosh Pandey	Dec 2024	J.G. Negi Young Scientist Award 2024	Awarded by the Indian Geophysical Union for significant contribution in the field of Geoscience (below 35 years)
3	Fousiya AA	Nov 2024	Scientist of the year award-2024	Awarded by the Indian Agricultural Research Institute (ICAR), Lucknow at the 1st International conference under the Theme climate change, for outstanding contribution & Recognition in the field of Environmental Sciences.
4	Fousiya AA	Feb 2025	P.M Sayeed Sahib Excellency Award 2025	Awarded by Lakshadweep State committee, for being the first women from Lakshadweep to get a Phd and PDF in the field of Marine Geosciences.
5	Anand N.	2025	Program Committee member, Propagation Through and Characterization of Atmospheric and Oceanic Phenomena (pcAOP) 2025, Seattle, USA	
		2025	Reviewer, Optica Women Scholars programme, 2025; Optica Amplify Scholarship, 2025	
6	Prasanth	2025	Editorial Board Member, Nature Scientific Data	
7	Pramitha M	2024-25	Organising committee member GW/QBOi seminar series, APARC, WCRP	

SCHOOL OF EARTH, ENVIRONMENTAL AND SUSTAINABILITY SCIENCE



Fellowships

Sl. No.	Name of Faculty member	Month & Year	Fellowship Title & Duration of Fellowship	Description
1	Pramitha M	August 2024	Consultancy Project from Forschungszentrum Jülich Germany. One year	Method selection, algorithm design, implementation and test application for scale separation between global scale waves and gravity waves from satellite observations.

SCHOOL OF EARTH, ENVIRONMENTAL AND SUSTAINABILITY SCIENCE



Editorial Assignments

Sl. No.	Name of Faculty member	Name of Journal and Duration of editorial assignment	Description
1	Ashutosh Pandey (co-editor)	Geological Society London Special Publication (Volume 551) Special issue on: Alkaline rocks: Economic and geodynamic significance through geological time (https://www.lyellcollection.org/toc/sp/551/1)	The Geological Society's flagship book series – Geological Society London Special Publications represent a state-of-the-art treatment of their subject matter and are renowned throughout the global geoscience community for their high quality of science and production.
2	Prasanth Valayamkunnath	Editorial Board Member, Nature Scientific Data	Scientific Data is a peer-reviewed open access scientific journal published by Nature Research since 2014. It focuses on descriptions of data sets relevant to the natural sciences, medicine, engineering and social sciences, which are provided as machine-readable data, complemented with a human oriented narrative.

SCHOOL OF EARTH, ENVIRONMENTAL AND SUSTAINABILITY SCIENCE



Invited Talks

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
1	Ashutosh Pandey	Mantle evolution and geodynamics through the lens of cratonic alkaline magmatism	3 March 2025	Department of Marine Geology and Geophysics, School of Marine Sciences, Cochin University of Science and Technology, Cochin	J.G. Negi Young Scientist Award Lecture of the Indian Geophysical Union
2	Ashutosh Pandey	Geochemically distinct basalts of Panjal Traps record transition from sub-continental lithospheric mantle to sub-lithospheric mantle melting regime	18 Feb 2025	National Conference at NCESS, Thiruvananthapuram	
3	Vishnu S Nair	The Mighty Monsoonal Storms: Tracing Historical Evolution and Future Impacts	10 September, 2024	TIFR- Centre for Applicable Mathematics	Institute colloquium talks about monsoon low-pressure systems.
4	Vishnu S Nair	Forecasting Monsoon Low-Pressure Systems: A Hybrid Modeling Approach Using Data-Driven and Numerical Methods	19 - 21 November, 2024	National Centre for Medium Range Weather Forecasting (NCMRWF), Ministry of Earth Science, New Delhi	Join the Celebration of India's 30 Years of Numerical Weather Prediction (NWP) and the WCSSP-India Meeting at NCMRWF from November 19-21, 2024. Engage in discussions that connect MoES and India-UK efforts in NWP, emphasizing the role of SEESS and IISER-TVM.
5	Anand N.	Science and signs of climate change	08 August 2024	St. Thomas Residential School, Thiruvananthapuram	
		Laser communication through turbulent and turbid atmosphere	29 June 2024	35th Mid-Year meeting of the Indian Academy of Sciences at Indian Institute of Science, Bengaluru	
		Lectures/hands-on tutorials on aerosols, Mie scattering, and radiative transfer modelling	December 2024	DST National Training Program on Aerosols and Climate, Indian Institute of Science, Bengaluru	

SCHOOL OF MATHEMATICS



Awards & Recognitions

Sl. No.	Name of Faculty member	Month & Year	Title of Award/ Recognition	Award/Recognition received for
1	Sudarshan Kumar K	2024, October	Invitation to give a talk.	Invited to give a talk in the Alumni conference held at TIFR Centre for Applicable Mathematics, Bengaluru, India
2	Sudarshan Kumar K	2024, October	Invitation as resource person	Invited to give lectures in the NCM workshop held at Indian Institute of Petroleum and Energy, Visakhapatnam, Andhra Pradesh.
3	Rajan M.P	February 28, 2025	K.K. Nair Foundation Scientific Award	In recognition of contribution in the area of Mathematics on the occasion of National Science Day Celebrations
4	Viji Z Thomas	May, 2024	Chaired a Session at Zassenhaus group theory conference	

SCHOOL OF MATHEMATICS



Invited Talks

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
1	Sudarshan Kumar K	On second-order approximation of non-local conservation laws and	2024, October	Invited to give a talk in the Alumni conference held at TIFR Centre for Applicable Mathematics, Bengaluru, India	Talk has been delivered
2	Sudarshan Kumar K	Numerical methods for PDE	2024, October	Invited to give lectures in the NCM workshop held at Indian Institute of Petroleum and Energy, Visakhapatnam, Andhra Pradesh.	Talk has been delivered

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
3	Sudarshan Kumar K	On hyperbolic system of conservation alws	2025, February	Invited to give a talk in a research symposium held at Mathematics department of Manipal Institute of Technology, Manipal	Talk has been delivered
4	Sheetal Dharmatti	Existence and Uniqueness of Viscosity Solutions of Value function of Local Cahn-Hilliard-Navier-Stokes System	25 October 2024	IIT Bombay in the conference Recent Advances in PDE's Theory and Computations.	
5	Sheetal Dharmatti	Cahn-Hilliard-Navier-Stokes equations with Nonhomogeneous Boundary: Existence, Uniqueness, Regularity and Optimal Control	12 July 2024	IIT Goa	
6	Sheetal Dharmatti	Separation Property for the Nonlocal Cahn-Hilliard-Brinkman System	19 January 2025	Frontier Symposium @ IISER Thiruvananthapuram,	
7	Sheetal Dharmatti	An introductory course on Measure theory	20 May 2024- 1 June 2024	Resident faculty for MTTs Summer camp, Central University of Tamilnadu, Thiruvavur, Tamilnadu	
8	Sheetal Dharmatti	Cahn-Hilliard-Navier-Stokes equations with Nonhomogeneous Boundary: Existence, Uniqueness, Regularity and Optimal Control	25 April 2024	IIT Bombay	
9		On endomorphism of Moduli space of Principal bundles	11.3.25	KSOM	
10	Sachindranath Jayaraman	Linear preservers of semipositive matrices	Summer 2024	IISER Thiruvananthapuram	Inter IISER Math Meet

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
11	Mohammed Ramiz Reza	A local Douglas formula and generalized Cesaro summability in higher order weighted Dirichlet type spaces	May 16, 2024	Saarland University, Germany	Conference Name: Spaces of Analytic Functions and their Operators
12	Mohammed Ramiz Reza	Brown Halmos Operator Identity and Toeplitz Operators on the Dirichlet Space	February 24, 2025	Indian Institute of Technology Bombay, India	Conference Name: Conference on Operator Algebra and Related Topics (COART-25@ITB)
13	Nagaiah Chamakuri	International Workshop on Hardware-aware Scientific Computing	October 28-30, 2024.	University of Heidelberg, Germany	High-Performance Computing, Resource-aware numerical methods, Scalable methods for solving partial differential equations (PDEs), Optimal control of PDEs
14	Jyothsna S	Products of primes in ray classes	18th January 2025	IISER Pune (Women in Numbers 2025)	
15	Jyothsna S	Products of primes in ray classes	29th December 2024	Annual Conference of the Ramanujan Mathematical Society (RMS 2024), held at Christ University, Banaglore	
16	Jyothsna S	The two variable Artin conjecture	12th December 2024	Conference titled, 'Celebrating Number Theory in India,' held in honour of M. Ram Murty at IISER Pune	
17	Geetha Thangavelu	Permutation modules of walled Brauer algebras	May 28, 2024	Institute of Algebra and Number theory, University of Stuttgart, Germany	Invited to visit and collaborate Steffen Koenig, Richard Dipper and Anne Henke for the period 16 May 2024-16 July 2024, University of Stuttgart, Germany.
18	Geetha Thangavelu	Permutation modules of walled Brauer algebras	February 2-5, 2025	The Institute of Mathematical Sciences, Chennai	Invited talk at Chennai in a conference "Representations of groups and algebras"
19	Dhanya Rajendran	Asymptotic Estimates for (p,q) Laplace Problems with Singular and Indefinite Sign Non-linearity and some applications	December 16-20	14th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Abudhabi	

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
20	Asha Kisan Dond	Convergence of Adaptive finite element method	January 06-10, 2025	Department of Mathematics, IIT Roorkee	Indo-French Workshop on Innovative Numerical Methods for Modern Engineering Problems] Organized by Department of Mathematics, IIT Roorkee, January 06-10, 2025
21	Asha Kisan Dond	Convergence of Adaptive finite element method	July 8-13, 2024	IT Bombay	NCM workshop "Finite Element Analysis of Variational Problems ", at IIT Bombay, July 8-13, 2024
22	Asha Kisan Dond	Quasi-optimality of adaptive FEMs for distributed elliptic optimal control problems	13 May 2024.	Humboldt-Universität zu Berlin, Germany	Invited talk in Research Seminar Numerical Analysis
23	Asha Kisan Dond	Convergence of adaptive Crouzeix-Raviart and Morley FEM for distributed optimal control problems	8 May 2024	Universität Wien, Austria	Invited talk
24	Asha Kisan Dond	Quasi-optimality of Adaptive Nonconforming FEM for Distributed Elliptic Optimal Control Problems	16 May 2024	University of Bonn, Germany	Invited talk in Research Seminar: Mathematics of Computation at Institut für numerische Simulationen .
25	Asha Kisan Dond	Stabilized finite element methods for convection-dominated diffusion equations	29 May 2024	Universität Leipzig, Germany	Invited talk
26	Viji Z Thomas	On the size of the Schur multiplier of finite groups	May 31- June 1, 2024	Texas State University at San Marcos, USA	
27	Viji Z Thomas	On the size of the Schur multiplier of finite groups	April 8-13, 2024	Ischia Group theory Conference, Italy	
28	Samya Kumar Ray	Speaker on functional analysis	08-13 July, 2024	AFS-III held at IIST, Thiruvananthapuram	
29	Samya Kumar Ray	A variant of Grothendieck inequality and tensor product norms	25th February, 2025	IIT Bombay	Conference Name: Conference on Operator Algebra and Related Topics (COART-25@IITB)

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
30	Samya Kumar Ray	Weighted weak (L ₁) estimate for non-commutative square function	28th December 2024	Christ University Bangalore	39th Annual Conference of Ramanujan Mathematical Society
31	P. Devaraj	Optimal dual pairs of frames for erasures	14-3-2025	RANI ANNA GOVERNMENT COLLEGE FOR WOMEN, Tirunelveli, Tamil Nadu	

SCHOOL OF PHYSICS



Awards & Recognitions

Sl. No.	Name of Faculty member	Month & Year	Title of Award/ Recognition	Award/Recognition received for
1	Shabnam Iyyani	July, 2024	Selected to Visiting Associateship Program at IUCAA	
2	Shabnam Iyyani	February, 2025	P. I. Paul Outstanding Young Physics Researcher Award 2024	The award is given to exceptional young researchers from Kerala in the field of physics who have demonstrated exceptional talent and innovation through their contributions to theoretical, experimental, or applied physics.
3	Vinayak Kamble	December 2024	DAE Young Achiever Award	Awarded in DAE Solid state physics symposium for recognising early career Faculty/scientists
4	Deepshikha Jaiswal-Nagar	January 2025	Chairperson, Gender in Condensed Matter Physics Working group- Indian Physics Association	
5	G. Ambika	March 2025	NSC 2025 C. S. Hsu Award	International Award for distinguished scholars in Nonlinear Dynamics and Control

SCHOOL OF PHYSICS



Fellowships

Sl. No.	Name of Faculty member	Month & Year	Fellowship Title & Duration of Fellowship	Description
1	Vinayak Kamble	December 2024	Elected as Young Associate of Maharashtra Academy of Science, Pune	

SCHOOL OF PHYSICS



Editorial Assignments

Sl. No.	Name of Faculty member	Name of Journal and Duration of editorial assignment	Description
1	Vinayak Kamble	Editor, Scientific Reports	<i>Scientific Reports</i> is a peer-reviewed open-access scientific mega journal published by Nature Portfolio, covering all areas of the natural sciences.
2	G. Ambika	Editorial Board Member, Phil. Trans. Royal Society A, London	A scientific journal published by the Royal Society, that focuses on original research and review content across the physical, mathematical, and engineering sciences.
3	G. Ambika	Associate Editor, The European Physical Journal: Special Topics.	A scientific journal that publishes topical issues, on specific subjects within physics and related fields-Springer Nature Link

SCHOOL OF PHYSICS



Invited Talks

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
1	Suraj S Hegde	Tale of two topologies: Interplay of skin and edge localizations in open quantum systems	17.12.2024	Young Investigators meet on quantum condensed matter theory-2024, IISER Pune.	
2	Vinayak Kamble	Gas sensor array : AI assisted data analysis and its challenges	January 31 and February 1, 2025	SPARC-Sponsored two-day international workshop on "Sensors and Actuators with Special Emphasis on Polymeric Materials"	jointly organized by the Department of Chemistry, University of Calicut, Kerala, and the Centre for Materials for Electronics Technology (C-MET), Thrissur, Kerala and the Electronic Industries Association of India (ELCINA).
3	Vinayak Kamble	Machines that sniff chemicals: Physical means of chemical identification	8th November 2024.	Igniting Curiosity: A one-Day Symposium on Advanced Science for Young Researchers at Goa University	symposium organized through the funding from Indian National Young Academy of Science and Goa University.
4.	Deepshikha Jaiswal-Nagar	Exploring Emergent Quantum Phenomena: Superconductivity, Magnetism and quantum information	26th March 2025	Seminar in Physics: Focusing on Women in Scientific Leadership, IISER Kolkata	Conference organised by IISER Kolkata
5.	Deepshikha Jaiswal-Nagar	Low concentration resistive and optical based hydrogen sensing using palladium thin films	20th September 2024	India-Singapore Virtual Workshop on Green Economy (Hydrogen), 20-21 September 2024.	Online conference organised by Department of Science and Technology, India

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
6.	Deepshikha Jaiswal-Nagar	Tomonaga-Luttinger liquid and quantum criticality in spin-1/2 antiferromagnetic Heisenberg chain $C_{14}H_{18}Cu_4O_{10}$ via Wilson ratio	13th September 2024	Invited talk at TIFR Hyderabad	
6.	Deepshikha Jaiswal-Nagar	Tomonaga-Luttinger liquid and quantum criticality in spin-1/2 antiferromagnetic Heisenberg chain $C_{14}H_{18}Cu_4O_{10}$ via Wilson ratio	15th July 2024	International conference on "Engineered 2D Quantum Materials", ICTS Bangalore.	International conference organised by ICTS Bangalore during 15th July -26th July 2024.
7.	Deepshikha Jaiswal-Nagar	Probing pseudogap in a high temperature superconductor $YBa_2Cu_3-xAl_xO_{6+d}$	20th June 2024	National Initiative on Undergraduate Science, HBCSE-TIFR Mumbai	Nurture program NIUS-Physics organised by Homi Bhabha Centre for Science Education, June 18-29 2024.
8	G.Ambika	Dynamics from Data	June 13, 2024	International Faculty Development Program (FDP) on Advances in Nonlinear Dynamics: Methods and Applications (ANDMA 2024)	Organised by The School of Advanced Sciences (SAS), VIT-AP University (online)
9	G. Ambika	Recurrence networks and dynamics from data of climate zones in India	Nov 12, 2024	Workshop on Climate Dynamics and Networks	Organised by ICTS, Bangalore- Nov 11-16, 2024
10	G.Ambika	Data to Dynamics	Feb 06, 2025	Dr Sathy Menon Memorial Lecture	Organised at Maharajas College, Cochin
11	G.Ambika	Exploring Nature's hidden patterns	Mar 06, 2025	Annual meeting of University College Physics Society (UCPS)	Organized by University College, TVM
12	G.Ambika	Understanding complex systems from Data	Mar 07, 2025	Recent Advances PhyCheMat -RAPCM2025	Faculty Development Program (FDP) (Celebrating Women in Science)-organised by VIT-AP(online)

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
13	G.Ambika	Relay synchronization and control in multiplex networks with directional coupling	Mar 09, 2025	Conference on Nonlinear Systems and Dynamics(CNSD) 2025	Organised by Bharathidasan University Trichi, Mar 09-13, 2025 under Society for Nonlinear and Complex Systems(SONCOS).
14	Manoj Namboothiry	Solution-Processed Solar Cells – A Glimpse of Organic and Perovskite solar cells	9th January 2025	IIT Madras	International school and conference on the evolution of electronic structure theory and experimental realization (EESTER-2025), jointly organized by IIT Madras, SRMIST, Anna University, and CSIR-CLRI lab
15	Manoj Namboothiry	Flexible electronics: A perspective on photovoltaics and photodetection	14th January 2025	IIT Kanpur	
16	Bindusar Sahoo	Dilaton Weyl Multiplets in Conformal Supergravity	9th December 2024	National Strings Meeting, IIT Ropar	A biennial national conference jointly organized by the Indian String Theory Community
17	Bindusar Sahoo	Relating maximal conformal supergravities in 6d and 4d	13th November 2024	ICTS Bengaluru	Invited Talk at ICTS Bengaluru
18	Bindusar Sahoo	Superconformal approach to N=4 supergravity	26th June 2024	IMSc Chennai	Invited Talk at IMSc Chennai
19	Bindusar Sahoo	Superconformal approach to N=4 supergravity	22nd May 2024	Harish Chandra Research Institute Prayagraj	Invited talk at HRI
20	Mathew Arun Thomas	Anomalous U(1)	Aug 9 – 11, 2024	Centre for High Energy Physics, Indian Institute of Science	FRONTIERS IN PARTICLE PHYSICS 2024

Sl. No.	Name of Faculty member	Title of the Talk	Date	Institution/Place of the Talk	Description
21	Mathew Arun Thomas	(Assisted) baryon number violation	14 -18 October 2024	IIT Hyderabad	17th International Conference on Interconnections between Particle Physics and Cosmology
22	Mathew Arun Thomas	Correlating assisted nucleon decay with dinucleon decay	13th to 15th March 2025	Centre for High Energy Physics, Indian Institute of Science	Journeys in Particle Physics: Rohini Godbole Memorial Conference
23	Madhu Thalakulam	Superconducting and metallic states in two-dimension: Two-sides of the same coin	February 11-14, 2025	4th International Conference on Optoelectronic and Nanomaterials for Advanced Technology (icONMAT 2025), CUSAT-Kochi, Kerala	

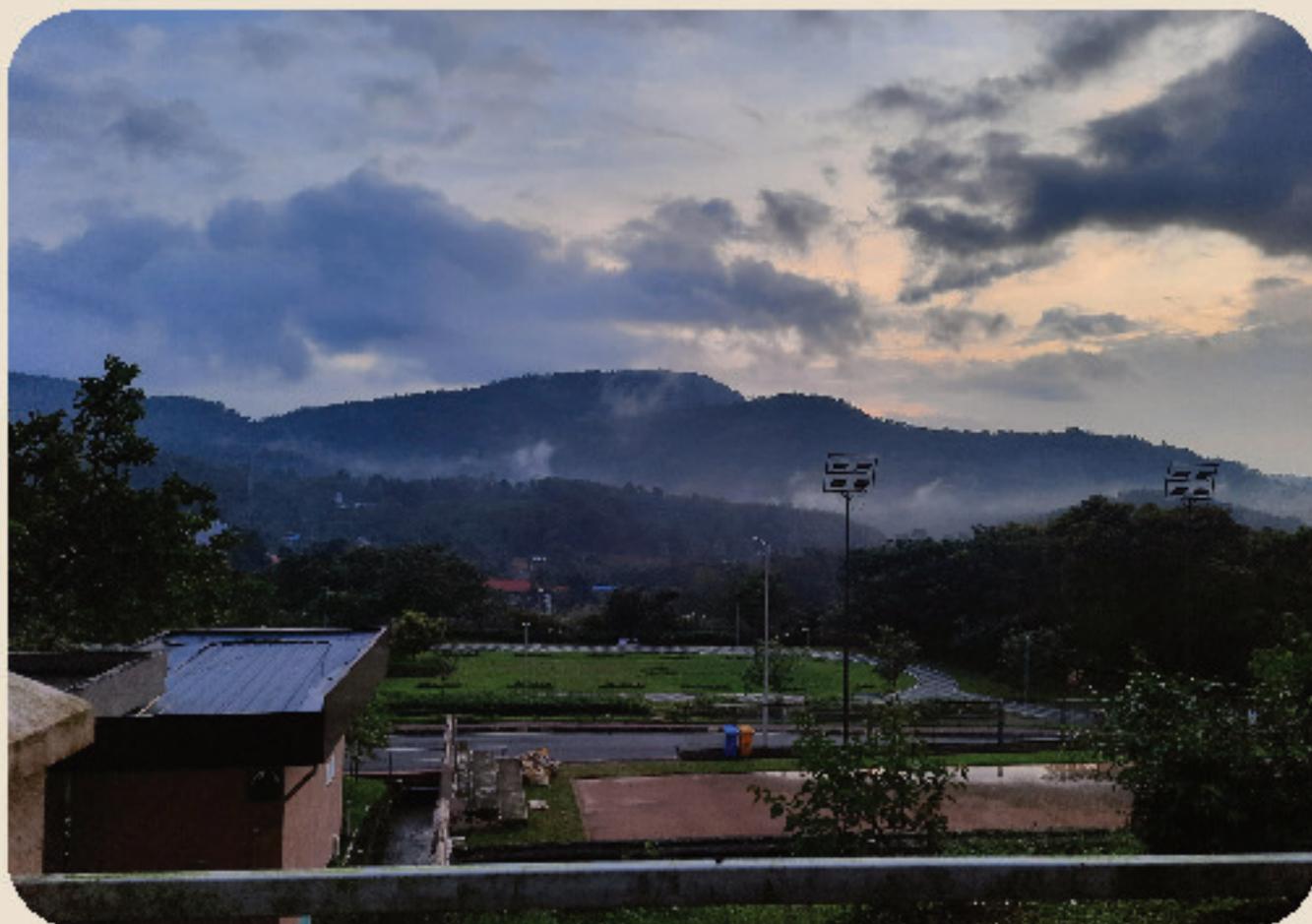


Photo: Shyam M, Alumnus Batch '19, IISER TVM

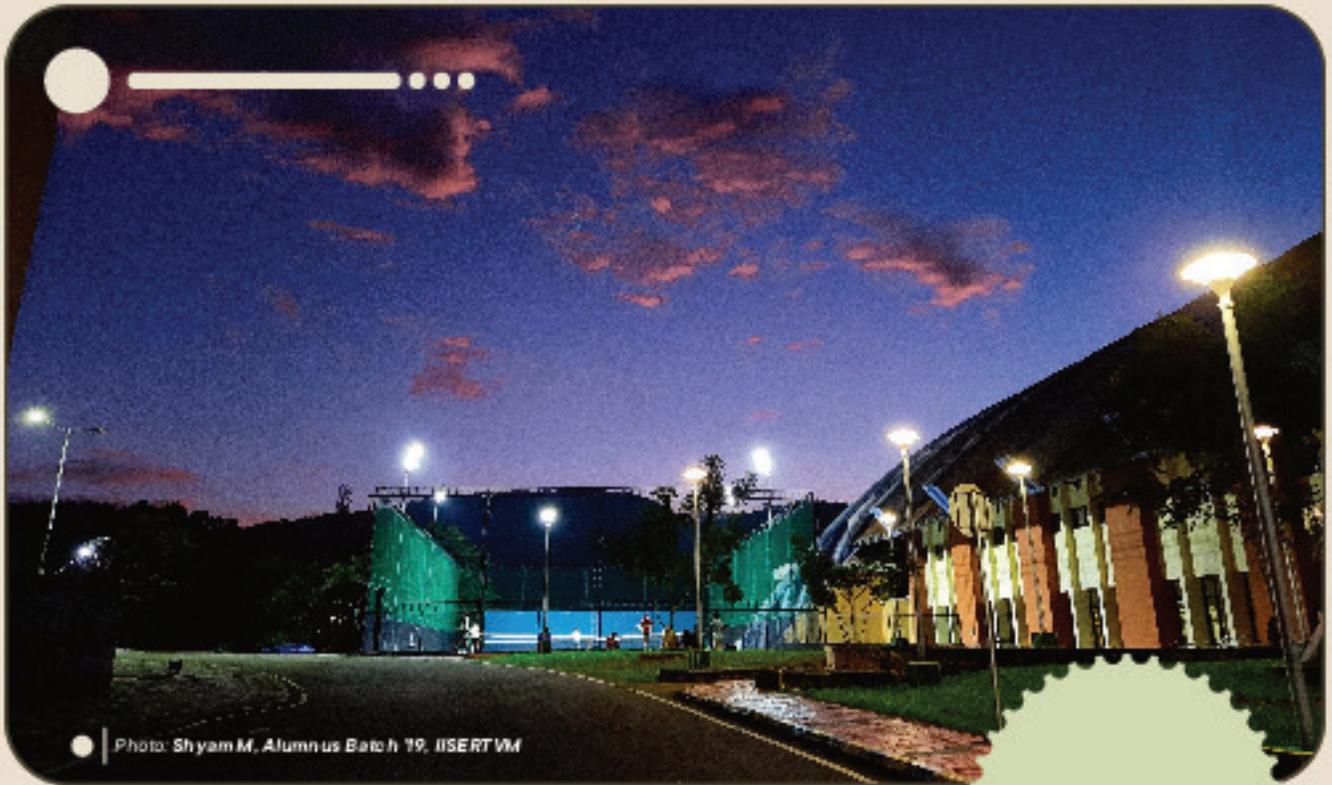


Photo: Shyam M, Alumnus Batch 19, IISERTVM

Grants & Partnerships...

NEW EXTRAMURAL GRANTS

NEW EXTRAMURAL GRANTS (2024-25)

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	National / International	Period From	Period To	Funds Received During the Year 2024-25 (Amount in Lakhs)
1	MOF-Nanocellulose Hybrid Composite Materials for CO2 Capture and Separation Applications	DR. A THIRUMURUGAN	SOC	MoESTARS/ STARS2/20230 522	MOE	National	29.05.2024	28.05.2027	27.63
2	Understanding the contribution of chromatin remodelers to epilepsy	DR. AMRUTHA SWAMINATHAN	SOB	BT/PR52416/ BMS/85/208/2024	DBT	National	24.10.2024	23.10.2027	37.89
3	Ecophysiological functioning of Indian mangroves under climate change conditions: current performance and future predictions	DR. AMIRBAN GUJHA	SOB	CRG/2023/000961	SERB	National	10.10.2024	09.10.2027	25.54
4	Petrology, geochemistry, and geochronology of mafic and felsic volcanic rocks of Panjal Traps, Kashmir, NW India	DR. ASHUTOSH PANDEY	SOEES	SRG/2023/000218	SERB	National	26.10.2023	25.10.2025	12.93
5	Exploring Stable Organofluorophosphonium/ Salts as Difluoromethylating Reagents in Asymmetric Organic Synthesis	DR. BASUDEV SAHOO	SOC	MoESTARS/ STARS2/20230147	MOE	National	29.05.2024	28.05.2027	26.10
6	Quantum information processing from distinguishing ability of physical processes	DR. DEBASHIS SAHA	SOP	MoESTARS/ STARS2/20230809	MOE	National	29.05.2024	28.05.2027	15.89
7	National Green Hydrogen Mission	DR. DEEPSHIKHA JAISWAL NAGAR	SOP	353/6/2023-NT	MNRE	National	20.01.2025	19.01.2028	0.00

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	National / International	Period From	Period To	Funds Received During the Year 2024-25 (Amount in Lakhs)
8	Delving into metamagnetic quantum criticality in magnetic insulators Thermal expansion and Magneto-caloric effect studies	DR. DEEPSHIKHA JAISWAL NAGAR	SOP	IGSTC/WISER/2024/ DJN2120/45/202425/89	IGSTC	National / International	30.08.2024	29.08.2027	13.00
9	Mathematical Aspects of Machine Learning with applications to signal processing	DR. DEVARAJ PONNAIAN	SOM	CRG/2023/004903	SERB	National	08.10.2024	07.10.2027	8.97
10	Length scales in social spider webs: comparative web-building behaviour across species	DR. HEMA SOMANATHAN	SOB	CRG/2023/004410	SERB	National	16.10.2024	15.10.2027	7.52
11	Functionalizing the next generation 2D semiconductors for optoelectronic and catalytic applications via ion irradiation	DR. JOY MITRA	SOP	SPARC- UMIER/20242025/ P3086 / IITKGP/ SPARC/2024 /50	IIT KHARAGPUR	National	01.04.2024	31.03.2026	24.00
12	Harnessing Direct and Indirect Excitons in TMDCs for photo-stimulated device applications	DR. JOY MITRA	SOP	MoESTARS/ STARS2/20231012	MOE	National	29.05.2024	28.05.2027	15.56
13	Defining the role of cell-extrinsic and cell-intrinsic factors involved in activated CD8 T cell differentiation	DR. KARTHIK CHANDIRAN	SOB	BT/RLF/ Reentry/19/2022	DBT	National	17.04.2024	16.04.2027	27.72
14	Synergizing materials with system for energy-efficient magneto-electrolytic hydrogen generator	DR. M.M SHAJUMON	SOP	IITB RESEARCH COLLABORATION PROJECT	IIT BOMBAY	National	11.06.2024	10.06.2026	27.60

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	National / International	Period From	Period To	Funds Received During the Year 2024-25 (Amount in Lakhs)
15	Development of multimodal optical coherence tomography ultrasound MEMS technology-based microscopic-resolution photoacoustic elastography (OCT-US-MEMS-PPAE) imaging system: a validation study for ophthalmic diagnosis and therapeutic treatments	DR. MSUJESH KUMAR SINGH	SOP	BT/PR50627/ MED/32/993/2023	DBT	National	30.05.2024	29.05.2027	286.42
16	Development of a 50-qubit quantum information processor with electron spins in silicon	DR. MADHU THALAKULAM / DR. ANIL SHAJI	SOP	DST/QTC/NGM/ QC/2024	DST	National	11.02.2025	10.02.2033	5.20
17	Photoluminescence in Supramolecular Matrices	DR. MAHESH HARIHARAN	SOC	INT/FRG/ IRTG/01/2024DR. MAHESH HARIHARAN	DST	National	01.10.2024	30.09.2029	63.30
18	Exploring the Mechanistic and Device Aspects of Spine Doped Aryl Dimides for Thermally Activated Delayed Fluorescence	DR. MAHESH HARIHARAN	SOC	MoESTARS/ STARS2/20230770	MOE	National	29.05.2024	28.05.2027	26.10
19	Zero touch Realization of Decentralized Federated learning for Real time Applications in 6G assisted Edge Networks	DR. MAINAK ADHIKARI	SODS	TTDF, DEPT OF TELECOMMUNICATIONSISER TVMTTF/6G/119	TTDF, DEPT OF TELECOMMUNICATIONS	National	16.03.2025	15.03.2028	9.97
20	Artificial Intelligence for supporting Integrated Sensing and Secured Communication in 6G assisted Edge Networks	DR. MAINAK ADHIKARI	SODS	TTDF, DEPT OF TELECOMMUNICATIONSISER TVMTTF/6G/309	TTDF, DEPT OF TELECOMMUNICATIONS	National	16.03.2025	15.03.2028	20.47

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	National / International	Period From	Period To	Funds Received During the Year 2024-25 (Amount in Lakhs)
21	Literature study comparing and assessing different methods for scale separation between global-scale and mesoscale waves	DR. PRAMITHA M	SOEES	German Juulich Project	OTHERS	International	29.08.2024	30.04.2025	2.64
22	An investigation on the impacts of climate change and anthropogenic activities on terrestrial hydroclimate and agriculture using a convection-permitting climate model	DR. PRASANATH VALAYALAKUNNATH	SOEES	MoESTARS/ STARS2/20230415	MOE	National	29.05.2024	28.05.2027	17.39
23	Regioselective Synthesis of Alkyl(haloalkoxy)allene via Cross-Coupling Reactions	DR. RAMESH RASAPPAN	SOC	ROYAL SOCIETY OF CHEMISTRY (RSC)	OTHERS	International	03.04.2024	02.04.2025	5.21
24	Photonic quantum processor development	DR. RAVI PANT	SOP	DST/QTC/INQM/ QC/2024	DST	National	11.02.2025	10.02.2033	3.00
25	Microcomb solitons: A novel tool for exploring fundamental physics and advanced real-world applications	DR. RAVI PANT	SOP	CRG/2023/001165	SERB	National	24.10.2024	23.10.2027	49.50
26	Microwave photonic phase shifter and high-resolution frequency measurement exploiting coherent Brillouin interactions	DR. RAVI PANT	SOP	MoESTARS/ STARS2/20230415	MOE	National	29.05.2024	28.05.2027	29.15
27	Chief Minister's Navakarala Post-doctoral Fellowship	DR. SANDREA MAUREEN FRANCIS	SOB	KSHEC-AI/144/ CMNPF(2nd Batch)- MOde 11 /Contingency Fund/256/2022-23	KSHEC	National	26.04.2024	25.04.2026	0.50
28	Ramanujan Fellowship	DR. SIDDHARTH SHRIKANT KULKARNI	SOB	RJF/2023/000045	SERB	National	24.05.2024	23.05.2029	20.20

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	National / International	Period From	Period To	Funds Received During the Year 2024-25 (Amount in Lakhs)
29	Decipher the entry mechanism of the Middle East respiratory syndrome coronavirus (MERS-CoV) and a SARS-like virus to develop antivirals that target host factors	DR. STALIN RAJ VICTOR	SOB	CRG/2023/006001	SERB	National	15.10.2024	14.10.2027	29.34
30	Metabolic shift and mitochondrial defects in the lysosomal storage disorder of saposin deficiency	DR. SWATHI DEVIREDDY	SOB	CRG/2023/007275	SERB	National	15.10.2024	14.10.2027	21.28
31	Towards optimality – an effective window to new physics	DR. TANUJOY MANDAL	SOP	CRG/2023/007031	SERB	National	15.10.2024	14.10.2027	11.96
32	Understanding the role of highly expressed in cancer 1 (Hect) in controlling expanded organization of kinase to chore and its link to mitotic checkpoint signaling	DR. TAPAS KUMAR MANNA	SOB	BT/PR53720/ BMS/85/235/2024	DBT	National	24.09.2024	23.09.2027	46.48
33	The recruitment of the γ -TuRC to the Sas-6 cartwheel for centrosome microtubule assembly	DR. TAPAS KUMAR MANNA	SOB	IC12025 (22)/2/2023-ICD-DBT	DBT	National	31.07.2024	30.07.2027	14.30
34	Analysis of grass samples	DR. ULLASA KODANDARAMAIAH	SOB	UNIVERSITY POZNA2021/43/B/N28/00966	OTHERS	International	-	31.05.2026	10.99
35	Host plant mediated intra-specific diversification in a butterfly	DR. ULLASA KODANDARAMAIAH	SOB	CRG/2023/005559	SERB	National	04.09.2024	03.09.2027	14.35
36	Ultrafast Excited-state Structural Dynamics in Chalcone-based Sunscreen Agents	DR. YADITHYA LAKSHMANNA	SOC	ANRF/IRG/2024/001397/JCS	ANRF	National	25.03.2025	24.03.2028	23.46

ON-GOING EXTRAMURAL GRANTS

ONGOING EXTRAMURAL GRANTS (2024-25)

Sl. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
1	Electrochemical Routes to Synthesis the 2,5-Furandicarboxylic Acid from Biomass-Derived 5-Hydroxymethylfurfural	DR. A MUTHUKRISHNAN	SOC	STARS-2/2023-0368	MoE	24.09.2023	25.09.2026	9.15	
2	Main-group compounds for carbon monoxide activation	DR. AJAY VENUGOPAL	SOC	CRG/2023/004024	SERB	23.02.2024	22.02.2027	8.00	
3	Copper-Mediated Nucleophilic and Electrophilic Propargylation Reactions: Asymmetric Synthesis of Various Propargylic Compounds	DR. ALAGIRI KALIVAMOORTHY	SOC	SERB-C.RG/2022/002516	SERB	09.01.2023	08.01.2026	-	
4	Copper-Catalyzed Asymmetric Conjugate Addition Reactions of Fluorinated Pronucleophiles	DR. ALAGIRI KALIVAMOORTHY	SOC	STARS-2/2023-0628	MoE	24.09.2023	25.09.2026	8.24	
5	Exploration of H-Heteroaryl-1-propynes as pronucleophile for various propargylation and allenylation reactions	DR. ALAGIRI KALIVAMOORTHY	SOC	CSIR-02/0487/23/JEMR-II	CSIR	04.10.2023	05.10.2026	-	
6	National Post-Doctoral Fellowship	DR. ALOK KUMAR	SOC	PDF/2023/002916	SERB	09.04.2024	08.04.2026	13.37	
7	Neural-network quantum state (NQS) based variational wave function for strongly correlated electron systems	DR. AMAL MEDHI	SOP	CRG/2021/005792	SERB	19.03.2022	18.03.2025	6.00	
8	Rising Stars Award - T1	DR. AMRUTHA SWAMINATHAN	SOB	INTERNATIONAL BRAIN RESEARCH ORGANISATION (IBRO)	IBRO-OTHERS	21.02.2024	20.02.2026	-	
9	INSPIRE FACULTY FELLOWSHIP	DR. ANAND NARAYANA SARMA	SOEES	DST/INSPIRE/04/202.0/001237	DST	22.10.2021	21.10.2026	-	
10	DBT Research Associateship Program	DR. ANAND RAMAIAH SANTHASEELA	SOB	DBTRA/2023-24/N/NI PGR/31	DBT	03.07.2023	02.07.2025	0.33	
11	Hydraulic targets for better crop growth and productivity under climate change like conditions	DR. ANIRBAN GUHA	SOB	DBT-RAMALINGASWAMI-BT/RLF/Re-entry/08/2021	DBT	01.11.2022	31.10.2027	-	

Sl. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
12	Structure based drug design targeting transcription regulator, and its binding to RNA polymerase complexes in Mycobacteria	DR. ARUN KUMAR G	SOB	KSCSTE/354/2023	KSCSTE	13.02.2023	12.02.2025	-	
13	Hybrid numerical schemes for system of hyperbolic conservation laws	DR. ASHA KISAN DOND	SOM	SERB-MTR/2022/000265	SERB	13.01.2023	12.01.2026	2.20	
14	Chief Minister's Navalarala Post Doctoral Fellowship (CMNPF)	DR. ASWATHI K	SOP	KSHEC-AI/144/C/CMNPF	KSHEC	04.07.2022	03.07.2024	-	
15	Unveiling weak carbon nucleophiles in metal-catalyzed C-S coupling with N-sulfinylamines for organic synthetic application	DR. BASUDEEV SAHOO	SOC	CSIR-02/0480/23/EMR-II	CSIR	26.02.2024	25.02.2027	-	
16	Exploring 2D Atomic Crystals for Resistive Switching Based Emerging Artificial Neuromorphic Devices	DR. BIKAS C DAS	SOP	C-RG/2021/000567	SERB	02.03.2022	01.03.2025	3.00	
17	Energy-Efficient Synaptic Transistors of Two-Dimensional Layered Material	DR. BIKAS C DAS	SOP	EEQ/2021/000810	SERB	14.03.2022	13.03.2025	3.00	
18	Stability of complex systems under higher-order interactions	DR. CHANDRAKALA MEENA	SOP	SRG/2023/001846	SERB	22.12.2023	21.12.2025	-	
19	INSPIRE FACULTY FELLOWSHIP	DR. CHANDRAKALA MEENA	SOP	DST/INSPIRE/FACULTY AWARD-IFA19/PH-248	DST	06.11.2020	05.11.2025	19.62	
20	Emergent patterns in complex dynamical networks of mixed dynamics	DR. CHANDRAKALA MEENA	SOP	EEQ/2023/001080	SERB	26.02.2024	25.02.2027	-	
21	Decoding Neuronal States using Chimera Patterns	DR. D V SENTHIL KUMAR	SOP	C-RG/2021/000816	SERB	08.03.2022	07.03.2025	4.50	
22	Thermal Expansion Measurements in a spin χ Heisenberg antiferromagnet $\text{Cu}_2\text{Hf}_4\text{Cu}_4\text{M}_2\text{O}_5$	DR. DEEPTHIKHA JAISWAL NAGAR	SOP	C-RG/2021/001262	SERB	14.03.2022	13.03.2025	-	
23	DST-Bioenergy & H2 MAP	DR. DEEPTHIKHA JAISWAL NAGAR	SOP	DST/TMD/IC-MAP/2K20/02 [C]	DST	16.03.2022	15.03.2026	-	
24	Existence and qualitative properties of solutions of quasilinear and nonlocal elliptic partial differential equations	DR. DHANYA RAJENDRAN	SOM	SERB-MTR/2022/000780	SERB	09.02.2023	08.02.2026	-	
25	On the central idempotents of algebras arising from Schur-Weyl Duality and the invariant theory of certain groups	DR. GEETHA T	SOM	SERB-SPG/2021/004200	SERB	10.06.2022	09.06.2025	-	

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26	Design and Synthesis of Helically Chiral Configurational Stable Macrocycles Towards Chiroptical Properties	DR. GOKULNATH SABAPATHI	SOC	EEQ/2023/000756	SERB	24.02.2024	25.02.2027	-	
27	BEEscape: Investigating landscape level pesticide use and health of native social bees	DR. HEMA SOMANATHAN	SOB	SERB-SPR/2021/000510	SERB	30.05.2022	29.11.2025	20.00	
28	Quantifying ecosystem services provided by native bees to forests and adjacent cropland: towards a sustainable forest-farm network	DR. HEMA SOMANATHAN	SOB	BT/PR39693/FCB/125/96/2020	DBT	10.05.2023	09.05.2026	-	
29	Chief Minister's Navalarala Post Doctoral Fellowship (CMNPF)	DR. HILIAS K.M	SOP	KSHEC-A1/14/4(C)/CMNPF	KSHEC	14.07.2022	13.07.2024	-	
30	Ramanujan Fellowship	DR. INDRANIL MONDAL	SOC	RJF/2022/000101	SERB	03.07.2023	02.07.2028	23.80	
31	Nanofabricated Single Protein Assemblies for Solid-State Bioelectronic Devices	DR. JERRY ALFRED FERREIRO	SOC	SERB-CRG/2022/000584	SERB	18.01.2023	17.01.2026	4.00	
32	Identification and characterisation of conserved microRNAs and target genes that regulate ageing in <i>Drosophila</i>	DR. JERRY ALFRED FERREIRO	SOC	STARS-2/2023-0635	MoE	24.09.2023	25.09.2026	7.32	
33	Identification and characterisation of conserved microRNAs and target genes that regulate ageing in <i>Drosophila</i>	DR. JISHY VARGHESE	SOB	STARS-2/2023-0106	MoE	24.09.2023	25.09.2026	14.03	
34	Investigating cross-talks between insulin signalling and hypoxic signalling pathway in managing nutrient homeostasis during growth and development in <i>Drosophila</i>	DR. JISHY VARGHESE	SOB	CRG/2023/002329	SERB	22.03.2024	21.03.2027	-	
35	A novel heterostructure architecture for photodetection and photo-enhanced electron emission applications	DR. JOY MITRA	SOP	DST/INT/POL/P-44/2020 (G)	DST	2022	2024	-	
36	Exploring extreme light-matter interactions in the epsilon near zero regime of doped metal oxide semiconductors and conducting polymers	DR. JOY MITRA	SOP	CRG/2023/006878	SERB	22.03.2024	21.03.2027	-	

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37	JC BOSE FELLOWSHIP	DR. K GEORGE THOMAS	SOC	SB/S2/JOB-64/2013	SERB	01.06.2019	31.05.2024	-	
38	Photochemical and Electrochemical Processes in Assembled Molecules and Nanomaterials: Implications Field and Coherence in Photovoltaics	DR. K GEORGE THOMAS	SOC	DST/NM/TJUE/EE-01/2019	DST	15.11.2021	14.11.2025	64.85	
39	Nanophotonic Approaches Towards Enhancing the Chiroptical Signals in Assembled Molecules and Materials	DR. K GEORGE THOMAS	SOC	CEFIPRA-6908	CEFIPRA	11.05.2023	10.05.2026	-	
40	Synthesis of mimics of collagen, elastin and fibrin via isosteric replacement of amide with triazole	DR. K M SURESHAN	SOC	SERB-C.RG./2022/0005618	SERB	13.01.2023	12.01.2026	12.00	
41	A Core-shell Hybrid Sorbent for Efficient Marine Oil Spill Recovery	DR. K M SURESHAN	SOC	STARS-2/2023-0222	MoE	24.09.2023	25.09.2026	7.63	
42	JC BOSE FELLOWSHIP	DR. K M SURESHAN	SOC	JOB/2023/0000039	SERB	14.02.2024	13.02.2029	16.75	
43	Asymptotic preserving IMEX-DG schemes on adaptive grids for multiscale compressible flows	DR. K R ARUN	SOM	C.RG./2021/004078	SERB	24.02.2022	23.02.2025	8.00	
44	Elucidating the mechanisms of nutrient acquisition by liver-stage plasmodium	DR. KAMALAKANNAN VUJAYAN	SOB	R.2015/04/2023-HR/E-OFFICE: 8225172	ICMR	29.06.2023	28.06.2026	-	
45	Elucidating Plasmodium induced complexity in the host signaling network	DR. KAMALAKANNAN VUJAYAN	SOB	IA/I/23/2/506998	DBT	01.03.2024	28.02.2029	109.18	
46	Identification of host factors that regulate Plasmodium entry of hepatocytes	DR. KAMALAKANNAN VUJAYAN	SOB	S.RG./2023/001874	SERB	08.03.2024	07.03.2026	-	
47	RAMANUJAN FELLOWSHIP	DR. KARTHIK CHANDIRAN	SOB	RJF/2022/000102	SERB	10.04.2023	09.04.2028	-	
48	Understanding the role of infection and signaling pathways involved during formation of T cell memory	DR. KARTHIK CHANDIRAN	SOB	R.2015/02/2023-HR/E-OFFICE: 8225167	ICMR	17.08.2023	16.08.2026	-	
49	RAMANUJAN FELLOWSHIP	DR. KRISHNADAS K R	SOC	RJF/2022/000022	SERB	13.07.2023	12.07.2028	23.80	
50	Non-volatile resistance switching memory on SiC for harsh environment applications	DR. KJMARAGURUBARAN SOMU	SOP	C.RG./2021/000935	SERB	16.03.2022	15.03.2025	-	
51	DST-Storage MAP	DR. M M SHALUMON	SOP	DST/TMD/IC-MAP/2K20/01	DST	14.02.2022	13.02.2026	-	

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52	Lithium Battery Testing	DR. M. M. SHALUJMON	SOP	MOMENTIVE PERFORMANCE MATERIALS (INDIA) PVT LTD	OTHERS	15.12.2021	-	-	
53	Design and fabrication of electrocatalytic microcells using elemental 2-dimensional materials	DR. M. M. SHALUJMON	SOP	C-RG/2021/004246	SERB	22.03.2022	21.03.2025	8.00	
54	Development of Sodium-Ion Batteries for Efficient and Sustainable Energy Storage	DR. M. M. SHALUJMON	SOP	STR/2022/000022	SERB	31.01.2023	30.05.2026	12.80	
55	Hard Carbon development for battery electrodes	DR. M. M. SHALUJMON	SOP	RELIANCE INDUSTRIES LTD	OTHERS	15.05.2023	31.05.2024	3.29	
56	Development of miniature lithium ion batteries for on-chip energy storage	DR. M. M. SHALUJMON	SOP	STARS-2/2023-0834	MoE	24.09.2023	25.09.2026	20.00	
57	Electrochemical studies with Graphene	DR. M. M. SHALUJMON	SOP	Bharat Petroleum Corporation Limited (BPCL)	BPCL	2023	-	4.11	
58	Unravelling the role of interchromophoric electronic coupling in symmetry breaking charge separation vs. singlet fission	DR. MAHESH HARIHARAN	SOC	C-RG/2023/005859	SERB	02.03.2024	01.03.2027	-	
59	Robust and Collaborative Fog-aided Federated Learning Framework for Enhanced Resiliency of Real-time Applications	DR. MAJNAK ADHIKARI	SODS	S-RG/2022/000071	SERB	17.03.2023	16.06.2025	10.46	TRANSFERRED FROM IIT LUCKNOW
60	Transparent solar cells: A perspective for bifacial solar cells	DR. MANOJ A G NAMBOOTHIRY	SOP	C-RG/2021/003874	SERB	24.02.2022	23.02.2025	8.00	
61	DST-Materials MAP	DR. MANOJ A G NAMBOOTHIRY	SOP	DST/TMD/IC-MAP/2K20/03 [C]	DST	16.03.2022	15.03.2026	1.75	
62	INSPIRE FACULTY FELLOWSHIP	DR. MATHEW ARJUN THOMAS	SOP	DST/INSPIRE/04/2019/002507	DST	20.10.2020	19.10.2025	8.01	
63	IISER TVM-KLDB COLLABORATIVE PROJECT	DR. N. SADANANDA SINGH	SOB	KLDB COLLABORATIVE PROJECT	KLDB	24.09.2021	23.09.2026	-	
64	Genome editing in bovine embryo: optimization and generation of targeted genetic variant	DR. N. SADANANDA SINGH	SOB	BT/PR46677/AAQ/1/96/0/2022	DBT	19.09.2023	18.09.2026	45.6	

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65	Stabilization by sparse controls for systems of reaction-diffusion equations with mixed state and control constraints	DR. NAGAJAH CHAMAKURI	SOM	SERB-C-RG/2022/006421	SERB	17.03.2023	16.03.2026	-	
66	Chief Minister's Navalarila Post Doctoral Fellowship (CMNPF)	DR. NEEMA P M	SOP	KSHEC-A1/144C/VC/MNPF	KSHEC	20.06.2022	19.06.2024	2.00	
67	Understanding the effect of stabilizing selection for the timing of adult emergence on circadian clock of <i>Drosophila melanogaster</i>	DR. NISHA N KANNAN	SOB	SERB-EEQ/2022/001034	SERB	22.02.2023	21.02.2026	5.00	
68	Deciphering the molecular pathways underlying chromatinopathies in neurological disorders	DR. NISHANA MAYILAADUJMV EETIL	SOB	SRG/2023/001820	SERB	28.02.2024	27.02.2026	-	
69	Engineering a site-specific synthetic chromatin remodeler for genome editing and gene expression	DR. NISHANT K T	SOB	SPR/2020/000427	SERB	31.08.2021	30.08.2024	-	
70	Understanding the mutational landscape in different <i>Candida auris</i> clades using a multipronged approach	DR. NISHANT K T	SOB	ICMR-Myco/Adhoc/1/2022-EC-D-II	ICMR	20.02.2023	19.02.2026	11.60	
71	Insights into meiotic crossover mechanisms using SNP-ChIP analysis	DR. NISHANT K T	SOB	C-RG/2022/003817	SERB	28.06.2023	27.06.2026	6.00	
72	Chromosomal features governing crossover pathway choice	DR. NISHANT K T	SOB	BT/PR41371/BRB/10/1958/2.020	DBT	14.09.2023	13.09.2026	3.24	
73	INSPIRE FACULTY FELLOWSHIP	DR. NITIN YADAV	SOP	DST/INSPIRE FACULTY/ BATCH-18/2022	DST	08.12.2022	07.12.2027	-	
74	Unveiling the hidden relationship between vorticity and magnetic field in the solar atmosphere	DR. NITIN YADAV	SOP	MTR/2023/001332	SERB	17.02.2024	16.02.2027	-	
75	Identifying the effect of a-synuclein induced alterations on electrophysiological homeostasis of dopaminergic neurons in Parkinson's disease progression	DR. POONAM THAKUR	SOB	WELLCOME TRUST-IA/E/17/1/503664	DBT	01.09.2019	31.08.2024	18.89	
76	Evaluation of the neuroprotective potential of Probucol and Chlorogenic acid in a progressive mouse model of Parkinson's disease	DR. POONAM THAKUR	SOB	C-P project code: PTO1	Cure Parkinson's Trust	01.04.2024	30.09.2025	73.66	

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
77	INSPIRE FACULTY FELLOWSHIP	DR. PRAMITHA M	SOEES	DST/INSPIRE/04/2020/001105	DST	09.09.2021	08.09.2026	-	
78	INSPIRE FACULTY FELLOWSHIP	DR. PRASANTH VALAYALAKUNNATH	SOEES	DST/INSPIRE FACULTY/BATCH-18/2022	DST	08.12.2022	07.12.2027	3.52	
79	On Design and Analysis of Stepped Wedge Cluster Randomized Trials	DR. PRIYANKA MAJUMDER	SODS	SRG/2023/002749	SERB	15.02.2024	14.02.2026	-	
80	Collective spatiotemporal dynamics of biological soft matter using theory and computation	DR. PUSHPITA GHOSH	SOC	SERB-SRG/2022/000043	SERB	27.09.2022	26.09.2024	-	
81	An Improved Lennard-Jones Formulation for Modeling Adsorption on Graphynes	DR. R S SWATHI	SOC	SERB-C-RG/2022/006873	SERB	31.01.2023	30.01.2026	6.00	
82	Twistronics with transition metal dichalcogenides	DR. RAJEEV N KINI	SOP	IPA/2020/000021	SERB	26.03.2020	26.03.2025	8.50	
83	Supply of phenomones for ongoing Coconut Development Board	DR. RAJENDAR GORETTI	SOC	HO-TMOC01(11)/5/2021	RARS (SZ) Vellayani, Trivandrum	2023	-	2.89	
84	Multifunctional Biodegradable Hybrid Black phosphorus-CeO ₂ Nanoparticles as a Synergistic Targeted Chemo-photothermal Therapy for Glioblastoma Multiforme	DR. RAJENDRA KJRAPATI	SOC	DBT-BT/RLF/Re-entry/24/2020	DBT	05.04.2021	04.04.2026	7.86	
85	Neutrophils Mediated Enzymatic Biodegradability of Two-Dimensional MXene Nanosheets: Effect of Surface Functionalization and BloodSerum Protein Coating	DR. RAJENDRA KJRAPATI	SOC	SERB-SRG/2022/000291	SERB	27.09.2022	26.09.2024	-	
86	2D Materials/Biopolymer based Broad-Spectrum Antimicrobial Multilayer Coatings: Synergistic Approach to Thwart the Biofilm Formation on the Medical Implants	DR. RAJENDRA KJRAPATI	SOC	SERB-EEQ/2022/000614	SERB	17.03.2023	16.03.2026	-	
87	RAMANUJAN FELLOWSHIP	DR. RAM KUMAR	SOC	RJF/2022/000007	SERB	20.02.2023	19.02.2028	-	
88	Structure, function and molecular mechanism of transcription regulators in Mycobacterium spp.	DR. RAMANATHAN NATESH	SOB	STARS/APR2019/BS/729/FS	MHRD	15.05.2020	14.05.2024	-	

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
89	Structure, function and molecular mechanism studies of an evolvability factor Transcription Repair Coupling Factor in <i>Mycobacterium</i> spp.	DR. RAMANATHAN NATESH	SOB	C-RG/2023/001211	SERB	02.03.2024	01.03.2027	-	
90	Small molecule inhibitors to cripple mycobacterial "SOS" response mutagenic axis and combat antimicrobial resistance (AMR)	DR. RAMANATHAN NATESH	SOB	ICMR-Discovery/IIRP/SG-0865/2023	ICMR	09.02.2024	08.02.2027	-	
91	Carbonyl activation using late-transition metal-hydride complexes [H-M-L-X-H] (X = O, N) containing hydrogen bond donor ligands	DR. RAMARAJ AYYAPPAN	SOC	S-RG/2023/001701	SERB	24.12.2023	25.12.2025	-	
92	Si-H bond activation and its applications in homogeneous catalysis	DR. RAMARAJ AYYAPPAN	SOC	EEQ/2023/000702	SERB	24.02.2024	25.02.2027	5.00	
93	Investigation of quantum phase transitions in two-dimensional Heisenberg kagome lattice antiferromagnets	DR. RAMESH CHANDRA NATH	SOP	C-RG/2022/000997	SERB	20.01.2024	19.01.2027	-	
94	Nickel mediated cross-coupling reactions of α -SILYLOXYALKYL - Zinc reagents	DR. RAMESH RASAPPAN	SOC	CSIR-02/0409/21/EMR-II	CSIR	03.06.2021	02.06.2024	-	
95	Synthesis and Application of Alkyl(trialoxy)silanes via Cross-Electrophile and Nickel Hydride Coupling Reactions	DR. RAMESH RASAPPAN	SOC	C-RG/2023/005485	SERB	02.03.2024	01.03.2027	-	
96	Characterization of network structure and homogeneity of N-Doped Graphene activated Natural Rubber Sulfur Vulcanizate	DR. RANI ALPHONSA JOSE	SOC	TAR/2021/000384	SERB	10.12.2021	09.12.2024	3.35	
97	CRISPR Crop Network: Targeted improvement of stress tolerance, nutritional quality and yield of crops by using genome editing	DR. RAVI MARUTHACHALAM	SOB	ICAR-NARS/BGAM-9.021/22-23	ICAR	14.08.2022	15.08.2025	5.90	
98	Unraveling the molecular and biochemical basis of a drought-resistant bushy mutant with high organogenic potential in <i>Arabisidopsis thaliana</i>	DR. RAVI MARUTHACHALAM	SOB	C-RG/2022/007631	SERB	17.10.2023	16.10.2026	-	

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
99	Cancer environment sensitive DNA nanoparticles: A unique drug delivery vehicle for combination cancer therapy	DR. RE.JI VARGHESE	SOC	SERB-C-RG/2022/002612	SERB	06.02.2023	05.02.2026	450	
100	Conflict between Replication and Transcription accelerates Mutagenesis and drives Antibiotic Resistance	DR. SABARI SANKAR THIRUPATHI	SOB	WELLCOME TRUST-IA/1/18/2/504037	DBT	01.10.2019	30.09.2024	38.41	
101	Biomass-Derived Carbon Dots for High-Performance Supercapacitor	DR. SAM JOHN	SOP	SERB-TAR/2022/000226	SERB	28.10.2022	27.10.2025	-	
102	Defining lysosomal mechanisms of defense against intracellular pathogens	DR. SANDHYA GANESAN	SOB	SERB-SRG/2022/002157	SERB	04.11.2022	03.11.2024	200	
103	High-efficient delivery of antimicrobials to target intracellular, vacuole-bound bacterial pathogens	DR. SANDHYA GANESAN	SOB	ACORN-AMR/2023/003	ACRON	01.05.2023	30.04.2024	-	
104	Defining fundamental principles of vesicle fusion using infectious and genetic disease models	DR. SANDHYA GANESAN	SOB	IA/1/23/2/507001	DBT	01.03.2024	28.02.2029	107.87	
105	Structural elucidation of the bacterial transcription elongation complex with Gre factors: focus on Mycobacterium tuberculosis RNA polymerase	DR. SANDHEA MAUREEN FRANCIS	SOB	KSCSTE/264/2021-BLP	KSCSTE	26.04.2021	25.04.2024	4.39	
106	Chief Minister's Navakerala Post-doctoral Fellowship	DR. SANGEETHA VARMA	SOB	"KSHCEC-A/144/CMNPF-2nd Batch-Mode II/Contingency Fund/56/2022-23"	KSHEC	10.07.2023	09.07.2025	110	
107	Understanding the role of energy producing metabolic pathways on hematopoietic emergence in mouse	DR. SATISH KHURANA	SOB	BT/PR30459/MED/31/449/2021	DBT	28.03.2023	27.03.2026	-	
108	Unravelling the role of VEGF signaling in hematopoietic stem cell maturation and expansion in mouse fetal liver	DR. SATISH KHURANA	SOB	C-RG/2022/000634	SERB	07.12.2023	06.12.2026	-	
109	Modulating cellular metabolism to enhance neural stem cell function in adult mammalian brain	DR. SATISH KHURANA	SOB	ICMR-EMDR/SG/9/2023-4d18	ICMR	30.11.2023	29.11.2026	-	
110	INSPIRE FACULTY FELLOWSHIP	DR. SHABNAM IYANI	SOP	DST/INSPIRE/04/2019/00540	DST	01.10.2020	30.09.2025	-	

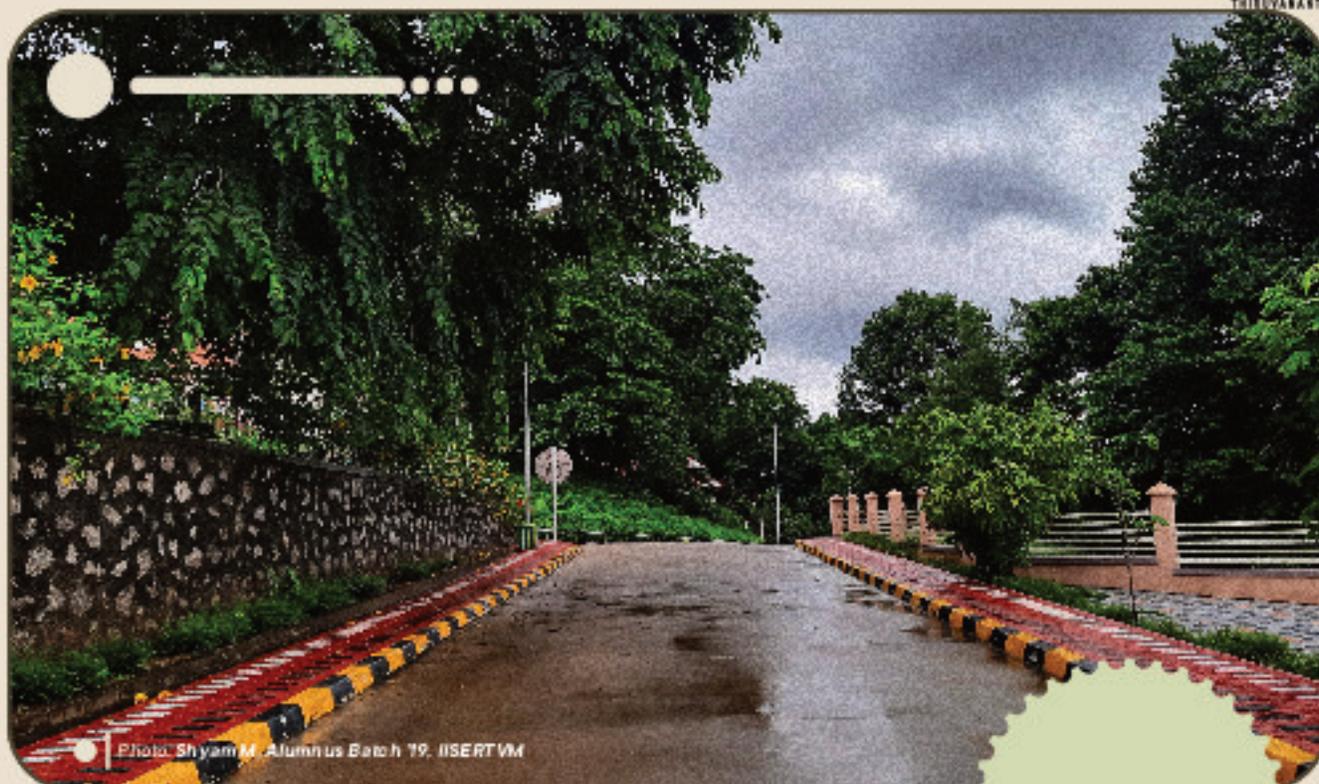
Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
111	Thorough investigation of the mechanism of the origin of Gamma-ray burst through first principles, observational interpretation and simulation studies	DR. SHABNAM IYANI	SOP	SERB-SRG/2022/000211	SERB	13.01.2023	12.01.2025	1.00	
112	Control and Finite Element Analysis of Cairn-Hillard-Navier-Stokes system	DR. SHEETAL DHARMATTI	SOM	C-RG/2021/008278	SERB	02.03.2022	31.07.2025	-	
113	Cyclodextrin tethered polymeric materials for the capture of plant essential oils: Evaluation of its in vitro efficacy as an antimicrobial and cytotoxic agent for biomedical applications	DR. SONIA MOL JOSEPH	SOC	SERB-TAR/2022/000048	SERB	13.10.2022	12.10.2025	-	
114	Synthesis and application of chiral mechanically interlocked molecules	DR. SOUMEN DE	SOC	C-SIR-01/3137/23/EMR-II	CSIR	01.08.2023	31.07.2026	-	
115	Class numbers of number fields	DR. SRILAKSHMI KRISHNAMOORTHY	SOM	C-RG/2023/009035	SERB	14.03.2024	15.03.2027	-	
116	Development and Evaluation of diagnostics and Candidate VACCINES for emerging SARS-Coronavirus-2 (Dac-VAC-SARS)	DR. STALIN RAJ VICTOR	SOB	IPA/2020/000070	SERB	23.12.2020	22.06.2024	-	
117	ENDFLU - Evaluation of Rationally Designed Influenza Vaccines	DR. STALIN RAJ VICTOR	SOB	DBT-EJ-BT/IN/EU-INF/15/RV/19-20	DBT	31.12.2020	30.12.2025	37.51	
118	Development of Novel Adeno Viral Vector Platform for Vaccine Delivery: Pandemic Preparedness Against Emerging Viral Pathogens	DR. STALIN RAJ VICTOR	SOB	ICMR-EM/DEV/IG/3/1280/2023	ICMR	15.02.2024	14.02.2025	75.76	
119	Chemistry of Reactive Sulfur and Selenium Species: Elucidating the Routes in Bio(n)organic Signalling and Toxicology	DR. SUBRATA KUNDU	SOC	C-RG/2021/001174	SERB	15.12.2021	14.12.2024	1.75	
120	Investigations of Structure-Reactivity Patterns of First-Row Late Transition Metal-Boryl/Silyl Complexes	DR. SUBRATA KUNDU	SOC	C-SIR-01(3025)/21/EMR-II	CSIR	20.10.2021	19.10.2024	-	
121	INSA Associate Fellowship 2023	DR. SUBRATA KUNDU	SOC	A/INSA/GEN/003/2023/3	DST	01.01.2024	30.06.2024	-	
122	Conductive inorganic-organic hybrid materials for electrochemical applications	DR. SUKHENDU MANDAL	SOC	C-SIR-01(3024)/21/EMR	CSIR	17.08.2021	14.08.2024	-	

Sr. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
123	Atom-Precise Metal Nanocluster and Two-Dimensional Cluster-Assembled Materials for Efficient Electrochemical Nitrogen Reduction Reaction	DR. SUKHENDU MANDAL	SOC	SERB-CRG/2022/000984	SERB	12.01.2023	11.01.2026	8.00	
124	Physiology and metabolism of lysosomal dysfunction in a lysosomal storage disorder causing prosoapsin mutation	DR. SWATHI DEVI REDDY	SOB	DBT-RAMALINGASWAMY-BT/RLF/Re-entry/54/2021	DBT	22.09.2022	21.09.2027	27.64	
125	Plasmonic Chromatography for Multiresidue Pesticide Detection in Spices	DR. T SHYAMALA	SOC	DST/WOS-B/AFE-20/202 [G]	DST	07.01.2022	06.01.2025	15.75	
126	Climate change and water balance challenges in pollinator insects	DR. ULLASA KODANDARAMIAH	SOB	STARS-2/2023-0811	MoE	24.09.2023	25.09.2026	14.36	
127	Bench-stable di/trifluoromethylating reagents and their applications in radical-based difunctionalization of alkenes	DR. VEERA REDDY YATHAM	SOC	STARS-2/2023-0092	MoE	24.09.2023	25.09.2026	5.19	
128	Remote C-H functionalization driven by cerium photocatalysis	DR. VEERA REDDY YATHAM	SOC	CSIR-02/0466/23/EMR-II	CSIR	01.08.2023	31.07.2026	-	
129	Theoretical investigation on the triplet formation pathways in natural photosensitizers	DR. VENNAPUSA SIVARANJANA REDDY	SOC	CSIR-01/3109/23/EMR-II	CSIR	08.07.2023	07.07.2026	-	
130	Directed evolution of regulatory multi-enzyme complexes	DR. VJAY JAYARAMAN	SOB	BT/RLF/Re-entry/44/2022	DBT	01.12.2023	30.11.2026	-	
131	Interface Engineering of Bi-Sb-Ge Tellurite Superlattices using Atomic Layer Deposition	DR. VINAYAK B KAMBLE	SOP	SERB-EEQ/2022/001016	SERB	23.02.2023	22.02.2026	3.50	
132	Development of AI assisted Versatile Chemical Sensor Array for On-demand End Use	DR. VINAYAK B KAMBLE	SOP	SERB-CRG/2022/006973	SERB	02.03.2023	01.03.2026	11.50	
133	Characterization and staking of multiple susceptible genes for a broad range of rice pathogens to engineer bioad-specific resistance in south Indian mega rice varieties by genome editing	DR. YUGANDER ARRA	SOB	BT/RLF/Re-entry/48/2022	DBT	01.03.2024	28.02.2027	-	
134	FIRST PROGRAM	DST-FIRST - SOM	SOM	SR/FST/MS- II/2021/102	DST	02.03.2022	01.03.2027	-	

Sl. No.	Name of the Project	Project Leader	School	Project Code	Funding Agency	Period From	Period To	Funds Received During the Year (Amount in Lakhs)	Remarks
135	FIST PROGRAM	HOD, SOB	SOB	SR/FST/LS-II/2018/217 [C]	DST	27.08.2019	24.08.2024	-	
136	FIST PROGRAM	HOD, SOP	SOP	SR/FST/CSII-042/2016 [C]	DST	22.07.2019	21.07.2024	-	
137	Self-Testing Quantum State Using Entangled measurements	SUBHAM DAS	SOP	I-HUB/ PGF/IB-3/2.023-24/04	IISER- PUNE	01.02.2024	30.09.2024	0.99	
138	Certifying Quantum Advantage in Direction-Agnostic Multi-Party Communication Networks	A V N S MEGHANATH	SOP	I-HUB/ PGF/IB-3/2.023-24/08	IISER- PUNE	01.02.2024	30.06.2024	0.62	



Photo: Parthiban, Electrical substations team, IISERTVM



Student Placements and Recognition ...

SCHOOL OF BIOLOGY

Placements

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
1	Anagha Muralidharan	BS-MS	Amrutha Swaminathan	National Centre for Biological Sciences	Stowers Institute for Medical Research	
2	Samarpita Sahu	BS-MS Bio Major	Anirban Guha	IIT Bombay		PhD program
3	Josy Joseph	BS-MS	Jishy Varghese		Indiana University, Bloomington, USA	
4	Irene Mariam Joseph	BS-MS	Jishy Varghese		Indiana University, Bloomington, USA	
5	Jitika Bhatta	MSc	Jishy Varghese		Indiana University, Bloomington, USA	
6	Palak Khare	MS by research	Jishy Varghese			Immuneel Therapeutics, Bangalore
7	Sreesha Sudhakar	PhD	Jishy Varghese			4Base Care, Bangalore
8	Tanmay Devgan	Masters Thesis	Kamalakaran Vijayan		PhD	The University of Melbourne
9	Ajmal P M	Masters Thesis	Kamalakaran Vijayan		PhD	Pasteur Institute of Lille
10	Abyson Joseph	PhD	Ramanathan Natesh			Senior Scientist and Team Leader, Downstream Processing R&D, Cell Biology Division, HiMedia Laboratories Pvt. Ltd., Mumbai
11	Sivasankar Putta	PhD	Ramanathan Natesh		Postdoctoral Research Associate, Binghamton University, USA	

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
12	Johnson Luwang Wahengbam	PhD	Ramanathan Natesh			Director (Research & Extension), Bir Tikendrajit University, Manipur
13	Eswar Reddy Maddi	PhD	Ramanathan Natesh			Senior Scientist (Quality & Analytical Sciences) in mRNA Vaccine Technology Analytics at PopVax Pvt. Ltd, Hyderabad, INDIA
14	Ankur Chattopadhyay	MSC	Ramanathan Natesh	IIT Kanpur		PhD program at BSBE, IIT Kanpur
15	Khachuk Debbarma Naithok	MSc	Ramanathan Natesh		Tohoku University	PhD program at Tohoku University, Japan.
16	Vatsala Pandey	MSc	Ramanathan Natesh		Vienna BioCenter	PhD program at Vienna BioCenter, Austria.
17	Shrutika Sansaria	PhD	Nisha N Kannan		Stowers institute, USA	
18	Soyam Gupta	PhD	Nisha N Kannan		Paris Sciences and Letters (PSL) University	
19	Ashna Anilkumar	PhD	Nisha N Kannan		University of Tartu, Estonia	
20	Anagha J	PhD	Nisha N Kannan		University of Paris-Saclay, France	
21	Naeema C	BS-MS	Nishana Mayiladumveettil	-	Clarkson university, New York, USA	PhD
22	Abhinand Lal	BS-MS	Nishana Mayiladumveettil	-	Université Paris-Saclay - CEA - CNRS, France	PhD
23	Barninee Sengupta	BS-MS	Nishana Mayiladumveettil	-	Institute of Molecular Genetics of Montpellier CNRS - UMR, France	PhD
24	Tamonash Debnath	MSc	Nishana Mayiladumveettil	IIT Kanpur	-	PhD
25	Suman Dash	PhD	Nishant K.T		University of California, Davis	Postdoctoral position

Sl No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
26	Rutika Sansaria	B.S-M.S	Nishant KT		Institute of Molecular Biology of Plants (IMBP)- CNRS, University of Strasbourg, France	PhD position
27	Shivam Barnwal	IPHD	Nishant KT		Institute of Molecular Medicine, University Medical Center Mainz, Germany	PhD position
28	Sandra Ann Litto	B.S-M.S	Nishant KT		McGill University, Canada	PhD position
29	Indulekha V	B.S-M.S	Nishant KT		Arizona State University, Tempe, USA	PhD position
30	Devu B Kumar	BS-MS	Poonam Thakur		Ruhr University, Germany	PhD position with DAAD scholarship
31	Jacob G Kurian	BS-MS	Ravi Maruthachalam		University of California, Berkeley, USA	
32	Paarth Anand Anakam	BS-MS	Ravi Maruthachalam		University of Illinois, Urbana-Champaign, USA	
33	Mariya Joyson	BS-MS	Ravi Maruthachalam		Max Planck Institute of Plant breeding and Research, Cologne, Germany	
34	Mohit Pradip Rajabhoj	PhD	Ravi Maruthachalam		University of Pennsylvania, Philadelphia, USA	
35	Abhinav Uniyal	MS (Research)	Ravi Maruthachalam		Swedish University of Agricultural Sciences, Sweden	
36	Ramesh Bondada	SRF	Ravi Maruthachalam		Max Planck Institute of Biology, Tübingen, Germany	
37	Ritu Yadav	MS (Research)	Ravi Maruthachalam		Swedish University of Agricultural Sciences, Sweden	
38	Jebin Babu	BS-MS	Sabari Sankar Thirupathy		University of Texas at Austin	PhD
39	Kavya Sunil	BS-MS	Sabari Sankar Thirupathy		Heidelberg University	PhD

Sl No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
40	Ira Zibbu	BS-MS	Sabari Sankar Thirupathy		University of Texas at Austin	PhD
41	Dea Vincent	BS-MS	Sabari Sankar Thirupathy	IISER Thiruvananthapuram	Max Planck Institute Göttingen	PhD
42	Akhila S	BS-MS	Sabari Sankar Thirupathy	IISc		Project Assistant
43	Anushka Mitra	MSc (Biology)	Dr Sandhya Ganesan		PhD at Max Planck Institute of Molecular Physiology	
44	Chandhana Prakash	MSc (Biology)	Dr Sandhya Ganesan		PhD at Ludwig-Maximilians-Universität Munich	
45	Siva Subramanian A	BS-MS Batch 19	Dr Sandhya Ganesan	6 months research internship/assistantship	Max Planck Institute for Evolutionary Biology	
46	Aslam A P	BS-MS Batch 18	Dr Sandhya Ganesan	6 months research internship/assistantship in Cellular biology of infection	Czech Academy of Sciences, Czech Republic	
47	Sayanthana Benny	BS-MS Batch 19	Dr Sandhya Ganesan			JRF at IISER Thiruvananthapuram
48	Tejas Pawar	MSc (Biology)	Dr Sandhya Ganesan			JRF at IISc, Bangalore
49	Kulkarni Gopal Vyankatesh		Sanu Shameer			Junior research fellow with Mohit Kumar Jolly, IISc Bangalore
50	Akash S Kumar	BS-MS	Satish Khurana		Friedrich-Alexander University of Erlangen-Nuremberg	
51	Anaswar SR	BS-MS	Satish Khurana		Institute of Anatomy, Medical Faculty Carl Gustav Carus, Technische Universität Dresden	
52	Sneha P R	BS-MS	Satish Khurana		University of Bonn	
53	Gayathri V	BS-MS	Satish Khurana		Université libre de bruxelles	
54	Adithya J	BS-MS	Prof Srinivasa Murty Srinivasula	Fortune IAS Academy, Trivandrum		

Sl No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
55	Harshini S	BS-MS	Prof Srinivasa Murty Srinivasula		Dartmouth College, USA	
56	Anubhav Arun	MSc	Prof Srinivasa Murty Srinivasula			
57	Ashvini Sharma	MSc	Prof Srinivasa Murty Srinivasula			
58	Deodhar Apoorva Vivek	MSc	Prof Srinivasa Murty Srinivasula			
59	Divanshu	MSc	Prof Srinivasa Murty Srinivasula	IISc, Bangalore		
60	Karthika T	PhD	V. Stalin Raj		Post Doctoral Research	Catholic University of America, USA
61	Jyothi Lakshmi	BS-MS	V. Stalin Raj			Project Assistant at Center for Human Genetics, Bangalore, India
62	Diana	BS-MS	V. Stalin Raj		Phd at Department of Chemistry, Robert W Newberry, University of Texas, Austin	
63	Merina Tony		V. Stalin Raj			Research Internship at Institute of Science and Technology (ISTA), Austria
64	Sheba Cheeran	PhD			Univ. of Geneva	
65	Srilakshmi Ranjith	PhD			Utrecht University	
66	Vishnu M. Nair	Postdoc			Queens Mary University, London	
67	Bhagya Lakshmi R.	Postdoc			Univ. of Copenhagen	
68	Aarul Jain	BS-MS	Ullasa Kodandaramaiah		University of California Riverside	
69	Diya Elizabeth Shaji	BS-MS	Yashraj Chavhan		Umeå University (Sweden)	PhD position at the Department of Molecular Biology, Umeå University (Sweden)

SCHOOL OF BIOLOGY

Awards & Recognitions

Sl No.	Student's Name	Course	Advisor	Month & Year	Title of Award/Recognition	Award/Recognition received for
1	Samyukta Anand	BS-MS	Amrutha Swaminathan	2024	Best poster award	Best poster award in the National Conference for Undergraduate Research in Biosciences held at IISER Tirupati
2	Aditya Singh Chauhan, Aditi Lai, Krupa Atul Kumar and Sehaj Bhat	BS-MS 2nd Yr.	Anirban Guha	Nov. 2024	2nd place in Anwesha EXPO, IISER Thiruvananthapuram	For research project presentation "Plant Disco (B23)"
3	Krishna M. Nair	PHD	Anirban Guha with Ullasa Kodandaramaiah	Mar-25	SPIE Proceedings paper accepted for publication	For the conference paper entitled: "Multiple wavelength sMx-SPIM: an effective microscopy technique for investigating light absorption and photosynthetic efficiency in plants" http://dx.doi.org/10.1117/12.3044294
4	Anindita Rao	PhD	Jishy Varghese	February, 2025	Best Platform Presentation	Frontiers Symposium in Biology, 2024; IISER TVM
5	Sohela Sarkar	PhD	Jishy Varghese	March, 2025	Travel Grant	ANRF, International Travel Support, Travel Grant to present a poster at the Keystone Symposium - Metabolic and Nutritional Control of Development and Cell fate at Beverly, MA, USA
6	Anindita Rao	PhD	Jishy Varghese	March, 2025	Poster presentation	Annual Drosophila Research Conference, San Diego, USA
7	Reshma Menon	PhD	Jishy Varghese	Jan-25	First Prize in Write-On 2024, science writing competition, PhD category	Write-On is a science writing competition organised by India Biosciences
8	Priyanshi Srivastava	Master's thesis	Kamalakkannan Vijayan		Internship	Microbes scholarship, Paris-Saclay program
9	Komal	PhD	Karthik Chandiran/ Kamalakkannan Vijayan	February - 2025	Travel Award	To attend the FIMSA Advanced Immunology course

Sl No.	Student's Name	Course	Advisor	Month & Year	Title of Award/Recognition	Award/Recognition received for
10	Anjitha K	PhD	Ramanathan Natesh	Feb-24	Travel Grant Award	Travel award was awarded by DECTRIS to attend SEACOAST 2024 at KMUTT, Bangkok, Thailand.
11	Anjitha K	PhD	Ramanathan Natesh	Feb-25	Best Poster Award	Best Poster award was presented at CTDDR 2025 at CSIR-CDRI, Lucknow, India
12	Yash Misra	PhD	Ramanathan Natesh	Jan-24	Travel Bursary Award	Travel bursary was awarded by STFC-UKRI for attending the CCP4 study weekend 2024
13	Yash Misra	PhD	Ramanathan Natesh	May-25	Travel Grant Award	Travel grant was awarded by DECTRIS to attend FEBS advanced course 2025-Time resolved spectroscopy meets time resolved crystallography: the future of dynamic photobiology.
14	Amrutha Krishnakumar	PhD	Ramanathan Natesh	Jan-25	Travel Bursary Award	Travel bursary was awarded by STFC-UKRI for attending the CCP4 study weekend 2025
15	Anna Geo	PhD	Nisha N Kannan	2024	The Company of Biologists travel grant	For attending the Asia Pacific Drosophila Neurobiology Conference, Tokyo, Japan (2024)
16	Swetha Gopal	PhD	Nisha N Kannan	2024	Society for Research in Biological Rhythms (SRBR) Merit Award for poster presentation	Awarded the Society for Research in Biological Rhythms (SRBR) Merit Award for poster presentation at the 2024 SRBR Meeting (USA)
17	Nikilesh Vijayan	PhD	Nishant KT	Dec. 2024	Best poster award	Chromosome Stability conference, JNCASR Bangalore
18	Amamah Farnaz	PhD	Nishant KT	Dec. 2024	Best poster award	Chromosome Stability conference, JNCASR Bangalore
19	Sameer Joshi	PhD	Nishant KT	Sept. 2024	Poster award	ICGA conference-2024 held at National Institute of Immunology (NII), New Delhi
20	Santhosh Kumar S	PhD	Poonam Thakur	Nov. 2024	Travel award to attend Indian Academy of Neuroscience annual meeting at NIMHANS, Bengaluru, India	
21	Samhitha Patil	BS-MS	Sabari Sankar Thirupathy	June-July 2024	DAAD-WISE Scholarship	Summer Internship at Max Planck Institute for Evolutionary Biology

Sl No.	Student's Name	Course	Advisor	Month & Year	Title of Award/Recognition	Award/Recognition received for
22	Anushka Mitra	Biological Science	Sandhya Ganesan	2024	CSIR-NET JRF	
23	Hrithik Kumar	PhD (Batch 2023)	Sandhya Ganesan	February, 2025	Best Poster Award	Best poster presentation in the fourth edition of the annual Frontier Symposium in Biology 2025 (FS-BIO 2025) at the IISER TVM
				February, 2025	Poster Presentation	Among the 19 students selected for the poster presentation in the 43rd Mahabaleshwar Seminar on Molecules, Membranes and Organelle at Alibaug, Mumbai
24	Amrita Bhattacharya	PhD (Batch 2023)	Sandhya Ganesan	February, 2025	Flash talk and Poster Presentation	Selected for Flash talk and received Travel award at Molecular Motors, Transports and Tracks 2025 meeting held at IIT Jodhpur.
25	Bhavyalakshmi K B and Nisha Singh	BS-MS Biology (Batch 20), IPHD batch 2023	Sandhya Ganesan	December, 2024	Selected for Global Immunocourse	Global Immunocourse at Ashoka University, 2024 (Aspiring immunologists were selected among hundreds of applicants for the course conducted by renowned Indian and international immunologists)
26	Mullai V R	PhD (Jan 2022 batch)	Sandhya Ganesan	October, 2024	Poster Presentation and Travel Grant	Received Travel grant and presented poster in Immunoon 2024, held in Indian Institute of Science, Bengaluru from 17-20th October 2024
				January, 2025	Selected for Workshop	Selected for participating in the Hands on Workshop on basic Bio-methodologies of Laboratory Mice and Rat, held in NCBS, Bengaluru from January 27-31, 2025
27	Chandhana Prakash	MSc (Batch 2022)	Sandhya Ganesan	May, 2024	DBT JRF	
				July, 2024	School Gold Medal	For scoring the highest CGPA in the MSc Biological Sciences course at IISER TVM, batch 2022

Sl No.	Student's Name	Course	Advisor	Month & Year	Title of Award/Recognition	Award/Recognition received for
28	P V Arun Prasanth	PhD (Batch 2023)	Sandhya Ganesan	May 2024		Selected for Microscopy and Image Analysis 2024 Training course at IISER Pune
				February, 2025		Selected for the 43rd Mahabaleshwar Seminar on Molecules, Membranes and Organelle at Alibaug, Mumbai
29	Roshin Nazeer	BS-MS Batch 20	Sandhya Ganesan	May - July 2024	ThinkSwiss Research Scholar	Selected by Swissnex for doing an Internship at the Institute of Medical Microbiology, University of Zurich under Adrian Egli
				April 2025	CSIR-NET JRF	
30	Kulkarni Gopal Vyankatesh		Sanu Shameer	Dec-24	2nd prize in poster presentation	Student was awarded 2nd place in poster presentation at the 23rd International Conference on Systems Biology (ICSB 2024)
31	Anu P V	PhD	Satish Khurana	February, 2025	Finalist, TNO-Inspiring Science Awards 2025	Qualified as a finalist of the TNO-Inspiring Science Awards for the best published Life Sciences paper by a student from India, 2025.
32	Kavitha M S	PhD	V Stalin Raj	Feb-25	Best Oral presentation at Frontiers Symposium in Biology (FS BIO-2025) held at IISER Thiruvananthapuram, India	For oral presentation, entitled, 'Self-assembling protein nanoparticle vaccine elicits potent humoral responses against three emerging Coronaviruses' at FS-BIO-2025
33	Harshal Srivastava	PhD	V Stalin Raj	Mar-25	First Prize for Poster Presentation	Presented a poster entitled, "Biotin Ligase-Based Approach for Detecting Protein-Protein Interactions" at the 6th International Conference on Genome Biology (ICGB-6) held at Madurai Kamaraj University, Tamil Nadu, India
34	Ushma Anand	PhD	Tapas K. Manna	Dec-24	EMBO Travel Award	Travel award for attending American Society for Cell Biology 2024 meeting in USA.
35	Ushma Anand	PhD	Tapas K. Manna	Dec-24	Selected for short talk in international meeting in USA	Speaker at American Society for Cell Biology meeting

SCHOOL OF CHEMISTRY

Placements

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
1	Diksha	PhD	Dr V. Sivaranjana Reddy		University of Vienna, Austria	Post-doc
2	D Melanie Magdalene	BS-MS	Alagiri Kaliyamoorthy	CSIR-NCL Pune		PhD
3	Priyadarshini Baidya	BS-MS	Sukhendu Mandal		Cornell University, New York	PhD
4	Jibin Thomas	BS-MS	Sukhendu Mandal		Technical University of Munich	PhD
5	Rajanya Adhikary	BS-MS	Sukhendu Mandal		University of California, Davis	PhD
6	Teena Thomas	IPHD	Sukhendu Mandal		The Ohio State University	PhD
7	Kritika Sharma	MSc	Sukhendu Mandal		North Carolina State University	PhD
8	Dayona A Varghese	BS-MS	Sukhendu Mandal		University of California, Riverside	PhD
9	Sanjay P	BS-MS major	Veera Reddy Yatham		UNIST South Korea	PhD
10	Krishnendu Chatterjee	MSc	Veera Reddy Yatham	IISER-TVM		PhD
11	Harikrishnan	PhD	Reji Varghese		Okinawa University	Post-doc
12	Harsha	BS-MS	Reji Varghese		University of Wurzburg	PhD

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
13	Basil	BS-MS	Reji Varghese		Rochester University	PhD
14	Anushree	BS-MS	Reji Varghese		Ohio State University	PhD
15	Soumakanya	IPhD	Reji Varghese			PhD
16	Thamraparni	MSc	Reji Varghese		University of Bristol	PhD
17	Akhil K	BS-MS	R. S. Swathi		University of Luxembourg	PhD
18	Arshath Varunsha M	BS-MS	R. S. Swathi		Texas A&M University	PhD
19	Sarag K	BS-MS	R. S. Swathi		University of Wisconsin-Madison	PhD
20	PRABAL DAS	BS-MS	Pushpita Ghosh		PhD at Max Planck Institute of Molecular Plant Physiology, Germany, 2024	PhD
21	GAJULA THEJA KUMAR	BS-MS	Pushpita Ghosh	IIT Bombay		PhD
22	Alvin Antony Chungath	BS-MS	Basudev Sahoo		Ohio State University, USA	PhD
23	Malavika Krishnan	BS-MS	Basudev Sahoo		University of Wuppertal, Germany	PhD
24	Priyanka Paunekar	BS-MS	Y. Adithya Lakshmana		Radboud University	PhD
25	Bishal Saha	IPHD	Y. Adithya Lakshmana		Michigan State University	PhD
26	Parvathy Anil	BS-MS	Rajendra Kurapati		University of Strasbourg	PhD
27	Ashwin T Shaji	BS-MS	Rajendra Kurapati		Tokyo University, Japan	PhD
28	Manikrishna Lakavathu	BS-MS	Rajendra Kurapati		Dublin City University, Ireland	PhD
29	Revathi Chandrasekaran	Ph.D.	Ramesh Rasappan		UVJ Technologies Pvt. Ltd	Cheminformaticist

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
30	Akhila M.	BS-MS	Subrata Kundu		University of Georgia, USA.	PhD
31	Adwaith K V	BS-MS	Subrata Kundu		Heidelberg University	PhD
32	Aswin S	BS-MS	Jerry Alfred Fereiro		University of Munster	PhD
33	Ruth Mariam Ipe	PhD	Gokulnath Sabapathi		Department of Pharmacology, Believers Medical College, Thiruvalla	Research Associate and Lab Supervisor
34	Anjana P Nambiar	PhD	Gokulnath Sabapathi		Molecular Connections, Bangalore	
35	Asif Khan	BS-MS	Gokulnath Sabapathi		City University, New York	PhD
36	Sankeerthana PA	BS-MS	Gokulnath Sabapathi		Indiana University, USA	PhD
37	Ajsal K.	BS-MS	Gokulnath Sabapathi		Florida State University	PhD
38	Vishnu E. K.	PhD	K. George Thomas		The Julius Maximilian University of Würzburg, Germany	Postdoc
39	Ajaykumar M. P.	PhD	K. George Thomas		University of Technology Sydney, Australia	Postdoc
40	Sanoop M. S.	PhD	K. George Thomas		University of Utah, USA	Postdoc
41	Thwahira Shirin A.	BS-MS	K. George Thomas		EPFL, Lausanne, Switzerland	PhD
42	Hridya M. Biju	BS-MS	K. George Thomas		Utrecht University, The Netherlands	PhD
43	Aravind B.	BS-MS	K. George Thomas		University of California, Berkeley, USA	PhD

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
44	Nanditha Rajeev	BS-MS	Krishnadas K R		University of Notredamem USA	PhD
45	Majima K	BS-MS	Kana M. Sureshan		Michigan State University	Ph.D.
46	Ameena Yoonus	BS-MS	Kana M. Sureshan		City University of Newyork	Ph.D.
47	Saumiya kumar gupta	BS-MS	Kana M. Sureshan		University of Wurzburg	Ph.D.
48	Khazeber Ravichandran	PhD	Kana M. Sureshan		University of Wurzburg	Post-doc
49	Javed R Pathan	PhD	Kana M. Sureshan		Ghent University	Post-doc
50	Cijil Raju	PhD	Kana M. Sureshan		Humboldt University of Berlin	Post-doc
51	Indrajit Giri	Post Doctoral Fellow	Mahesh Hariharan		National Institute of Material Science, Japan.	Post Doctoral Fellow, Japan
52	Aasif Khan	Post Doctoral Fellow	Mahesh Hariharan		King Fahd University of Petroleum and Minerals, Saudi Arabia	Post Doctoral Fellow, Saudi Arabia
53	Anitta Benoy	BS-MS	Mahesh Hariharan		Julius-Maximilians-Universität Würzburg (JMU), Germany	Ph.D. Scholar, Germany
54	Devika Sasikumar	Ph.D.	Mahesh Hariharan	Appointed as failure analysis engineer at Apple India Pvt. Ltd		Appointed as failure analysis engineer at Apple India Pvt. Ltd

SCHOOL OF CHEMISTRY

Awards & Recognitions

Sl. No.	Student's Name	Course	Advisor	Month & Year	Title of Award/ Recognition	Award/Recognition received for
1	Nida Nahan E. K.	Integrated PhD	Sukhendu Mandal	Dec-24	Best Poster Award	Best Poster Award in the International Conference on Molecular Materials and Functions, 2024, IIT Madras
2	Priyanka C.	Ph.D	Sukhendu Mandal	Sep-24	Best Poster Award	Best Poster Award in the Asia NANO Conference, 2024, IIT Madras
3	Megha R.	IPhD	R. S. Swathi	Mar-25	Best poster award	Inter IISER-NISER Chemistry Meet-2025
4	Aswathy R.	PhD	R. S. Swathi	Feb-25	Best flash talk prize	Frontier Symposium in Chemistry (FS-CHM) 2025, IISER Thiruvananthapuram
5	Megha R.	IPhD	R. S. Swathi	Dec-24	Best poster award	Physics and Chemistry of Atomic, Molecular and Condensed Matter Systems (PCAMC), 2024
6	Tarpan Maiti	PhD	Pushpita Ghosh		Prime Ministers Research Fellow	Selected for the prestigious PMRF in 10 th cycle through lateral entry
7	Kaustav Mondal	PhD	Pushpita Ghosh		Prime Ministers Research Fellow	Selected for the prestigious PMRF in 11 th cycle through lateral entry
8	Kaustav Mondal	PhD	Pushpita Ghosh		Best Poster Award	Society of Physical Chemistry Symposium (Society of Physical Chemistry Symposium (Soc-Phyc) 2024 at IIT Bombay
9	Mr. Amit Pal	PhD	Basudev Sahoo	Mar-25	Best Poster Award	Best Poster Award in Indo-German Conference, entitled "Sustainable Chemistry III, IIT Indore 2025)
10	K Swetha	PhD	Rajendra Kurapati	Feb-25	Raman Charpak PhD Exchange Fellowship	Raman-Charpak Fellowship 2024 CEFIPRA
11	Gayathri K.	PhD	Subrata Kundu	Feb-25	Best poster award	2nd International Main Group Conference at IISER Thiruvananthapuram
12	Gayathri K.	PhD	Subrata Kundu	Dec-24	Best poster award	International Conference on Modern Trends in Inorganic Chemistry (MTIC XXI) at IIT Kharagpur

Sl. No.	Student's Name	Course	Advisor	Month & Year	Title of Award/ Recognition	Award/Recognition received for
13	Gayathri K.	PhD	Subrata Kundu	Dec-24	Best poster award	ChemSci2024 (Leadears in the Field Symposium) at ISER Thiruvananthapuram
14	Livin Paul	PhD	K. George Thomas	Dec-24	Best Poster Prize Award	Best Poster Prize Award in The 12th International Symposium on Dynamic Excitons (IS-DyEx) 2024, held at Thiruvananthapuram
15	Merin Varghese	PhD	K. George Thomas	Jan-25	Best Oral Presentation	Best SLAM presentation at 5th Frontier Symposium in Chemistry FSCHM 2025, held at ISER Thiruvananthapuram
16	Devika Rajan	PhD	K. George Thomas	Oct-24	Best Poster Prize Award	Best Poster Prize Award at Society of Physical Chemistry (SoPhyC), held at IIT Bombay
17	Cijil Raju	Postdoc	Kana M Sureshan	2024	Humboldt Research Fellowship	Pursuing Post Doctoral Research
18	Ms. Haripriya Balan	Ph.D.	Kana M Sureshan	2024	BEST POSTER PRIZE AWARD	51st National seminar on Crystallography (NSC 51)
19	Anu Lal	Ph.D.	Kana M Sureshan	2024	BEST POSTER PRIZE AWARD	ETSST, SRM University
20	Suvarna Sujilkumar C	PhD	Mahesh Hariharan	November 2024	Best Poster Award from the Fluorescence Society	Best Poster Award from the Fluorescence Society for the poster presentation at FCSXV and international conference OWLS-17, 16-21 November 2024, IIT Bombay
21	Philip Daniel Maret	PhD	Mahesh Hariharan	July 2024	Best Presentation	Awarded the "Best Presentation" at the MRSI Annual Technical Meeting (ATM) organized at the University of Kerala, Thiruvananthapuram.
22	Kavya Vinod	PhD	Mahesh Hariharan	December 2024	Best poster award	12th International Symposium of Dynamic Exciton, jointly organised by Dynamic Exciton Japan and ISER Thiruvananthapuram
23	Kavya Vinod	PhD	Mahesh Hariharan	January 2025	Best poster award	5th Frontiers Symposium in Chemistry (FS-CHM 2025), organised by School of Chemistry, ISER Thiruvananthapuram
24	Aniruddha Mazumder	PhD	Mahesh Hariharan	December 2024	Best Oral Presentation	Chemical Science Leaders in the Field (LITF) Symposium, ISER TVM, 2024

SCHOOL OF DATA SCIENCE

Placements

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details (Name of Company, Place)
				Indian Universities	Foreign Universities	
1	Aaqilah A.J	BS-MS	Raji Susan Mathew		UT Southwestern,USA	
2	Tandalam Jighnyas Reddy	BS-MS	Mainak Adhikari			Allianz Technology, Thiruvananthapuram,India
3	Jovita Biju	BS-MS	Raji Susan Mathew			Mavenir, Bangalore
4	Sharda	BS-MS	Saptarshi Bej		Charles University, Prague, Czechia	

SCHOOL OF DATA SCIENCE

Awards & Recognitions

Sl. No.	Student's Name	Course	Advisor	Month & Year	Title of Award/Recognition	Award/Recognition received for
1	Maitreya Saameer Ganu (Batch 2023)	I2 Data Science	Dr Suresh Chavan	2024	INSPIRE	He was among the top 1% of students in his college, securing 92.5% in the science stream and ranking 5th overall. In recognition of this academic excellence, he was awarded the INSPIRE scholarship.

Sl. No.	Student's Name	Course	Advisor	Month & Year	Title of Award/Recognition	Award/Recognition received for
2	Muskan Kumari	12 Data Science (B23)	Dr Suresh Chavan	December 2024	Infosys STEM Star Scholarship	She received the Infosys STEM Stars Scholarship, which supports girl students pursuing STEM degrees, based on her academic performance and interest in science and technology.
3	Ananya J R	12 Data Science (B22)	Dr Raji Susan Mathew	2024 - 2025 March 2025	INSPIRE Scholar GATE DA	Awarded by the Department of Science and Technology, Government of India, for being in the top 1% of the CBSE Standard XII examination (AISSCE) with a score of 97%. Cleared GATE 2025 in Data Science and Artificial Intelligence
4	Ann Rose Saji	12 Data Science (B22)	Dr Raji Susan Mathew	2024 - 2025 March 2025	INSPIRE Scholar GATE DA	Awarded by the Department of Science and Technology, Government of India, for being in the top 1% of the CBSE Standard XII examination (AISSCE) with a score of 96.8%. Cleared GATE 2025 in Data Science and Artificial Intelligence
5	Soorya Gayathri A K	12 Data Science (B22)	Dr Raji Susan Mathew	2024 - 2025	IISM 2024 SPORTS AWARD 2025 (IISERTVM) ITSAV 2024 ISHYA 2024	She was the captain of the Badminton women's team, which bagged the 1st runner-up in the 11th INTER ISER SPORTS MEET
6	Neethu D	12 Data Science (B23)	Dr Suresh Chavan	2024	INSPIRE	Awarded by the Department of Science and Technology, Government of India, for being in the top 1% of the CBSE Standard XII examination (AISSCE) with a score of 96.4%.
7	Mehul Goyal	12 Data Science (B22)	Dr Raji Susan Mathew	2025	Conference presentation	Selected to present a talk at EuroPython-2025, an international tech conference in Prague, Czech Republic.
8	Govindram Neware	12 Data Science (B20)	Alwin Poulos	Dec 2024	Travel Grant Awardee	Selected to attend the 5th Indian Symposium on Machine Learning (IndoML 2024) at BITS Pilani - Goa Campus fully funded and present my work.
9	Pranav M	12 Data Science (B23)	Suresh Chavan	2024	INSPIRE	Awarded by the Department of Science and Technology, Government of India, for being in the top 1% of the CBSE Standard XII examination (AISSCE) with a score of 96.6%.
10	Harshit Kumar	12 Data Science (B22)	Dr Raji Susan Mathew	2024	BVC	He received the scholarship awarded to students of merit from a financially weaker background. It is awarded on a merit-to-means basis.

SCHOOL OF EARTH, ENVIRONMENTAL AND SUSTAINABILITY SCIENCES

Placements

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
1	Deepam Jyoti	Major Project	Pramitha M		PhD at Ludwig Maximilian University Munich, Germany	
2	Abhinav B Roy	Major Project	Pramitha M	PhD at IISER Bhopal		
3	Arun Jo Mathew	Major Project	Pramitha M	PhD at IISER Thiruvananthapuram		
4	Vikash Rishi Dharan K	Major Project	Pramitha M			Jacobi Group, Coimbatore
5	Devika Sunil S.	Major Project	Anand N.	PhD at IISER Thiruvananthapuram		Project associate at IISc, Bengaluru (August to December 2024)
6	Rohan Thakur	Major Project	Anand N.		PhD at New Mexico State University	
7	Ravikiran Hegde	Major Project	Anand N.		PhD at Max Planck Institute for Meteorology	
8	Sandeep T	Major Project	Prasanth V.			Project Assistant at IISER TVM (From August 2024 to Present)



SCHOOL OF EARTH, ENVIRONMENTAL AND SUSTAINABILITY SCIENCES

Awards & Recognitions

Sl. No.	Student's Name	Course	Advisor	Month & Year	Title of Award/Recognition	Award/Recognition received for
1	Charbak Das	Minor in SEESS IMS22083	Subhajit Ghosh	13th March, 2025	Sakura Science Summer Internship Program, JST at the Earthquake Research Institute (ERI), The University of Tokyo	Selected for Sakura Science Summer Internship Program, JST at the Earthquake Research Institute (ERI), The University of Tokyo
2	Arun Jo Mathew	PhD. PHD241022	Pramitha M	19.01.2025 to 02.02.2025	Full funding to visit Forschungszentrum Jülich Germany	Visited Forschungszentrum Jülich, Germany as part of Collaborative research.
3	Ravikiran Hegde	BS-MS Major and Minor project at SEESS	Anand N		Institute gold medal, Best undergraduate researcher medal	



Photo: Parthiban, Electrical substations team, IISERTVM

SCHOOL OF PHYSICS

Placements

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
1	Krishna Kumar	BS-MS	Shabnam Iyyani		PhD	University of Leeds, UK
2	Allada Suryavamshi	MSc	Shabnam Iyyani	Project Associate		ARIES, Nainital, Uttarakhand
3	Greeshma	BS-MS	Manoj Namboothiry		PhD	RMIT, Australia
4	Ananthapadmanabhan	BS-MS	Manoj Namboothiry	M.Tech		IIT Allahabad
5	Akhil Alexander	PhD	Manoj Namboothiry		PDF	Tampere University, Ireland
6	Soumya Adhikari	PhD	Bindusar Sahoo		Post doctoral fellow	Sogang University, South Korea
7	Aravind Aikot	BS-MS	Bindusar Sahoo		PhD	Lehigh University, USA
8	ASHTAKALA VENKATA NAGA SAI MEGHANATH	BS-MS	Debashis Saha		PhD	Stockholm University
9	Manan Singh Kachhawaha	IPhD	Debashis Saha	PhD		TIFR, Mumbai
10	Srijani Pal	MSc	Debashis Saha	PhD		ISI, Kolkata
11	Athul George	BS-MS	Chandrakala Meena		PhD	Central European University Vienna, Austria

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
12	Athul Kumar O	BS-MS	Chandrakala Meena	MBA		IIM Indore
13	Athul Kumar O	BS-MS	Chandrakala Meena	MBA		IIM Indore
14	Chinmayi R Gallgekere	BS-MS	Chandrakala Meena	Project Associate		IISc Bangalore
15	Akshay A	BS-MS	Mathew Arun Thomas		PhD	Huston University, USA
16	Vivek Tewatia	BS-MS	Madhu Thalakulam		PhD	KU Leuven, Belgium
17	Pratheek Malol	BS-MS	Madhu Thalakulam		PhD	Univ. Jyväskylä, Finland
18	Pooja S	BS-MS	Ravi Pant		PhD	University of Illinois at Urbana-Champaign
19	Manisha Bansal	PhD	Tuhin Maity		PDF	University of Cambridge
20	Wasim Akram	PhD	Tuhin Maity		PDF	CNRS, France
21	Mathews Benny	BS-MS	Souvik Paul		RA and PhD	IFPAN, Poland
22	GIREESH K T	BS-MS	Vinayak Kamble		PhD	University of Groningen, Netherlands
23	Ann Eliza Joseph	BS-MS	Vinayak Kamble		PhD	University of Wurzburg, Germany

SCHOOL OF PHYSICS

Awards & Recognitions

Sl. No.	Student's Name	Course	Advisor	Month & Year	Title of Award/ Recognition	Award/Recognition received for
1	Roshni Benny	PhD	Manoj Namboothiri	April 20, 2024	Best Paper Award	International Conference on Energy, Environment and Health (INFOFEST 2024), Kerala
2	Adithya LG	PhD	Chandrakala Meena	March, 2025	2nd Best Poster Award	Conference on Nonlinear Systems and Dynamics (CNSD)-2025, Bharathidasan University, Tamil Nadu
3	Yuvraj Singh	PhD	Chandrakala Meena	March, 2025	3rd Best Poster Award	Conference on Nonlinear Systems and Dynamics (CNSD)-2025, Bharathidasan University, Tamil Nadu
4	Annu Anns Sunny	PhD	Madhu Thalakulam	December 2024	Best Poster Award	Asia Pacific Conference on Condensed Matter Physics (AC2MP 2024) held at IIT Patna, December 2024
5	Manisha Bansal	PhD	Tuhin Maity	September 2024	Best Poster Award	International Workshop on "Materials and Devices for Post-CMOS Computing," held at the Institute of Nano Science and Technology (INST), Mohali, and co-organized by the University of Cambridge and INST.



Photo: Parthiban, Electrical substations team, IISERTVM

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
1	Veena Sri	BS-MS20				As Consultant at Deloitte, Hyderabad
2	Satya Surya Pranita Sai Garikipati	BS-MS20				As Consultant at Deloitte, Hyderabad
3	Suhana Nujum G	BS-MS20				As Associate Data Scientist (Internship) Allianz Services
4	Suryaraj B	BS-MS		At IISc Bangalore (IAS summer research fellowship program 2024) At IISc Bangalore (IAS-SRFP 2025)		
5	Ipsita Chatterjee	MSc24		NISER Bhubaneswar, Odisha		
6	Tanisha Talekar	MSc 23		TIFR Mumbai	ANU Mathematical Sciences Institute, Australia	
7	Tarun Thomas	BS-MS 23		IIT Dharwad		
8	Nabanshu Neer Gogoi	BS-MS22		IIT Dharwad		
9	Manit Kishor	BS-MS 22		TIFR CAM (SRF 2025)		

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
10	Anvitha Bhat	BS-MS 22		IISc Bangalore		
11	Arjun Vijayan Nair	BS-MS20		ISI Bangalore, TIFR - CAM Summer programme	Hadamard Doctoral School of Mathematics (EDMH), Paris-Saclay, France	
12	S V Roshini	BS-MS 22		Australian National University Mathematical Sciences Institute		
13	Christopher	BS-MS-23		BITS Hyderabad		
14	Avrojjit	BS-MS-23		IISc Bangalore		
15	Saptarshi Dutta	BS-MS 21		ISI Calcutta		
16	A J Nithin	BS-MS 23		ICTS-TIFR Bangalore (IAS-SRFP)		
17	Shreya Jugoolkar	BS-MS 21			Okinawa Institute of Science and Technology (OIST), Japan	
18	Devansh Tripathi	BS-MS 22			TIFR-CAM, ETH Zürich	
19	Anusurya Suthar	BS-MS 22		IIT Gandhinagar		
20	Gana Gangadharan	BS-MS22		ISI Bangalore (IAS-SRFP-2025)		
21	Saumya Ahuja	BS-MS 23		IIT Madras (SRFP)		
22	Subhradeep Ghosh	MSC 23		IISER Berhampur		
23	Amal Abdulla C	BS-MS 23		IISER TVM		
24	Ashutosh Santhalia	MSc23		IISER TVM		
25	Aneeth Kumaar P V	BS-MS 23		IISER Bhopal		

Sl. No.	Student's Name	Course	Advisor	Higher Education		Employment Details
				Indian Universities	Foreign Universities	
26	Anindita Kanjilal	MSc 23		Presidency University, Kolkata		
27	Sandipan Jana	MSc 23		ISI Calcutta		
28	Sinta Maria Siby	BS-MS20			University of Münster, Germany	
29	Nafsa Sajju	BS-MS23		IIT Madras - FedEx SMART, IISER-TVM		
30	Uthra Premalal MK	BS-MS23		IISER TVM		
31	Krishna S Menon	BS-MS20			Universita della Svizzera Italiana, Uni of Oldenburg, Switzerland, Germany	
32	vivek Kumar	BS-MS 23		IISER TVM		
33	Suwin Michael D Souza	BS-MS 23		IIT Madras		
34	Prerana Chatterjee	BS-MS 23		IIT Madras		
35	Akshara.K	BS-MS22		IIT Palakkad		
36	Vansh Pandit	BS-MS23		IIT Madras		
37	Riddhina Dimiri	BS-MS23		IIT Madras		
38	Aanandee Das	BS-MS23		TIFR-CAM		
39	Akhila Anna Varghese	BS-MS20			University of Texas at Arlington, USA	
40	Abdul Rasheed P	BS-MS23		IIT Kanpur (SRFP)		
41	Asiya Anas	BS-MS20			University of Kansas, Lawrence, USA	
42	More Dileep Vipul	BS-MS23		IIT Pune		
43	Adarsh T	MSc 24		IISER TVM		

SCHOOL OF MATHEMATICS

Awards & Recognitions

Sl No.	Student's Name	Course	Advisor	Month & Year	Title of Award/ Recognition	Award/Recognition received for
1	Dimpi KM	PhD	Geetha Thangavelu	June, 2024	Got grant from IMSc Chennai, to visit Amritanshu Prasad	Invited Talk at the Institute of Mathematical Sciences (IMSc), Chennai Delivered a research talk during a visit to Amritanshu Prasad, June 2024.
2	Dimpi KM	PhD	Geetha Thangavelu	Feb 2025	Poster Presentation at IMSc Conference	Presented a poster titled "Hook Fusion Procedure for Hyperoctahedral Groups" at the Conference on Representation of Groups and Algebras, February 2025.
3	Dimpi KM	PhD	Geetha Thangavelu	May 2025	Speaker at Women in Mathematics Celebration	Speaker at Women in Mathematics Celebration Gave a talk highlighting the mathematical contributions of Sophie Germain and Neena Gupta, May 2025.
4	Dimpi KM	PhD	Geetha Thangavelu	June 2025	Invited for collaboration and funding for visiting Steffen Koenig, University of Stuttgart, Germany	Invited to collaborate with Koenig and gave a talk at the department
5	Dimpi KM	PhD	Geetha Thangavelu	June 2025	Got travel grant from NTNU, Norway to attend a conference	Talk at NTNU, Norway Participated in the international conference "Geometric Models in Representation Theory and Beyond" at NTNU, Trondheim; delivered a research talk, June 2025.



Academic
Programmes...

ACADEMIC DATA

From 1st April 2024 to 31st March 2025

The academic programs at IISER Thiruvananthapuram encompass undergraduate, graduate, and postgraduate degree programs, offering a wide range of courses across all schools. The institution offers the following degree programs: the BS-MS degree (in Biology, Chemistry, Mathematics, and Physics), the Integrated and Interdisciplinary BS-MS degree (in Biology, Chemistry, Data Science, Earth and Environmental Sciences, Mathematics, and Physics), the MSc degree (in Biology, Chemistry, Mathematics, and Physics), the Integrated PhD degree (in Biology, Chemistry, Mathematics, and Physics), and the PhD degree (in Biology, Chemistry, Data Science, Earth and Environmental Sciences, Mathematics, and Physics).

BS-MS Programme (Basic Science Stream)

The BS-MS Programme at IISER TVM is tailored to meet contemporary needs with a strong emphasis on interdisciplinary studies. The first 3 semesters focus on foundational courses encompassing natural sciences, mathematics, computation, and language skills for scientific communication. 4th semester onwards, students specialise in one major (Biology, Chemistry, Data Science, Earth and Environmental Sciences, Mathematics or Physics) and one or more minors. A research project is undertaken in the fifth year.

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL BS-MS STUDENTS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
Male	84	266	170	5	86	42	653
Female	50	272	234	9	81	41	687
Total	134	538	404	14	167	83	1340

GENDER & CATEGORY-WISE DISTRIBUTION OF BS-MS STUDENTS ENROLLED IN 2024							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
Male	25	69	56	3	30	12	195
Female	9	32	43	3	16	13	116
Total	34	101	99	6	46	25	311

No of total students enrolled for BS-MS in 2024 = 311

Subsequent to admission in 2024, No. of total students discontinued the program – 17

Final number of the enrolled BS-MS Students in 2024 = 294

SCHOLARSHIP SOURCES FOR ALL BS-MS STUDENTS (UNTIL 31 MARCH 2025)

	No of Students
DST-INSPIRE	243
KVPY	2
Other (Please Specify) Egrantz, Lakshadweep, NSP, Prathibha, reliance, samunnathi, VBC, SFF, SFFS, Canara, SBI	262
Total	507

SCHOLARSHIP SOURCES FOR BS-MS STUDENTS ENROLLED IN 2024

	No of Students
DST-INSPIRE	35
KVPY	0
Other (Please Specify) (Egrantz, NSP, VBG)	78
Total	113

DETAILS OF THE BS-MS FIFTH-YEAR PROJECTS CARRIED OUT DURING 2023-24

School of Biology				
Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
1.	Aan Ruth	IMS19003	Dr. Sandhya Ganesan	Elucidating the antimicrobial activity of Protamine sulphate against bacterial Pathogens
2.	Abin Krishna K S	IMS19009	Dr. Ullasa Kodandaramaiah	Host specialisation behaviour in the butterfly <i>Catopsilia pomona</i>
3.	Ajmal P M	IMS19020	Dr. Kamalakannan Vijayan	Unraveling Host-Pathogen Interactions through Proximity Labeling: An Insights into Molecular Crosstalk
4.	Akash S Kumar	IMS19021	Dr. Satish Khurana	Understanding the role of HIF-1 α stabilization on NSPC proliferation and differentiation
5.	Akshaya Jayan	IMS19026	Dr. Ullasa Kodandaramaiah	Testing Host Use in two Pierid Butterfly Species <i>Catopsilia pyranthe</i> and <i>Eurema Blanda</i>

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
6.	Amina Hanaan Majeed	IMS19032	Dr. Anirban Guha	Stem anatomical traits in sorghum: genotypic variation and influence of variable nitrogen regimes
7.	Anagha J.	IMS19035	Dr. Nisha N Kannan	Role of microRNAs in the circadian regulation of locomotor activity-rest rhythm in <i>Drosophila melanogaster</i>
8.	Ananya Aravind	IMS19039	Prof. S. Murty Srinivasula and Dr. Jean Pierre Mothet, ENS Paris-Saclay	The Role of CARP 2 in Organelle Dynamics
9.	Anupama Krishna J	IMS19043	Dr. Jishy Varghese	Fruit Fly Hexamerins: Understanding Stage-Dependent Roles of Larval Serum Proteins in <i>Drosophila melanogaster</i>
10.	Aparna Pradeep	IMS19046	Prof. Hema Somanathan	Food or sex: Understanding heteranthy through a trait-based approach in paleotropical Melastomataceae
11.	Ashna Anilkumar	IMS19056	Dr. Nisha N Kannan	Understanding the interplay between the circadian clock and metabolism in <i>Drosophila</i>
12.	Asmita Dhara	IMS19063	Dr. Ramanathan Natesh	Protein-ligand interaction studies of <i>Mycobacterium smegmatis</i> RecA protein and Suramin
13.	Athulya P S	IMS19070	Dr. V Stalin Raj	Characterization of coronavirus entry using monomerized receptors
14.	Christeena Charly	IMS19079	Dr. Nisha N Kannan	Selection for timing of adult emergence in <i>Drosophila</i> leads to the evolution of circadian light input pathway and alteration in the development
15.	Devi R	IMS19086	Dr. V Stalin Raj	Production of Functional Recombinant Envelope Glycoprotein of Flaviviruses
16.	Eralanbu B I	IMS19092	Prof. Hema Somanathan	Effect of reward frequency and quality on floral constancy in <i>Apis dorsata</i> & Estimation of LD50 and LOAEL of two commonly used pesticides in <i>Apis dorsata</i>
17.	Gayathri V	IMS19098	Dr. Satish Khurana	Elucidating the effect of maternal hyperglycemia on the emergence of hematopoietic system in mouse embryo
18.	Harsha.T.N	IMS19103	Dr. Swathi Devireddy	Modulation of Lysosomal Cargo Exit by ER-localized Sorting Receptor Interactions
19.	Indulekha. V	IMS19105	Prof. Nishant KT	Establishment of Simulated Microgravity condition and studying its effect on Mitotic and Meiotic Stability in <i>Saccharomyces cerevisiae</i>

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
20.	Ira Zibbu	IMS19106	Dr. Sabari Sankar Thirupathy and Dr. Jeffrey E Barrick, Department of Molecular Biosciences The University of Texas at Astin	Chromosomal Rearrangements Over 75,000 Generations of a Long-Term Evolution Experiment with Escherichia coli
21.	Irin Mariyam Joseph	IMS19107	Dr. Jishy Varghese	Neuron-specific role of microRNAs that regulate metabolism in Drosophila melanogaster
22.	Josy Joseph	IMS19115	Dr. Jishy Varghese	Exploring Nutrient-Sensing in Tracheal Cells of Drosophila melanogaster - Implications in Growth Regulation
23.	Jyothilakshmi S	IMS19116	Dr. V Stalin Raj	Construction of a Kanamycin resistance pAdEasy-1 shuttle vector for the generation of a chimeric adenovirus vector system.
24.	Kapavarapu Pratham	IMS19117	Dr. Sanu Shameer	Exploring Alternative Nutrient Sources and Metabolic Demands of Trypanosoma brucei in the Procyclic Form
25.	Kaveri Sudhakaran	IMS19120	Dr. Ramanathan Natesh	Structural Studies of SARS-CoV-2 main Protease-Inhibitor Complex
26.	Kavya Sunil	IMS19121	Dr. Sabari Sankar Thirupathy	Development and Standardisation of forward mutation reporter system in Gram-positive model organism Bacillus subtilis
27.	Lia Susan George	IMS19129	Prof. Tapas K. Manna	Regulation of centriole duplication Factors by SCF FBXW7 E3 UBIQUITIN LIGASE
28.	Madhavi M	IMS19131	Dr. Ramanathan Natesh	Characterisation of Mycobacterium tuberculosis Mfd higher order Oligomer
29.	Meega Reji	IMS19137	Dr. Ravi Maruthachalam	Interplay Between Chromatin Organization and Maintenance of Genome Integrity
30.	Merina Tony	IMS19140	Dr. V Stalin Raj	Enhancing the Yield of Recombinant Envelope Protein in Flaviviruses: KFDV, AHFV AND JEV via Stabilizing Mutations
31.	Naeema C A	IMS19144	Dr. Nishana Mayilaadumveettil	Chromatin Architectural Proteins: Role in Diseases and Therapeutics
32.	P Nandhu	IMS19148	Dr. Nishana Mayilaadumveettil	Unraveling the Structure and Understanding the Consequences of Metal Displacement Studies on Chromatin Architectural Proteins
33.	Nanduraj S	IMS19149	Prof. Hema Somanathan	Morphometric Study of Native Honeybees in India and Standardization of Pesticide Detection Protocol from Honey
34.	Naveen Balachandran	IMS19150	Dr. Poonam Thakur	Automating cell counting in DAB stained tissue sections using deep learning models

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
35.	Nikhil Kollins	IMS19159	Dr. Ullasa Kodandaramaiah	Identifying the influence relative humidity has on adult seasonal forms in <i>Mycalesis mineus</i>
36.	Nithin K A	IMS19162	Dr. Jishy Varghese	An unbiased screen to identify microRNAs in the prothoracic gland that regulate developmental timing in <i>Drosophila melanogaster</i>
37.	Noel Benson	IMS19163	Dr. Jishy Varghese	Role of miR-100 in the growth and metabolism of <i>Drosophila melanogaster</i>
38.	Prabal Das	IMS19172	Dr. Ravi Maruthachalam and Dr. André Marques, Max Planck Institute for Plant Breeding Research	Unraveling Centromere Dynamics in Plants with Mono-Centromere and Holo-Centromere
39.	Pravin B	IMS19178	Dr. Sanu Shameer	Response of Wheat Roots to Hypoxia During Flooding
40.	Rutika Sansaria	IMS19195	Dr. Nishant KT	Interaction between Crossover Factors - Msh5 and Sgs1 in <i>Saccharomyces Cerevisiae</i>
41.	Samarpita Sahu	IMS19198	Dr. Anirban Guha	Leaf Bioenergetics and Thermotolerance in Sorghum and Finger Millet
42.	Sandra Ann Litto	IMS19199	Dr. Nishant KT	Conditional Depletion of MSH5 during Meiosis Using AnchorAway Technique in <i>Saccharomyces Cerevisiae</i>
43.	Sayanthana Benny	IMS19203	Dr. Sandhya Ganesan	Understanding the role of lysosomal Exocytosis in the Pathogenesis of <i>Coxiella burnetii</i>
44.	Sheba Cheeran	IMS19206	Prof. Tapas K. Manna	Understanding the Role of Centromeric protein - E (CENP-E) Mediated Kinetochore size Change In Error-Free Mitotic Progression
45.	Shreya Venkatesan	IMS19212	Dr. Poonam Thakur	Influence of Insulin Resistance on the Toxicity of α -Synuclein Fibrils
46.	Shrutika Sansaria	IMS19213	Dr. Nisha N Kannan	Understanding the Genetic role of Sleep in Memory Formation and Consolidation in <i>Drosophila</i>
47.	Siva Subramanian A	IMS19217	Dr. Sandhya Ganesan Andrea Fulgione	Adaptation Genomics to Climate and Ecological Niche Modeling of the Perennial Plant <i>Arabis Alpina</i>
48.	Sneha P R	IMS19219	Dr. Satish Khurana	Understanding FAK Mediated Integrin Signalling in the Regulation of Sdf-1 α Expression in the Bone Marrow Niche Cells
49.	Sona V Suresh	IMS19220	Dr. Satish Khurana	Elucidating the role of outside-in Integrin Signaling in the Regulation of Sdf-1 α Expression in Bone Marrow Niche Cells
50.	Sreyas R	IMS19225	Dr. Sanu Shameer	Studying the Effect of Varying Light Intensity on Metabolism in Mature Fully Expanded Leaves

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
51.	Tejas Sabu	IMS19229	Prof. S. Murty Srinivasula	Identification of a Novel Role of USP28 as a DUB for RFFL
52.	Vidyarashmi Hanehalli	IMS19236	Prof. S. Murty Srinivasula	Investigating the TRIM25-MIRO1 Axis
53.	Vishnu Prasad O	IMS19239	Prof. Nishana Mayilaadumveettil	Influence of Physical Proximity of Genes on Chromosomal Translocations
54.	Vishwathiga J	IMS19241	Prof. Hema Somanathan	Role of Pre and Post-pollination factors in Influencing Pollen Size in the Floral Community of the Southern western Ghats

School of Chemistry

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
1.	Abhin.M.Vishnu	IMS19006	Dr. Vinesh Vijayan	Biophysical Characterization of tau Constructs with Inhibitor Peptides
2.	Adithi Kamath	IMS19011	Dr. Rajendra Kurapati	Functionalization of Antimicrobial Biopolymers and Antibiofilm Surface Coatings
3.	Adwaith K V	IMS19014	Dr. Subrata Kundu	Selenium Dioxide Mediated Disproportionation of Nitrite
4.	Aiswarya Roby	IMS19018	Dr. Soumen De	Studies towards Transmission of Chiral Signal within a Ternary Complex
5.	Akhil K	IMS19022	Dr. R. S. Swathi	Empirical Approaches for Cation- π Interactions between Alkali Metal Ions and Two-Dimensional Carbon Networks
6.	Akhila M	IMS19025	Dr. Subrata Kundu	Designing Ligands to Study Mechanistic Dichotomy in Nitrite to Nitric Oxide Transformation at Transition Metal(II) Site
7.	Alvin Antony C	IMS19029	Dr. Basudev Sahoo	Synthesis and Functionalization of Boronic Esters Using Transition Metal Catalysis
8.	Ameena Yoonus	IMS19031	Prof. Kana M. Sureshan	Synthesis of Azobenzene-based Polymers via Topochemical Polymerization
9.	Amjatha Siraj	IMS19033	Dr. Vennapusa Sivaranjana Reddy	Influence of Electron-dense Atom in Acceptor Site in 5-CPP Derivative: ES IPT or Anti-Kasha behaviour
10.	Anagha K P	IMS19036	Dr. Vinesh Vijayan	The Phase Separation Studies of Low complexity domain of TIA1 and its Interaction leading to Condensate Formation
11.	Anusree P	IMS19044	Dr. Reji Varghese	DNA Templated Stacking Aromaticity of Norcorroles

Sl No	Name of Student & Roll Number	Supervisor's Name & Affiliation	Project Title
12.	Arshath Varunsha M IMS19049	Dr. R. S. Swathi	Exploring Cluster Geometries Using Swarm Intelligence
13.	Arya P IMS19053	Dr. Veera Reddy Yatham	C(sp ³)-C(sp ²) Bond Formation Mediated by Photoexcited triplet Ketone and Nickel Catalysis
14.	Asif Khan S S IMS19061	Dr. Gokulnath Sabapathi	Synthetic Route for Basket Handle Porphyrins Incorporating 11,12 Dihydroindolo(2,3-a) Carbazole for Ion Sensing Applications
15.	Asma Sherin. M IMS19062	Prof. K. George Thomas	Chiroptical Properties of Diacetylene and Phenyleneethynylene Aggregates: Chiral Handle Matters
16.	Aswany Gopal IMS19064	Dr. Jerry Alfred Fereiro	Understanding the Mechanism of Charge Transport via Non-Redox Active Proteins in Solid-State Configuration
17.	Aswin S IMS19066	Dr. Jerry Alfred Fereiro	Nanofabricated Protein Devices as Solid-State Electronic Gas Sensor
18.	Aswin Das IMS19068	Dr. Ramaraj Ayyappan	Synthesis and Characterisation of Phosphine Tethered CAAC Precursor
19.	Basil B Aliyas IMS19072	Dr. Reji Varghese	Design and Synthesis of Dipolar Assisted Merocyanine foldamer
20.	Bhavya R IMS19074	Dr. Indranil Mondal Ramkumar	Vanadium-Incorporated MoS ₂ Solid Solution Electrocatalyst For The pH-Universal Hydrogen Evolution Reaction
21.	Chandana P S IMS19076	Dr. Rajendra Kurapati	Intracellular Delivery of the Antimicrobial Peptides for Drug-Resistant Bacterial Infections
22.	Chandana S IMS19077	Dr. Soumen De	Synthetic Studies towards a Metal Stimulated Chiral [2] rotaxane
23.	Deepthi Damodaran Nambiar IMS19083	Dr. Vinesh Vijayan	Monitoring the motional dynamics in Intrinsically disordered proteins using a Residue-specific diffusion NMR experiment
24.	Diana Thomas IMS19089	Prof. Mahesh Hariharan	Validating Exciton Interactions in Eumelanin through a Systematic Bottom-up Approach
25.	Fathima Niloofar IMS19094	Dr. Basudev Sahoo	Hydrothiocarbonylation: A Metallaphotoredox Approach Towards the Synthesis of Linear Thioester Compounds from Activated Alkenes
26.	Harsha.P IMS19102	Dr. Reji Varghese	Design and Synthesis of DNA-templated Gold Nanoparticles for Chemodynamic Cancer therapy
27.	Hrudya. C. Babu IMS19104	Prof. Mahesh Hariharan	Room Temperature Phosphorescence in a Dinitrogen-substituted Dibenzocyclooctatetraene Derivative

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
28.	Jibin Thomas	IMS19112	Prof. Sukhendu Mandal	"Visualizing" the Partially Reversible Conversion of Gold Nanoclusters via Au ₂₃ (S-c-C ₆ H ₁₁) ₁₇ Intermediate
29.	Joel J Parakadavil	IMS19114	Dr. Rajendar Goreti	Studies Towards the Total Synthesis of Serofendic Acids A and B
30.	Kiran Raj	IMS19123	Dr. Ajay Venugopal	Sodium Trispyrazolylborate In Small Molecule Activation
31.	Lakshmi P	IMS19125	Prof. K. George Thomas	Blexciton Emission in CdSe Nanoplatelets: Excitation Energy Matters
32.	Lakshya A	IMS19126	Dr. Rajendra Kurapati and Dr. Gokulnath Sabapathi, IISERTVM	Bio-Inspired Nanomaterials: Synthesizing Enzyme-Mimicking Agents for Biofilm Disruption
33.	Majma K	IMS19132	Prof. Kana M. Sureshan	Design and Synthesis of Inositol-based Polymer via Topochemical Polymerization
34.	Malavika Krishnan	IMS19134	Dr. Basudev Sahoo	Synthesis of Unsymmetrical 3,3-Dialkyloxindole Boronic Esters from Alkenyl Oxindoles Enabled by Copper Catalysis
35.	Mridula K	IMS19142	Prof. Kana M. Sureshan	Synthesis of a Pseudo-polypeptide Containing Functional Amino Acid via TAAC Polymerization for Post-Synthetic Modification
36.	Nandagopal V M	IMS19146	Dr. Ravi Yadav	Geometrically constrained p-block Compounds: Synthesis and Reactivity
37.	Neeraja R Nair	IMS19152	Dr. Subrata Kundu	Nitrite and NO Interconversion at a Nickel Site via [Ni(NO)] ₁₀ Complex
38.	Pallavi P Das	IMS19165	Prof. Mahesh Hariharan	Interplay of Core-twist and Planarity in Modulating the Intersystem Crossing Dynamics of a Rylene-trisimide
39.	Prathiksha	IMS19177	Dr. Rajendra Kurapati	Biodegradability of Graphitic Carbon Nitride mediated by Primary Immune Cells
40.	Priyadarshini Baidya	IMS19181	Prof. Sukhendu Mandal	Exploring the Dual Linker Effects on Structure and Photoluminescence of Silver Cluster-Assembled Materials
41.	Priyanka A Paunikar	IMS19182	Dr. Y. Adithya Lakshmana	Effect of Photoacidity on Excited-State Dynamics of Analogues of Coumaric Acid
42.	Rajannya Adhikary	IMS19185	Prof. Sukhendu Mandal	Synthesis and Property Studies of Ethynyladamantane Protected Ag-Cu Bimetallic Nanoclusters
43.	Perumandla Sanjay Kumar	IMS19200	Dr. Veera Reddy Yatham	Difluoro Methylation of Alkenes and Synthesis of N-Aryl Succinimide Derivatives
44.	Sankeerthana. P. A	IMS19201	Dr. Gokulnath Sabapathi	Expanded Porphyrinoids with Pentafluorophenyl Pendants as Photostable Dyes for Phototheranostics

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
45.	Sarag K	IMS19202	Dr. R. S. Swathi	Unveiling the π - π Stacking in Circulene Dimers
46.	Shreya Mandal	IMS19210	Dr. Y. Adithya Lakshmana	Role of Intramolecular Charge Transfer and Proton Abstraction on Excited-state Dynamics of 4-(Dimethylamino)Chalcone
47.	Sreelakshmi Venugopal	IMS19222	Dr. Jerry Alfred Fereiro	Charge Transport Studies of Troger's Base Derivatives in Metal/Molecule/Metal Configuration
48.	Thomas Shalauque	IMS19230	Dr. Ajay Venugopal	Monocationic Bismuth(III) Complexes: Primary vs. Secondary Bonding and Catalytic Applications
49.	Amuda Manikandan	IMS19246	Dr. Rajendar Goreti	Studies on Glycidol Acetal Rearrangement Reactions and Conversion of Cyclic Anhydrides to Homo/Hetero Diesters
50.	Abhishek K	IMS18004	Dr. Vennapusa Sivaranjana Reddy	Rate calculation of time-resolved Fluorescence Spectroscopy in Stepwise Excited-state Intramolecular Double proton Transfer using Python
51.	D Melanie Magdalene	IMS18045	Dr. Alagiri Kallyamoorthy	Trideuteromethylation of Sulfoximines
52.	S Bala Surya	IMS18179	Dr. Ramesh Rasappan	Ni Catalysed Silylation using Solid Silylating Reagent and C-C Coupling with Metallaphotoredox
53.	Jatoth Naveen	IMS17239	Dr. Rajendra Kurapati	Biotransformation of Gold and Silver Nanoparticles by Immune Cells

School of Physics

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
1.	Aadi Chaturvedi	IMS19002	Dr. Nitin Yadav	Plasma Diagnostics and Shielding of Charged Particle Analyzers
2.	Abhinav B Roy	IMS19007	Dr. Pramitha M	Estimation of Boundary Layer Height and Cloud Base Height over a Western Ghat Region: Insights from Ceilometer Observations
3.	Ajaykrishnan R	IMS19019	Dr. Deepshikha Jaiswal Nagar	Hydrogen Sensing in PVA Capped Palladium and Bimetallic Gold Palladium Nanoparticles
4.	Akshita Mittal	IMS19027	Dr. Soumen Basak	Impact of Parameter Mismodeling on Gravitational-Wave Searches
5.	Ananth T P	IMS19037	Dr. Deepshikha Jaiswal Nagar	Growth and Investigation of Bi ₂ Sr ₂ CaCu ₂ O _{8+x} Single Crystals: Exploring Physical Properties of Bi-2212 Superconductors

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
6.	Anantha Padmanabhan B M	IMS19038	Prof. Manoj A.G. Namboothiry	Enhancing Photovoltaic Performance: Investigating Factors Influencing High-Efficiency Perovskite Solar Cells
7.	Aravind A	IMS19047	Dr. Bindusar Sahoo	Supersymmetric Truncation in Conformal Supergravities
8.	Arjun Kannan	IMS19048	Dr. Nitin Yadav	Investigating the Alfvénic Nature of Vortex Flows in Different Solar Magnetic Field Configurations
9.	Arun Jo Mathew	IMS19050	Dr. Pramitha M	Extraction of Atmospheric Gravity Waves from COSMIC GPSRO Profiles and Identification of their Sources using GROGRAT Model
10.	Ashik Manoj N	IMS19054	Dr. Vinayak B. Kamble	CVD Growth and Study of 2D Heterostructure for Gas Sensing Application
11.	Ashtakala Venkata Naga Sai Meghanath	IMS19057	Dr. Debashis Saha	Quantum Advantage in Direction-Agnostic Multi-Party Communication Networks
12.	Ashutosh Kumar	IMS19058	Prof. Anil Shaji	Finding the Occupation Number Corresponding to the Minimum Eigenvalue of Fermi Hubbard Hamiltonian using the VQE
13.	Ashveed A	IMS19059	Dr. Souvik Paul	Atomistic Spin Dynamics Simulations of Skyrmions in Transition Metal Ultrathin Films
14.	Aswathi K	IMS19065	Dr. Nitin Yadav	Vortex Interaction in the Simulated Solar Atmosphere: Investigating its Role in Heating
15.	Athul K. Soman	IMS19069	Dr. Soumen Basak	Primordial Gravitational Waves from Inflation
16.	Balusu Mohan Sai	IMS19071	Dr. Bindusar Sahoo and Dr. Sachin Jain, IISER Pune	Thermal Field Theory in Real-Time Formalism
17.	Deepam Jyoti	IMS19082	Dr. Pramitha M	Diagnosis of the Brewer-Dobson Circulation Using CMIP-6 Simulation and MERRA2 Reanalysis Data
18.	Devika Sunil S	IMS19087	Dr. N. Anand	Aerosol Black Carbon Characteristics at a Near-Pristine Location in the Western Ghats
19.	Devkrishna C K	IMS19088	Dr. Bindusar Sahoo	Superspace Formulation of Supergravity
20.	Bolegave Gaurav Gangadhar	IMS19096	Dr. Vinayak B. Kamble	Experimental Investigation of Chalcogenide Thin Films for Thermoelectric Applications
21.	Gaurav Seal	IMS19097	Prof. Ramesh Chandra Nath	Crystalline Electric Field Study of a Jeff = ½ Frustrated Triangular Lattice Compound K ₃ YbSi ₂ O ₇
22.	Gokul B Nair	IMS19100	Dr. D.V. Senthilkumar	Chimera States on Bipartite Network due to Higher-Order Repulsive Interaction
23.	Gokul Duraikandan	IMS19101	Dr. Tanumoy Mandal	Strong Production of Right-Handed Neutrinos through Leptoquarks: High-Luminosity LHC Prospect
24.	Jahnavi M S	IMS19109	Prof. M. M. Shajumon	Crystal Facet Modulation of P2-type Layered Oxide Cathodes for Long-Lasting Sodium-ion Batteries
25.	Jithesh Pavan D Souza	IMS19113	Dr. Amal Medhi	Neural-Network Quantum State (NQS) Wavefunction for Fermionic Systems

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
26.	Kaushik K A	IMS19119	Prof. Ramesh Chandra Nath	Structural and Magnetic Properties of a New Frustrated Triangular Lattice Antiferromagnet $\text{NH}_4\text{Fe}(\text{PO}_3\text{F})_2$
27.	Krishna Kumar	IMS19124	Dr. Shabnam Iyyani	Relativistic Jet Breakout Conditions in GRB Wolf-Rayet Progenitor Stars
28.	Lekshmi Anilkumar	IMS19127	Dr. Nitin Yadav	Effect of P-mode Waves on the Formation and Stability of Solar Prominence
29.	Lekshmi M P	IMS19128	Dr. Bikas C. Das	Chlorine Incorporated Methylammonium Antimony Iodide Perovskite Thin Film for Memristor Application
30.	Megha G	IMS19138	Dr. Chandrakala Meena	Understanding the Dynamics of ENSO: A Delay Action Oscillator Approach Incorporating Global Warming, Annual Forcing, and Stochastic Effects
31.	Meghna Biswal	IMS19139	Dr. Shabnam Iyyani and Dr. Sarita Vig, Indian Institute of Space Science and Technology	Exploring Globular Cluster Dynamics: A Comprehensive Study of M56 (NGC 6779)
32.	Namitha Nair	IMS19145	Prof. M. M. Shajjumon	Enhanced Oxygen Evolution Reaction in Alkaline Media via Electron Spin Polarisation
33.	Nandana Thilak	IMS19147	Dr. Deepshikha Jaiswal Nagar	Characterization of Ground State Properties and Verification of Bipartite Entanglement in Spin Half Antiferromagnetic Heisenberg Dimer
34.	Nidharssan S	IMS19154	Dr. Sreedhar B. Dutta	Multiscale Morphological Tests of Statistical Isotropy of the Universe using CMB Temperature Data from Planck
35.	Niharika P V	IMS19156	Dr. Vinayak B. Kamble	Doped Zinc Oxide Nanoparticles-Based Sensor Array For Ai-Assisted Gas Sensor
36.	Nikhil Biju	IMS19158	Dr. Shabnam Iyyani	Spectral Analysis of GRB150330A
37.	P Ashwathi	IMS19164	Dr. Chandrakala Meena	Chimera States in Wheel Network
38.	Phalguni Anurag	IMS19169	Prof. M. M. Shajjumon	Ti-Doped NASICON-Type $\text{Na}_4\text{MnCr}(\text{PO}_4)_3$ Cathode for Sustainable Sodium-Ion Batteries
39.	Pooja S	IMS19171	Dr. Ravi Pant	Impact of Microresonator Coupling Regimes on Nonlinear Phenomena
40.	Pratheek Malol	IMS19176	Dr. Madhu Thalakulam	Photoresponse of Schottky Barrier in Au-MoS ₂ Metal-Semiconductor Junction
41.	Preethi G	IMS19179	Prof. Anil Shaji	Electron Transport in Quantum Dots: Classical vs. Quantum System
42.	Radhin Vishnu	IMS19183	Dr. Deepshikha Jaiswal Nagar	Synthesis and Thermal Expansion Studies on $\text{YBa}_2\text{Cu}_3-x\text{Al}_x\text{O}_{6+\delta}$ (Al-YBCO) Single Crystals
43.	Ravikiran S Hegde	IMS19187	Dr. N. Anand	Surface Temperature Dependence of Stratospheric Sulfate Aerosol Forcing and Feedback
44.	Rithika Ganesan	IMS19190	Dr. Tanumoy Mandal	Pair Production of Right-Handed Neutrinos from Leptoquarks: A Prospect Study with Machine Learning

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
45.	Rohan Thakur	IMS19191	Dr. N. Anand	A Study on the Vertical Structure of Atmospheric Optical Turbulence using Long-Term Balloon Observations
46.	Rohit V Menon	IMS19193	Dr. Chandrakala Meena	Effect of Substrate and Flow Conditions on the Surface Colonization of <i>A. baumannii</i>
47.	Shahma Subair	IMS19205	Prof. Joy Mitra	Engineering Conductive Networks in Elastomeric Matrices
48.	Shreya Umesh Prabhu	IMS19211	Dr. Sreedhar B. Dutta	Deriving Field Equations of Gravity Theories from Spacetime Thermodynamics
49.	Shubham Tushar Chury	IMS19214	Dr. Shabnam Iyani	Building a Classifier for Wolf-Rayet Nebulae
50.	Shyam M	IMS19215	Dr. Mathew Arun Thomas	Quark Model in Six-Dimensions
51.	Sneha Maria Joseph	IMS19218	Prof. Ramesh Chandra Nath	A New Iron based Bipartite Trillium Lattice Compound, $BaTiFe_2(PO_4)_3$: Synthesis, Structure and Magnetic Properties
52.	Sreelakshmi P	IMS19221	Dr. Tuhin Subhra Maity	Vertically Aligned Nanocomposite of $NiO:CeO_2$ for Neuromorphic Memory Devices
53.	Subham Das	IMS19226	Dr. Debashis Saha	Self Testing of Quantum State using Entangled Measurements
54.	T Sandeep	IMS19228	Dr. Prasanth Valayamkunnath	Evaluating the Performance of Noah-MP Model and Investigating the Impacts of Agricultural Water Management Practices in Land Surface Energy and Water Balances
55.	Tirthonkor Saikia	IMS19231	Prof. Anil Shaji	Active Space Selection and Variational Quantum Eigensolver for Complex Molecules
56.	Udit Kumar Tyagi	IMS19233	Dr. Soumen Basak and Dr. Sandeep Haridasu, Scuola Internazionale Superiore di Studi Avanzati Trieste	Constraining Entropic Cosmologies with Late-Time Data
57.	Vaishakh S	IMS19235	Dr. Madhu Thalakulam	Phase Engineering of MoS_2
58.	Vikash Rishi Dharan K	IMS19238	Dr. Pramitha M	Estimation of Gravity Wave and Tidal Parameters using Network of SKiYMET Meteor Radars
59.	Vivek Kumar	IMS19242	Dr. Madhu Thalakulam	Study of Oxidation of $NbSe_2$ and its Application
60.	Phil Raju Abraham	IMS18097	Dr. Prasanth Valayamkunnath and Dr. Anitha Gera, National Centre for Coastal Research (NCCR) Chennai	Projection of Wind Power Density Variations in India due to Climate Change Using CMIP6

School of Mathematics

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
1.	Aadhya Krishnakumar	IMS19001	Dr. Rajeev Bhaskaran	Feynman-Kac Formula under Path Transformations
2.	Abhinaya A.S.	IMS19008	Dr. Viji Z. Thomas	Quadratic Forms Over Fields
3.	Adithya Jayaraman	IMS19012	Dr. Md. Ramiz Reza	An Introduction to Topological Vector Spaces and Distribution Theory
4.	Ameen Mahmood K	IMS19030	Dr. Shyamal Ghosh	Stochastic Ordering of Extreme Order Statistics from Heterogeneous q -Weibull Random Variables
5.	Apama K	IMS19045	Prof. P. Devaraj	A Study on Universal Approximators
6.	Aruna P	IMS19051	Dr. Geetha Thangavelu	Algebraic Topology
7.	T Ashwin Bhattathiripad	IMS19060	Prof. P. Devaraj	Construction of SIC-POVMs in an Arbitrary Dimension with Quantum Circuits
8.	Bazil Poulouse	IMS19073	Dr. Dhanya Rajendran	Sobolev space and three solutions To a class of Schrödinger-type Elliptical boundary value problems
9.	Daniya Saji	IMS19080	Dr. Saptarshi Bej	Dimensionality Reduction for Customer Churn Datasets
10.	Diya Elizabeth	IMS19090	Dr. Srilakshmi Krishnamoorthy and Dr. Soumen Maity, IISER Pune	Fixed-Parameter Tractable Algorithms for Different Combinatorial and Graph Problems
11.	G Siddharth	IMS19095	Dr. Saptarshi Bej	Search and Prediction of Hamiltonian Cycles in Barnette Graphs
12.	Kaushik Babu Nambiar	IMS19118	Dr. Dond Asha Kisan	Enhanced Numerical Methods for Black-Scholes European Option Pricing: a Combined FD6 and SSP-RK3 Approach
13.	K Ganesh	IMS19122	Dr. Nagalah Chamakuri	Unraveling Superadditivity of Qutrit State Noise Quantum Channels using Machine Learning
14.	Lissa Mary Johns	IMS19130	Dr. Geetha Thangavelu	Homological Algebra
15.	Nikhil N	IMS19160	Prof. M. P. Rajan	AI/ML Assisted Automation Solutions for Accelerated Battery Development
16.	Prashant Sharma	IMS19175	Prof. Dharmatti Sheetal and Vinayak B. Kamble, School of Physics, IISER TVM	Classification of Gas-Sensor Array Data using Machine Learning
17.	Preveena K V	IMS19180	Dond Asha Kisan	Convergence of Adaptive Finite Element Method
18.	Rishica Arora	IMS19189	Dr. Dharmatti Sheetal	Mathematics in Image Segmentation

Sl No	Name of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
19.	Shivam Bhargava	IMS19208	Dr. Nagalah Chamakuri	Simulation of Arterial Blood Flow Dynamics using Physics-Informed Neural Networks
20.	Shreenidhi S	IMS19209	Dr. K. R. Arun	Entropy Stable and Well-balanced Finite Volume Schemes for Hyperbolic Balance Laws
21.	Sreerag P	IMS19223	Prof. M. P. Rajan	Enhancing Stock Return Predictions: Sarimax and Neural Network Fusion
22.	Andhan Rahul Buddhan	IMS18026	Prof. Shrihari Sridharan Dr. K. R. Arun	ML and DL based Cyber Analytic Solution for Threat Detection and Hunting
23.	Lunavath Shiva	IMS18082	Prof. Utpal Manna	Deep Learning Approaches for Solving Partial Differential Equations with Physical Constraints



Photo: Shyam M, Alumnus Batch '19, IISERTVM

Names of the BS-MS Students who have received medals for academic performance

1. Institute Gold Medal with certificate for overall topper of the Institute's 2019 batch

Sl. No	Roll No	Name	Major
1.	IMS19187	Ravikiran S Hegde	Physical Sciences

2. Best Undergraduate Researcher Medal with certificate of the Institute's 2019 batch

Sl. No	Roll No	Name	Major
1.	IMS19212	Shreya Venkatesan	Biological Sciences
2.	IMS19165	Pallavi P Das	Chemical Sciences
3.	IMS19122	K Ganesh	Mathematical Sciences
4.	IMS19187	Ravikiran S Hegde	Physical Sciences

3. Institute Cultural Medal with certificate of the Institute's 2019 batch

Sl. No	Roll No	Name	Major
1.	IMS19132	Majma K	Chemical Sciences

4. Director's Gold Medal with certificate for academic proficiency with the highest CGPA of the Institute's 2019 batch

Sl. No	Roll No	Name	Major
1.	IMS19125	Lakshmi P	Chemical Sciences

5. Gold Medal with certificate for the best academic performance in the respective school (School Topper) of the Institute's 2019 batch

Sl. No	Roll No	Name	Major
1.	IMS19212	Shreya Venkatesan	Biological Sciences
2.	IMS19125	Lakshmi P	Chemical Sciences (Constituted As Challa Gold Medal)
3.	IMS19209	Shreenidhi S	Mathematical Sciences
4.	IMS19069	Athul K Soman	Physical Sciences

6. Silver Medal with certificate for the best academic performance in the respective school (School 2nd Topper) of the Institute's 2019 batch

Sl. No	Roll No	Name	Major
1.	IMS19229	Tejas Sabu	Biological Sciences
2.	IMS19104	Hruidya C Babu	Chemical Sciences
3.	IMS19001	Aadhya Krishnakumar	Mathematical Sciences
4.	IMS19171	Pooja S	Physical Sciences

Integrated and Interdisciplinary Sciences BS-MS Programme (i^2 Science Stream)

This relatively new 5-Year BS-MS programme comprises of 5 distinct streams viz. Biological Sciences, Chemical Sciences, Data Sciences, Mathematical Sciences and Physical Sciences, each centered around a core discipline and its corresponding thematic domains. After completing the foundational courses in the initial two years, students have the flexibility to select one of the five streams to pursue advanced studies in the core discipline and specialize in the associated thematic areas. It also involves a year-long research project in the fifth year.

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL BS-MS STUDENTS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
Basic Stream							
Male	53	223	131	5	69	28	509
Female	40	212	187	8	60	33	540
Total	93	435	318	13	129	61	1049
i^2 Stream							
Male	31	43	39	0	17	14	144
Female	10	60	47	1	21	8	147
Total	41	103	86	1	38	22	291

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL i^2 BS-MS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Biology							
Male	4	9	2	0	0	1	16
Female	1	29	8	0	6	0	44
Total	5	38	10	0	6	1	60

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL I ² BS-MS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Chemistry							
Male	2	9	7	0	6	1	25
Female	2	11	15	0	3	1	32
	4	20	22	0	9	2	57
School of Physics							
Male	5	7	7	0	2	2	23
Female	2	4	8	0	6	1	21
	7	11	15	0	8	3	44
School of Mathematics							
Male	10	6	8	0	8	4	36
Female	3	6	4	0	1	2	16
	13	12	12	0	9	6	52
School of Data Science							
Male	10	12	15	0	1	6	44
Female	2	10	12	1	5	4	34
	12	22	27	1	6	10	78
Total	41	103	86	1	38	22	291

Master of Science (MSc) Programme

The two-year MSc programme is positioned in a manner that bridges the flagship, five-year BS-MS programme of the institute with the PhD programme. The MS programme aims to extend the training in science to bright undergraduate students selected competitively from across the country.

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL MSc STUDENTS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Biology							
Male	2	5	6	1	2	1	17
Female	2	12	4	0	4	1	23
	4	17	10	1	6	2	40
School of Chemistry							
Male	0	5	4	0	3	1	13
Female	4	9	7	1	5	1	27
	4	14	11	1	8	2	40

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL MSc STUDENTS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Physics							
Male	6	6	5	0	3	2	22
Female	1	9	5	0	2	1	18
	7	15	10	0	5	3	40
School of Mathematics							
Male	3	10	6	0	4	1	24
Female	1	5	4	0	1	1	12
	4	15	10	0	5	2	36
Total	19	61	41	2	24	9	156

GENDER & CATEGORY-WISE DISTRIBUTION OF MSc STUDENTS ENROLLED IN 2024							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Biology							
Male	1	1	4	0	1	1	8
Female	1	8	1	0	2	1	13
	2	9	5	0	3	2	21
School of Chemistry							
Male	0	6	2	0	1	1	10
Female	2	2	4	0	4	1	13
	2	8	6	0	5	2	23
School of Physics							
Male	4	3	5	0	1	1	14
Female	0	4	1	0	1	1	7
	4	7	6	0	2	2	21
School of Mathematics							
Male	2	5	4	0	2	0	13
Female	0	2	1	0	1	1	5
	2	7	5	0	3	1	18
Total	10	31	22	0	13	7	83

No of total students enrolled for MSc in 2024 = 83

Subsequent to admission in 2024, No. of total students discontinued the program = 4

Final number of the enrolled MSc Students in 2024 = 79

SCHOLARSHIP SOURCES FOR ALL MSC STUDENTS (UNTIL 31 MARCH 2025)

	No of Students
INSPIRE	6
Egrantz + NSP	5
Total	11

SCHOLARSHIP SOURCES FOR MSC STUDENTS ENROLLED IN 2024

	No of Students
INSPIRE	5
Egrantz+NSP	4
Total	9

DETAILS OF THE MSC PROJECTS CARRIED OUT DURING 2024-25

School of Biology

Sl No	Name Of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
1.	Aabha P Shams	MSC22101	Dr. Satish Khurana	Understanding the role of hypoxia signalling in adult neural stem cells in SVZ
2.	Adityo Chaudhury	MSC22102	Prof. S. Murty Srinivasula	Elucidating the role of TRIM32 in regulating Golgi Architecture Dynamics and its interaction with RFFL/ CARP2
3.	Ankur Chattopadhyay	MSC22104	Dr. Ramanathan Natesh	Study of Mycobacterium smegmatis Gre factor homologue's non-canonical chaperone function
4.	Anushka Mitra	MSC22105	Dr. Sandhya Ganesan	Identifying novel roles of SNARE proteins in plant immunity
5.	Chandhana Prakash	MSC22106	Dr. Sandhya Ganesan	Characterization of Exocytosis in c. Burnetii Infection and Identification of Molecular Determinants of Infection-Induced Exocytosis
6.	Devangini Sharma	MSC22108	Dr. Jishy Varghese	Exploring the impact of Gasp gene knockdown on growth and metabolism in Drosophila melanogaster
7.	Gorky Guha	MSC22109	Dr. Nisha N Kannan	Correlated Effect of Long Term Stabilizing selection on the light input pathway of Drosophila
8.	Ishika Kain	MSC22110	Dr. Kamalakannan Vijayan	Investigating the Interaction Between Host cert protein & toxoplasma gondii During lipid scavenging pathway

9.	Megha Saha	MSC22112	Dr. Ramanathan Natesh	Studies on the Mycobacterium tuberculosis RNA polymerase secondary channel and its inhibitory protein.
10.	N Khachuk Debbarma	MSC22113	Dr. Ramanathan Natesh	Expression, purification and characterisation of Dicotyostelium discoideum PinA
11.	Kamble Rohan Sanjay	MSC22114	Dr. Ravi Maruthachalam	Characterization of bushy mutant in Arabidopsis thaliana
12.	Shaswata Modak	MSC22115	Prof. Nishant K.T	ChIP-Seq ANALYSIS OF Msh5 PROTEIN BINDING IN RAD51, RAD52 AND RAD54 MUTANTS OF Saccharomyces cerevisiae
13.	Shyamalima Bhattacharjee	MSC22116	Prof. S. Murty Srinivasula	In-vitro characterization of CARPs and Golgin45 interaction
14.	Soyam	MSC22117	Dr. Nisha N Kannan	Sexual dimorphism and temporal variation in Drosophila ball rolling behavior
15.	Subham Pal	MSC22118	Prof. Nishant K T	Study of the effect of DNA damaging agents on DNA repair during mitosis in irc20 mutant of Saccharomyces cerevisiae
16.	Subhankar Dey	MSC22119	Prof. S. Murty Srinivasula	Investigation into Golgi Architecture and its Regulation
17.	Tanmay Devgan	MSC22120	Dr. Kamalakannan Vijayan	To determine the role of the inflammasome NLRC4 on Toxoplasma gondii clearance
18.	Sowbarniga R	MSC22121	Dr. Ramanathan Natesh	Mycobacterium tuberculosis - LexA mutant CO-Crystallization of the protein with drug and Bio-Physical studies on the Interactions of Drug and Protein

School of Chemistry

Sl No	Name Of Student & Roll Number		Supervisor's Name & Affiliation	Project Title
1	Madhura Saha	MSC21208	Prof. Kana M. Sureshan	An attempt to synthesis pseudo-polypeptides via different topochemical 1,3-dipolar cycloadditions
2	Angshuman Sarmah	MSC22201	Dr. Ramaraj Ayyappan	Synthesis and Characterisation of Carbene-Phosphine Complexes
3	Usashi Pal	MSC22202	Prof. Kana M. Sureshan	Synthesis of a peptide-based polymer Containing achiral substrates via Topochemical 1,3 dipolar cycloaddition
4	Shraddha R Bhat	MSC22203	Prof. K. George Thomas	Multiresidue Detection of Neonicotinoids in Pollen using Surface-Enhanced Raman Spectroscopy
5	Kritika Sharma	MSC22204	Prof. Sukhendu Mandal	A Comprehensive Investigation into the Synthesis, Structure and Photophysical Properties of Atomically Precise Copper Nanocluster
6	Lakshmi M	MSC22205	Prof. Vinesh Vijayan	The interaction studies of PRD1 and PRD2 domains of human CPEB3 protein using biophysical techniques
7	Krishnendu Chatterjee	MSC22206	Dr. Veera Reddy Yatham	Dual Cobalt and Photoexcited triplet ketone catalysis for the Heck-type Olefination Reactions

8.	Akansha Gupta	MSC22207	Dr. Subrata Kundu	Trials to Synthesize a New Thioether Containing Tripodal Ligand for Nitrite Reduction
9.	Hariharan M	MSC22208	Dr. Ramesh Rasappan	Synthesis of α -Vinyltrialkoxysilanes via Nickel-Mediated Cross-Electrophile Coupling Reactions
10.	Aravind K A	MSC22209	Dr. Rajendra Kurapati	Biodegradability of Gold Nanosheets by Human Neutrophil Derived Myeloperoxidase
11.	Anisha Mondal	MSC22210	Dr. Indranil Mondal	Oxidation of Benzyl Alcohol Replacing OER using Metal Perovskite Hydroxide
12.	Tamraparni Ghosh	MSC22212	Prof. Reji Varghese	G4-Hemin loaded 2D nanosheets for combined and targeted chemo-photodynamic cancer therapy
13.	Jagriti Gupta	MSC22214	Dr. Jerry Alfred Fereiro	Design and Synthesis of Radical- Based Organic Molecules for Application in Molecular Electronics
14.	Krishnaraj T S	MSC22218	Dr. Basudev Sahoo	Synthesis of Dihydroquinazolinone from Ketones
15.	Apama Liz Benny	MSC22219	Vinesh Vijayan	Temperature dependent studies on the Self and Seeded Aggregation of K19

School of Physics

Sl No	Name Of Student & Roll Number	Supervisor's Name & Affiliation	Project Title
1	Sagnik Chakraborty	Dr. Vinayak B. Kamble	Investigating Thermoelectric Transport in Indium Oxide, Indium Tin Oxide and Indium Tin Oxide Core-Shell Nanocomposites
2	Saandeep U	Dr. Tanumoy Mandal	Temporal Correlations in Particle Oscillations
3	Tathagata Das	Dr.M Suheshkumar Singh	Fast Adaptive U-Net (FAU-Net): Novel Deep-Learning Network for Photoacoustic Imaging (PAI)
4	Shruti Dubey	Dr. Tanumoy Mandal	Exclusion Limits on New Physics Parameters using Likelihood Analysis
5	Kashish	Prof. M. M. Shajumon	Modified Current Collector Strategy for High Areal Capacity Sulphur-Selenium Cathode
6	Sankalpa Ghosh	Dr. Krishnendu Gope	Rotational Stabilisation of Highly Excited Superoxide ions obtained from Dissociative Electron Attachment to Ozone
7	Daryani Bhavisha Dinesh	Dr. Ravi Pant	Coherent Brillouin Interaction based Voltage Sensing
8	Vibhor Khanna	Dr. Tanumoy Mandal	Phase Transitions in Neutron Star Cores
9	Patel Nikiben Nileshkumar	Dr. Bindusar Sahoo	Black Hole Thermodynamics and Entropy Function Formalism
10	Karthik S B	Dr. Nitin Yadav	Magnetic Halos in Solar Atmosphere
11	Umang Soni	Dr. Madhu Thalakulam	Gold-Antimony (Au/Sb) Ohmic Contacts Characterization in Undoped Si/SiGe Heterostructure Towards Semiconducting Quantum Dot Applications

12.	Jaideep Vimal Jothi S	MSC22413	Dr. Sreedhar B. Dutta	Derivation of Van der waals Attractive Forces from Electromagnetic Fluctuations
13.	Ratul Sarkar	MSC22414	Dr. Bikas C. Das	Molecular Memristor of Copper Phthalocyanine Thin Film and Data Storage
14.	Trisha Roy	MSC22415	Prof. Anil Shaji	Exploring Quantum Correlations in Non-Directly Interacting Two-Atom Systems under Resonant Condition
15.	Srijani Das	MSC22416	Dr. Debashis Saha	Optical Implementation of Quantum Information Processing Protocols
16.	Chauhan Pradipkumar Babubhai	MSC22417	Dr. Sreedhar B. Dutta	Hamiltonian Formulation of General Relativity
17.	Allada Surya Vamshi	MSC22418	Dr. Shabnam Iyani	Energy Distribution in the associated Gravitational-wave and Electromagnetic events of GRB170817A/GW170817
18.	Anand Ajayan	MSC22419	Dr. Vinayak B. Kamble	Improved Spectral Selectivity and Stability of Novel ZnO Nanosheet - AU nanofluids for hybrid PV-T applications
19.	Sharun S	MSC22420	Dr. Bindusar Sahoo	Consistent Truncation of Higher Derivative Supergravity

School of Mathematics

Sl No	Name Of Student & Roll Number	Supervisor's Name & Affiliation	Project Title	
1	Ojas G Bhagavath	MSC22301	Dr. Sarbeswar Pal	Frobenius Theorem
2	Sanwaya Koner	MSC22302	Dr. Priyanka Majumder	A Study on Mixed-Effects Regression Models in Analyzing Four-level Longitudinal Data
3	Payel Purkait	MSC22303	Prof. P. Devaraj	Approximation rates for neural networks
4	V Adithya	MSC22304	Prof. Viji Z. Thomas	Topics in Finite Fields and Elliptic Curves
5	Arushi Marwaha	MSC22305	Prof. M. P. Rajan	A Synergistic Approach to Image Recognition through Fractal Dimension Analysis and Edge Detection
6	Haripriya V	MSC22306	Dr. Md. Ramiz Reza	A Study of Harmonic and Subharmonic Functions in the Complex Plane
7	Himanshu Shekhar	MSC22307	Dr. Dharmatti Sheetal	Analysis of solution of 1st order Linear PDE with different cases
8	Shuvadeep Mitra	MSC22308	Dr. Saikat Chatterjee	Category theoretical study of Sheaves
9	Palash Sahu	MSC22310	Dr. Shyamal Ghosh	Proximity between the nonparametric ageing classes and exponential distributions
10.	Harihara Mahama	MSC22311	Dr. K. R. Arun	An asymptotic preserving and energy stable finite volume scheme for the compressible Euler equations with congestion constraint
11.	A Muhammed Ajmal	MSC22312	Dr. Sachin dranath Jayaraman	Copositive and Completely Positive Matrices
12.	Ankita Kumari	MSC22313	Dr. Samya Kumar Ray	Estimating sum of random variables: Khinchin and Grothendieck inequalities

13.	Soumyadeep Sarkar	MSC22314	Dr. Shyamal Ghosh	Stochastic Comparison of α -Finite Mixture of Distributions Coming from Location-Scale Family
14.	Geethu Rajan	MSC22316	Dr. Sachinranath Jayaraman	Study of Hyperbolic Polynomials and Majorization
15.	Papul Pegu	MSC22318	Prof. Utpal Manna	Ordinary differential equations on Banach spaces
16.	Sooraj M	MSC22319	Dr. Priyanka Majumder	Discrete Martingale Theory and Its Applications
17.	Ajin Shaji Jose	MSC22320	Dr. Saikat Chatterjee	Categories, Topoi and Logic
18.	Saumya Verma	MSC22321	Dr. Shyamal Ghosh	On Cumulative Residual Entropy of Coherent and Mixed System

Names of the MSc Students who have received medals for academic performance

1. Gold Medal with certificate for the best academic performance in the respective school (School Topper) Institute's 2022 batch

Sl. No	Roll No	Name	Major
1	MSC22106	Chandhana Prakash	Biological Sciences
2	MSC22219	Apama Liz Benny	Chemical Sciences
3	MSC22319	Sooraj M	Mathematical Sciences
4	MSC22408	Daryani Bhavisha Dinesh	Physical Sciences

2. Silver Medal with certificate for the best academic performance in the respective school (School 2nd Topper) Institute's 2022 batch

Sl. No	Roll No	Name	Major
1	MSC22120	Tanmay Devgan	Biological Sciences
2	MSC22205	Lakshmi M	Chemical Sciences
3	MSC22320	Ajin Shaji Jose	Mathematical Sciences
4	MSC22402	Saandeep U	Physical Sciences



Integrated PhD (iPhD) Programme

It's a research programme at the end of which, Master of Science and PhD degree are awarded. The first four semesters consist of core and elective courses specialized in one subject (Biology, Chemistry, Physics or Mathematics). Students have option to exit with an MS by research degree after third year or continue with PhD research subject to fulfilling other requirements.

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL IPHD STUDENTS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Biology							
Male	0	16	2	0	1	0	19
Female	0	19	5	0	0	0	24
	0	35	7	0	1	0	43
School of Chemistry							
Male	1	18	12	0	4	0	35
Female	1	23	25	0	0	0	49
	2	41	37	0	4	0	84
School of Physics							
Male	2	22	5	0	2	0	31
Female	0	4	1	0	0	0	5
	2	26	6	0	2	0	36
School of Mathematics							
Male	1	15	4	0	0	0	20
Female	0	6	1	0	1	0	8
	1	21	5	0	1	0	28
Total	5	123	55	0	8	0	191

GENDER & CATEGORY-WISE DISTRIBUTION OF IPHD STUDENTS ENROLLED IN 2024							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Biology							
Male	0	4	0	0	0	0	4
Female	0	2	1	0	0	0	3
	0	6	1	0	0	0	7
School of Chemistry							
Male	1	2	2	0	0	0	5
Female	0	3	6	0	0	0	9
	1	5	8	0	0	0	14

School of Physics							
Male	1	1	1	0	0	0	3
Female	0	1	0	0	0	0	1
	1	2	1	0	0	0	4
School of Mathematics							
Male	0	2	0	0	0	0	2
Female	0	1	0	0	0	0	1
	0	3	0	0	0	0	3
Total	2	16	10	0	0	0	28

No of total students enrolled for iPhD in 2024 = 28

Subsequent to admission in 2024, No. of total students discontinued the program = 2

Final number of the enrolled iPhD Students in 2024 = 26

FELLOWSHIPS SOURCES FOR ALL IPHD STUDENTS (UNTIL 31 MARCH 2025)	
	No of Students
CSIR	1
SERB	1
PMRF	11
IISER TVM	178
Total	191

FELLOWSHIPS SOURCES FOR IPHD STUDENTS ENROLLED IN 2024	
	No of Students
CSIR	0
SERB	0
PMRF	0
IISER TVM	27
Total	27

Name of the iPhD Students who were awarded PMRF:

School of Biology	
Name of the Student	Gender
Anjali Variyar	Female
Amamah Farzlin Farnaz	Female
Aswathy B J	Female

School of Chemistry	
Name of the Student	Gender
S Aswini	Female
Anshuman Bera	Male
Suvarna Sujilkumar C	Female

School of Physics	
Name of the Student	Gender
Sebin Joseph Sebastian	Male

School of Mathematics	
Name of the Student	Gender
K. Sathasivam	Male
Rahuldev Ghorai	Male
Sarbani Pramanik	Female

THESIS DETAILS FOR STUDENTS WHO RECEIVED IPHD DUAL DEGREE (MASTERS AND PHD) DURING 2024-25

School of Biology				
Sl. No.	Name of Student & Roll Number		Supervisor's Name & Affiliation	Thesis Title
1	Rahul Sharma	IPHD15020	Prof. S. Murty Srinivasula	CARP2: A novel regulator of Golgi dynamics & protein quality control

School of Chemistry				
Sl. No.	Name of Student & Roll Number		Supervisor's Name & Affiliation	Thesis Title
1	Ajaykumar. M. P	IPHD15003	Prof. K. George Thomas	Plasmonic Nanostructures: Strong to Weak Coupling and Nanoscale Reactions
2	Pilli Ramadevi	IPHD15019	Dr. Ramesh Rasappan	Transition Metal Catalyzed Protodehalogenation, Cross-Electrophile Coupling and C-H Activation
3	Akashdeep Nath	IPHD16001	Dr. Vennapusa Sivarajana Reddy	Charge Transfer and Photophysical Studies in Redox-active Metal-Organic Frameworks: An Experimental and Theoretical Approach
4	Anish Kumar Das	IPHD16002	Prof. Sukhendu Mandal	Atomically Precise Silver and Copper Nanoclusters: Control in Structural Architecture for Enhancing Room Temperature Photoluminescence
5	Anjana P Nambiar	IPHD16004	Dr. Gokulnath Sabapathi	Design, Synthesis, And Chiroptical Properties Of Anthracene Linked Cyclo[n]Dipyrins
6	Lijina M P	IPHD16013	Prof. Mahesh Hariharan	Exploring Exciton Interactions in Crystalline Pentacene Architectures
7	Probal Nag	IPHD17024	Dr. Vennapusa Sivarajana Reddy	Sub-100 fs Photodynamics of ESIPT Chromophores
School of Physics				
Sl. No.	Name of Student & Roll Number		Supervisor's Name & Affiliation	Thesis Title
1	Bijoy John Mathew	IPHD13007	Prof. Anil Shaji	Quantum metrology and sensing using non-classical features of light
2	Akhileshwar Mishra	IPHD14001	Dr. Ravi Pant	Deep-UV to IR frequency combs: Enabling fundamental physics and applications
3	Aparajita Sen	IPHD15006	Dr. Soumen Basak	Aspects of Polarized CMB: Testing for its Statistical Isotropy and the Hunt for B-modes
4	Md Tahir Hossain Sarder	IPHD15015	Dr. Amal Medhi	Study of electronic properties of few strongly correlated electron systems using machine learning and variational Monte Carlo techniques.
5	Soumya Biswas	IPHD16021	Dr. Vinayak B. Kamble	Study of Thermoelectric Transport Properties in Oxide Nanohybrids, Thin Films and their Applications
6	Souradip Paul	IPHD16022	Dr. M Suheshkumar Singh	Development of real-time image reconstruction and surface-wave induced elastography for photoacoustic imaging.
7	Kallol Dey	IPHD17014	Dr. Soumen Basak	Analysis of binary merger signals with future gravitational wave detectors
8	KM. Nitu Rai	IPHD17020	Dr. Soumen Basak	Resolution of Binary Star Systems with Intensity Interferometry.

School of Mathematics				
Sl. No.	Name of Student & Roll Number		Supervisor's Name & Affiliation	Thesis Title
1	Abinash Sarma	IPHD15001	Dr. Srilakshmi Krishnamoorthy	ℓ -Regular Partitions/Multipartitions through the Lens of Theta Functions and Hecke Eigenforms
2	Aditya Chaudhuri	IPHD15002	Dr. Saikat Chatterjee	On Gauge Theory And Parallel Transport In Principal 2-Bundles Over Lie Groupoids
3	Niloofer Salam	IPHD15017	Prof. M. P. Rajan	On Solving Nonlinear Ill-Posed Problems with Application to Parameter Identification Problems
4	Nanditha. C. K	IPHD16015	Prof. M. P. Rajan	A Study on Mathematical Modelling of Tumor Growth and Treatments
5	Pasupulati Sunil Kumar	IPHD16016	Dr. Srilakshmi Krishnamoorthy	Results on Algebraic and Arithmetic Invariants
6	Shankhadeep Mondal	IPHD16019	Prof. P. Devaraj	A study of optimal dual frames for erasures
7	Soham Sanjay Gokhale	IPHD16020	Prof. Utpal Manna	Stochastic Analysis of Ferromagnetism
8	Yogesh Kumar Prajapaty	IPHD16024	Dr. Sachindranath Jayaraman and Prof. Shrihari Sridharan (Joint guidance)	Dynamics of Nonnegative Matrices

THESIS DETAILS FOR STUDENTS WHO HAVE COMPLETED REQUIREMENTS FOR PHD DURING 2024-25

School of Biology				
Sl. No.	Name of Student & Roll Number		Supervisor's Name & Affiliation	Thesis Title
1	Karthika. T	IPHD17019	Dr. V Stalin Raj	Unveiling the receptor-mediated entry mechanisms of coronaviruses towards identifying antiviral drug targets

School of Chemistry				
Sl. No.	Name of Student & Roll Number		Supervisor's Name & Affiliation	Thesis Title
1	Mintu Rehman	IPHD16014	Dr. Rajendar Goreti	Studies on the Impact of α -Coordinating Groups in Julia Kocienski Reaction and Arylogous Cross Ester Couplings for Natural and Unnatural Isocoumarins
2	Anju. B. S	IPHD16005	Dr. Subrata Kundu	Transformations of Nitrogen Oxides (NO _x) using Bio-inspired First-row Late Transition Metal Complexes
3	Aparna. R K	IPHD17009	Prof. Sukhendu Mandal	Harnessing Synergy: Metal Nanoparticle-Embedded Zr-Based Metal-Organic Frameworks for Energy-Related Applications
4	Diksha	IPHD18007	Dr. Vennapusa Sivaranjana Reddy	Theoretical Insights into White Light Emission using Excited-state Intramolecular Proton Transfer Chromophores

5	Safwa. T. K	IPHD16017	Dr. Vinesh Vijayan	Exploring the Structural Characteristics of the Stress Granule Protein TIA1 and its Influence on Modulating the Tau Aggregation
6	Gowtham Raj	IPHD17013	Dr. Reji Varghese	Multifunctional DNA Nanostructures for Chemodynamic Cancer Therapy

School of Mathematics

Sl. No.	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title	
1	Tony Nixon Mavelly	IPHD17032	Dr. Viji Z. Thomas	The size of the Schur multiplier of special p-groups and other classes of p-groups using graph theory
2	Mainak Kar	IPHD17022	Dr. K. R. Arun	Energy Stable and Asymptotic Preserving Schemes for the Singular Limits of Some Hyperbolic Systems

School of Physics

Sl. No.	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title	
1	Sandip Guchhait	IPHD17025	Prof. Ramesh Chandra Nath	Quantum magnetism in some low-dimensional frustrated spin-1/2 Heisenberg antiferromagnets
2	Bibin. P	IPHD16007	Prof. M. M. Shajumon	Lithium-based Dual-ion Batteries: Performance Optimization Using Machine Learning and Interface Modifications

DETAILS FOR STUDENTS WHO RECEIVED MASTER OF SCIENCE (BY RESEARCH)

DURING 2024-25

Sl. No.	Roll No.	Name	School
1.	IPHD17010	Malhar Vivek Atre *	Biological Sciences
2.	IPHD20015	Jyotirmay Srivastava	Biological Sciences
3.	IPHD21022	Ritu	Biological Sciences
4.	IPHD21025	Samanwitha Rao	Biological Sciences
5.	IPHD21027	Shivam Barnwal	Biological Sciences
6.	IPHD20020	Mitali Mithilesh	Chemical Sciences
7.	IPHD21008	Bishal Saha	Chemical Sciences
8.	IPHD21023	Dighe Roshni Sanjay	Chemical Sciences
9.	IPHD21030	Soumakanya Ram	Chemical Sciences
10.	IPHD21033	Teena Thomas	Chemical Sciences
11.	IPHD21003	Anitha Valliappan	Mathematical Sciences
12.	IPHD21009	Dyuti Dwibedi	Mathematical Sciences
13.	IPHD21021	Riddhi Ghosh	Mathematical Sciences
14.	IPHD21031	Subhajit Mukherjee	Mathematical Sciences
15.	IPHD20035	Pandya Siddharth Jyotindrabhai	Physical Sciences
16.	IPHD21012	Km Pallavi	Physical Sciences

* Posthumous Degree

PhD Programme

The institute offers a vibrant PhD programme in the areas of Biological Sciences, Chemical Sciences, Mathematical Sciences, Physical Sciences and Interdisciplinary areas like Data Science and Earth Environment and Sustainability Sciences. PhD scholars are admitted in 2 sessions (August and January) each academic year.

GENDER & CATEGORY-WISE DISTRIBUTION OF ALL PHD STUDENTS (UNTIL 31 MARCH 2025)							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Biology							
Male	2	24	17	0	3	0	46
Female	1	22	16	0	1	0	40
	3	46	33	0	4	0	86
School of Chemistry							
Male	3	25	18	0	12	1	59
Female	0	23	25	0	2	0	50
	3	48	43	0	14	1	109
School of Physics							
Male	8	31	18	0	3	2	62
Female	0	23	7	0	2	1	33
	8	54	25	0	5	3	95
School of Mathematics							
Male	1	9	5	1	0	1	17
Female	1	7	1	0	0	0	9
	2	16	6	1	0	1	26
Centres- CAMRIE/CHPC							
Male	2	10	4	0	2	1	19
Female	0	9	4	0	0	0	13
	2	19	8	0	2	1	32
School of Data Sciences							
Male	0	2	3	0	0	0	5
Female	0	2	0	0	1	0	3
	0	4	3	0	1	0	8
School of Earth, Environmental & Sustainability Sciences							
Male	0	1	4	0	0	0	5
Female	0	3	3	0	0	0	6
	0	4	7	0	0	0	11
Total	18	191	125	1	26	6	367

GENDER & CATEGORY-WISE DISTRIBUTION OF PHD STUDENTS ENROLLED IN 2024							
	EWS	GEN	OBC-NCL	PD	SC	ST	Total
School of Biology							
Male	0	3	8	0	0	0	11
Female	0	4	6	0	0	0	10
	0	7	14	0	0	0	21
School of Chemistry							
Male	3	9	12	0	6	0	30
Female	0	5	8	0	0	0	13
	3	14	20	0	6	0	43
School of Physics							
Male	3	6	3	0	2	0	14
Female	0	2	3	0	0	1	6
	3	8	6	0	2	1	20
School of Mathematics							
Male	0	3	2	0	0	0	5
Female	0	4	0	0	1	0	5
	0	7	2	0	1	0	10
Centres- CAMRIE/CHPC							
Male	1	4	2	0	1	0	8
Female	0	5	3	0	0	0	8
	1	9	5	0	1	0	16
School of Data Sciences							
Male	0	2	3	0	0	0	5
Female	0	2	0	0	1	0	3
	0	4	3	0	1	0	8
School of Earth, Environmental & Sustainability Sciences							
Male	0	1	3	0	0	0	4
Female	0	3	3	0	0	0	6
	0	4	6	0	0	0	10
Total	7	53	56	0	11	1	128

No of total students enrolled for PhD in 2024 = 128

Subsequent to admission in 2024, No. of total students discontinued the program = 8

Final number of the enrolled PhD Students in 2024 = 120

FELLOWSHIPS SOURCES FOR ALL PHD STUDENTS (UNTIL 31 MARCH 2025)

	No of Students
CSIR	50
DBT	14
ICMR	2
DST-INSPIRE	16
UGC	70
PMRF	26
IISER TVM	180
NBHM	2
Sponsored Project	7
Total	367

FELLOWSHIPS SOURCES FOR PHD STUDENTS ENROLLED IN 2024

	No of Students
CSIR	22
DBT	4
ICMR	1
UGC	22
IISER TVM	72
NBHM	1
Sponsored Project	6
Total	128

Names of the PhD Students who were awarded PMRF:

School of Biology		
Sl No	Name of student	Gender
1	Kavitha M S	Female
2	Manish R	Male



School of Chemistry		
Sl No	Name of student	Gender
1	Swathi Krishna P E	Female
2	Girish Suresh Yedase	Male
3	Alisha Rani Tripathy	Female
4	Pinku Prasad Mondal	Male
5	Amit Pal	Male
6	Avishek Kumar Jha	Male
7	Tarpan Maiti	Male
8	Akanksha Sharma	Female
9	Akash Bisoyi	Male
10	Subham Das	Male
11	Glory James	Female

School of Physics		
Sl	Name of student	Gender
1	Manisha Bansal	Female
2	Aiswarya K S	Female
3	Rachit Sharma	Male
4	Vipin Yadav	Male
5	Arijit Paramanick	Male
6	Lucky Donald Lyngdoh Kynshi	Male
7	Roshni Benny	Female
8	Sreelakshmy T	Female

School of Mathematics		
Sl	Name of student	Gender
1	Ritabrata Jana	Male
2	Ankur Upadhyay	Male

Centres- CAMRIE/CHPC		
Sl	Name of student	Gender
1	Kaustav Mondal	Male
2	Timi Titus	Female
3	Gopika P B	Female

THESIS DETAILS FOR STUDENTS WHO WERE CONFERRED WITH PHD DURING 2024-25

School of Biology

Sl. No.	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title
1	Anushree Bhatnagar PHD141003	Prof. S. Murty Srinivasula	ALIS in macrophage-land: Characterization of aggresome- like induced structures in TLR-mediated host-defense
2	Bhagya Lakshmi R PHD162002	Prof. Tapas K. Manna	Regulation of microtubule – chromosome attachment by cytoskeleton associated protein 5 (CKAP5)
3	Irene Mariam Roy PHD162004	Dr. Satish Khurana	Understanding the role of integrin signaling in hematopoietic stem cell niche modulation
4	Sajesh Vijayan PHD171024	Prof. Hema Somanathan	Behavioural and visual ecology of the Asian giant honeybee, <i>Apis dorsata</i>
5	Sneha Sadanand Joshi PHD171019	Dr. Ullasa Kodandaramaiah	Dynamics of divergence and hybridization in <i>Impatiens</i>
6	Vishnu M Nair PHD172012	Prof. Tapas K. Manna	Elucidating the role of E3 ubiquitin ligase, FBXW7 in regulation of mitotic progression in human cells
7	Suman Dash PHD181021	Prof. Nishant KT	Effect of Genomic Heterozygosity on Msh5 binding to meiotic chromosomes in <i>Saccharomyces cerevisiae</i>

School of Chemistry

Sl. No.	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title
1	Arshad. A PHD161007	Dr. Vinesh Vijayan	Elucidating the Structure and Dynamics of Tau Protein During Phase Separation and Aggregation
2	Reyno R S PHD161020	Dr. Rajendar Goreti	Methods For The Preparation of β -Amino- α , β -unsaturated Carbonyl Compounds and Cationic Polyene Cyclizations and Synthesis of Euolutchuol C
3	Sanoop. M. S PHD161025	Prof. K. George Thomas	Template-Assisted Chiral Induction: From Structurally Induced Chirality to Exciton-Coupled Chirality
4	Akash Sugunan PHD171001	Dr. Rajendar Goreti	Bifunctional Amino Quaternary Phosphonium Ions as Catalysts for Inter and Intramolecular Aldol Condensations.

5.	Meera Johny	PHD171013	Dr. Rajendar Goreti	BF ₃ -Mediated Glycidol Acetal Rearrangements and Silyl Promoted Reactions of Cyclic Anhydrides to Diesters and Amide Esters
6.	Javed Rahimkhan Pathan	PHD171015	Prof. Kana M. Sureshan	Synthesis of Various Polyamides Via Topochemical Azide-Alkyne Cycloaddition (TAAC) Reaction
7.	Ruth Mariam IPE	PHD171017	Dr. Gokulnath Sabapathi	Modulating the Electronic and Structural Properties of meso and Internally Linked Porphyrin-Pyrene Conjugates
8.	Vishnu E K	PHD171026	Prof. K. George Thomas	Charge Carrier Dynamics in CdSe Nanocrystals: A Single-Particle Spectroscopy Perspective
9.	Aditesh Mondal	PHD181003	Dr. Subrata Kundu	Reactions of Nitrate, Nitrite, and Hydroxylamine at a Biomimetic Copper(II) Site: Insights into the Formation of Nitric Oxide and Nitrous Oxide
10.	Allwin Ebenezer S	PHD181005	Dr. Vinesh Vijayan	Sequence-dependent modulation of conformation and aggregation propensity of R3 Tau repeat
11.	Arya Gopal. S	PHD182002	Dr. A.Muthukrishnan	Unveiling the Real Active Sites of Fe-N-C Catalyst for Oxygen Reduction Reaction: Kinetic and Mechanistic Analysis
12.	Revathi C	PHD182007	Dr. Ramesh Rasappan	Transition-Metal Catalyzed C-Si Bond Formation via Coupling of Silyl Nucleophiles
13.	Sayani Mukherjee	PHD182010	Prof. Sukhendu Mandal	Coinage Metal Nanoclusters: Insights into Catalytically Active Sites and Photophysical Properties

School of Physics

Sl. No.	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title
1.	Arka Mukherjee	PHD171004 Dr. Bikas C. Das	Exploring Low-Voltage Thin-Film Transistors and Bio-Inspired Synaptic Devices Using Novel Dielectrics
2.	Harikrishnan G	PHD171008 Prof. Joy Mitra	Optoelectronic and Transport Properties of Nanostructured Hybrids of ZnO-PEDOT:PSS and Ni-TiO ₂
3.	Vijith K. P	PHD171025 Prof. Manoj A.G. Namboothiry	Photoresponse Studies of Solution-Processed Two-Dimensional Transition Metal Dichalcogenide-Based Devices
4.	Varun. M. K	PHD181001 Dr. Ravi Pant	Harnessing Brillouin Scattering and Dynamic Phase Control for Microwave Photonic Signal Processing

5.	Akhil Alexander	PHD181004	Prof. Manoj A.G. Namboothiry	Defect Passivation and Interface Engineering Strategies for Improved Efficiency and Stability of Methylammonium Lead Iodide Perovskite Solar Cells
6.	Gudla Vardhini	PHD182005	Prof. M. M. Shajjumon	Carbonyl-based Organic Materials as Advanced Electrodes for Potassium-ion Storage

THESIS DETAILS FOR STUDENTS WHO HAVE COMPLETED REQUIREMENTS FOR A PHD DURING 2023-24

School of Biology

Sl No	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title	
1	Sumayya Abdul Rahim	PHD131017	Dr. Ullasa Kodandaramaiah	Diversification of the plant genus <i>Impatiens</i> in the northern Western Ghats
2	Rajabhoj Mohit Pradip	PHD152003	Dr. Ravi Maruthachalam	Unravelling the sporophytic role of gametophytic epigenetic regulators MEDEA and DEMETER in <i>Arabidopsis thaliana</i>

School of Chemistry

Sl No	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title	
1	Khazeber R	PHD202005	Prof. Kana M. Sureshan	Topochemical Ene-Azide Cycloaddition Reaction for the Synthesis of Crystalline Polymers
2	Saniya Gratiious	PHD191020	Prof. Sukhendu Mandal	Exploring the Transformation Chemistry at Nanoscale

School of Physics

Sl No	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title	
1	Sreevidya N	PHD182008	Dr. Madhu Thalakulam	Voltage tunable phases on electric double layer gated MoS ₂
2	Uday Singh	PHD191026	Dr. D.V. Senthilkumar	Robustness of Mixed Populations with Heterogeneity
3	Anusha. S	PHD181008	Dr. Madhu Thalakulam	Configuring Quantum Point Contacts for Broadband Electrical Amplification
4	Navaneeth Krishnan. K	PHD181014	Dr. Bikas C. Das	Exploring Self-Powered Operation and Neuromorphic Potential in Photodetectors of 2D van der Waals Materials

School of Mathematics

S No	Name of Student & Roll Number	Supervisor's Name & Affiliation	Thesis Title	
1	Pallavi B	PHD201034	Dr. Sachindranath Jayaraman	A study on eigenvalue perturbation theorems



Institute
Events & Activities...

INSTITUTE EVENTS & ACTIVITIES

Activities	Description	Date
"Seminar on A bird's eye view on new criminal laws"	Seminar by Shri Suneesh Kumar R IPS, Assistant Inspector General of Police, State Woman and Children on the topic "A bird's eye view on new criminal laws" on 17th April 2024	2024-04-17
Vikasit Bharat@2024	"The Institute is organising a workshop to contribute towards 'Vikasit Bharat 2047' vision of the Government of India, aiming to transform India into a developed nation by the year 2047, marking the 100th anniversary of Independence. Date/Time: 19 April 2024, 1515 Venue: CSB Seminar Hall"	2024-04-19
Celebration of International Day of Yoga 2024	The International Day of Yoga (IDY) was celebrated at IISER TVM on Friday, June 21st, starting at 7 am. As part of the IDY celebrations, a workshop on 'Balance and Coordination of Body and Mind' through Yoga was also conducted from June 21st to 25th, 2024, from 5:00 to 6:30 pm at the yoga hall of the indoor stadium.	2024-06-21
12th Convocation of IISER Thiruvananthapuram	IISER Thiruvananthapuram celebrated its 12th Convocation on Saturday, 20th July 2024. Prof. AJAY K. SOOD, PSA - Govt. of India, Chairperson PM - STIAC was the Chief Guest and delivered the convocation address.	2024-07-19
Partition Horrors Remembrance Day	As part of the observance of 14th August as "Partition Horrors Remembrance Day", a poster exhibition was organized in the Central Library. Exhibition was inaugurated by Prof S. Murty Srinivasula, Deputy Director, IISER Thiruvananthapuram.	2024-08-14
Independence Day Celebrations 2024	Independence Day Celebrations at IISERTVM August 15th 2024 Ministry of Education	2024-08-15
Swachhata Walkathon as a part of Swachhata Pakhwada 2024	IISER TVM organized "Swachhata Walkathon" as a part of "Swachhata Pakhwada 2024" on 3rd September 2024 at 4PM. Prof J. N. Moorthy, The Director, IISER TVM administered the "Swachhata Pledge" and flagged off the walkathon in the presence of Deputy Director and Deans. Students, Staff and faculty members actively participated in the walkathon.	2024-09-03

Teachers Day Celebrations 2024	Teachers' Day special lecture: Prof. N V Chalapathi Rao, Director, National Centre for Earth Science Studies, Thiruvananthapuram	2024-09-05
Swachhata Shramadaan as a part of Swachhata Pakhwada 2024	IISER TVM organized "Swachhata Shramadaan" as a part of "Swachhata Pakhwada 2024" on 12th September 2024 at 4:30PM. Students, Staff and faculty members actively participated in cleaning the various parts of the campus.	2024-09-12
National Intellectual Property Festival	"Online lecture on "intellectual property rights". Speaker: Dr. Nitin Tewari, Senior Principal Scientist and Head, Intellectual Property Group, CSIR-National Chemical Laboratory, Pune Date and time: 25th September 2024 at 3:30 PM"	2024-09-25
Hindi Fortnight Valedictory Function	"Hindi Week Celebrations of IISER Thiruvananthapuram for the year 2024 was celebrated from 23rd September to 27th September. Starting from 23 September 2024 various competitions like Speech, Debate, Translation etc have been conducted for the students and staff of the institute. The valedictory function of this year's Hindi Fortnight celebrations was conducted on September 27, 2024 at 4.00 pm. Eminent Hindi poet, Shri. Arun Kamal was the chief guest."	2024-09-27
Campus wide cleanup activity on Swachh Diwas	As part of the Swachh Diwas celebrations and the Swachhata Hi Seva campaign, IISER Thiruvananthapuram organized a campus-wide clean-up initiative, "Nishkam Seva," on October 2, 2024, from 7:30 AM to 9:15 AM at various locations across the campus. The event saw active participation from faculty members, staff, and students.	2024-10-02
Medical camp as a part of Swachhata Hi Seva campaign	As part of the Swachhata Hi Seva campaign, IISER Thiruvananthapuram organized a medical camp for sanitary workers, titled "Safai Mitra Suraksha Shivar," on October 2, 2024, starting at 10:00 AM. The event was inaugurated by Prof. J N Moorthy, Director, in the presence of the Deputy Director, Registrar, and Deans, addressed the workers, highlighting their essential role in maintaining a clean campus. The camp saw active participation from its members.	2024-10-02
16th Foundation Day	IISER TVM celebrated 16th Foundation Day	2024-10-28

Vigilance Awareness Week	Vigilance Awareness Week observed in the Institute from Oct 28 - Nov 3. This year's theme is 'Culture of Integrity for Nation's prosperity'. The faculty members and staff took an Integrity Pledge. Various programs arranged to create awareness among the IISER TVM fraternity. The programs include a special lecture by Shri Ajaya Kumar V, Superintendent of Police, Vigilance & Anti-Corruption Bureau, Southern Range, Trivandrum.	2024-10-29
National Unity Day	IISERTVM has conducted the Pledge to celebrate the Rashtriya Ekta Diwas 2024 & National Unity Day on the birth anniversary of Sardar Vallabhbhai Patel. Our Deputy Director, Prof. S M Srinivasula, conducted the Pledge on the Rashtriya Ekta Diwas 2024 & National Unity Day. Faculties, students and staffs participated in the pledge.	2024-10-31
National Constitution Day	IISER TVM celebrated Constitution Day to mark the 75th Year of India's Constitution. In observance of Constitution Day at our institute, Hon'ble Director Prof. J. N. Moorthy administered the pledge with faculties, staff & students.	2024-11-26
Bharatiya Bhasha Utsav	To commemorate the birth anniversary of the esteemed Tamil poet, writer, journalist, and eminent freedom fighter Shri Subramania Bharati, popularly known as 'Mahakavi Bharathi', 'Bharatiya Bhasha Utsav' was celebrated at IISER Thiruvananthapuram on 11 December 2024.	2024-12-11
Republic Day Celebrations 2025	76th Republic Day celebration at IISER TVM	2025-01-26
13th Asian and Oceanian Photochemistry Conference (APC 2025)	The 13th Asian and Oceanian Photochemistry Conference (APC 2025) was hosted by the Indian Institute of Science Education and Research Thiruvananthapuram (IISER TVM) at the Crowne Plaza in Kochi, from October 21 to 25, 2025. The conference was organized under the aegis of the Asian and Oceanian Photochemistry Association (APA; https://www.iisertvm.ac.in/www.asianphotochem.com/index.html), a non-profit organization dedicated to promoting and advancing the international development of photochemistry and related fields. APA was one of the three prominent international photochemical societies worldwide, alongside the European Photochemistry Association (EPA) and the Inter-American Photochemistry Society (I-APS). Details of the previous conferences in this series could be found on the APA website. For more details, please visit: https://conference.iisertvm.ac.in/apc2025	2025-02-10



Photo: Shyam M. Alumnus Batch 19, IISERTVM

Departmental Activities...

DEPARTMENTAL ACTIVITIES

SCHOOL OF BIOLOGY

SEMINARS / TALKS - Talks by National Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	19/04/2024	A structure-based mechanism for the regulation of RAD51 nucleofilaments by RADX	Dr. Swati Balakrishnan, Principal Project Scientist at IIT Delhi		
2	29/04/2024	The Battle of Cytosol	Dr. Anirban Banerjee, Dept. of Biosciences and Bioengineering, IIT Bombay		
3	14/06/2024	Centromere-specific histone 3 (CENP-A) chaperone has CENP-A independent functions on chromosome stability	Prof. Santanu Ghosh, Dept. of Biosciences and Bioengineering IIT, Bombay		
4	30/08/2024	Climbing the career ladder: Roles of mentor and mentee	Prof. Manoj Prasad, Professor & J.C. Bose Fellow, Dept. of Genetics, University of Delhi South Campus, New Delhi		
5	25/11/2024	Understanding and Addressing Complex Diseases through Data Driven Approaches	Dr. Anshu Bhardwaj, Principal Scientist, CSIR- Institute of Microbial Technology (IMTECH), Chandigarh.		

SI No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
6	19/12/2024	Tales of tiny cellular signalling antenna	Dr. Swapnil Shinde, Asst. Professor, Dept. of Bioscience and Bioengineering IIT Bombay.		
7	10/01/2025	Exploring the Evolutionary Origins of the Metabolome and Advancing Analytical Strategies	Dr. Sreejith Jayasree Varma, School of Chemistry, IISER Thiruvananthapuram		
8	10/01/2025	Small-Molecule Drug Discovery Through Academically Viable Medicinal Chemistry Approaches: From TLR7/9 inhibitor to Antibiotic Adjuvants.	Dr. Ayan Mukherjee, School of Chemistry, IISER Thiruvananthapuram		
9	20/02/2025	A Metabolic-Signalling-Gene Regulatory Circuit Providing Multiple Nodes for Therapeutic Interventions Targeting Tumor Progression	Dr. Ujjaini Dasgupta Amity Institute of Integrative Sciences and Health, Amity University Haryana		

SEMINARS/TALKS - Talks by International Experts

SI No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	28/06/2024	DeGlyPHER: simplifying glycoproteomics for vaccine design	Dr. Sabyasachi Baboo, Staff Scientist, The Scripps Research Institute 10550, North Torrey Pines Road La Jolla, CA 92037, USA		
2	02/08/2024	Exploiting Microbiome: From ailment to health & from waste to wealth	Dr. Sharmila Mande, Ayush Distinguished Scientist Chair, Ministry of Ayush Advisor to Life Sciences R&D at TCS Research Visiting Professor of Practice, IIT-Kanpur Visiting Guest Professor, IIT-Gandhinagar (Former Distinguished Chief Scientist, TCS Research)		

3	10/08/2024	Metabolic regulation of erythroid and B cell epigenome landscape and its disease implications	Prof. Kazuhiko Igarashi Department of Biochemistry, Tohoku University Graduate School of Medicine, Japan		
4	02/12/2024	Local Information Density and Multivariate Statistical Analysis: Powerful Tools for Investigation of Dynamic Biological Molecules by Cryo-EM	Dr. Sayan Bhakta, FAPESP Postdoctoral Researcher in Group of Prof. Marin van Heel Brazilian National Center for Research in Energy and Materials (CNPEM)		
5	27/03/2025	Antigen sensing by human gamma delta T cells	Dr. Mohindar Murugesh Karunakaran, Institute for Virology and Immunobiology, Dept of Medicine, University of Würzburg, Germany		

CONFERENCE/COLLOQUIUM/SYMPOSIA – International

SI No	Date	Title	Speaker(s): Name and Affiliation	Brief Comments	Website Link
1	10-12 December 2024	New Ideas in Molecular Evolution (NEMO3)	https://sites.google.com/view/nemo3iisertvm	Organised by Sabari Sankar Thirupathy, Vijay Jayaraman, Siddharth Kulkarni, and Yashraj Chavhan	https://sites.google.com/view/nemo3iisertvm
2	13-17 December, 2024	6th International Chromosome Stability	https://conference.iisertvm.ac.in/chromosome-stability-2024/	Organised by K. T. Nishant (IISER TVM), Kaustuv Sanyal (JNCASR)	https://conference.iisertvm.ac.in/chromosome-stability-2024/
3	5-8 Dec 2024	No-Garland Neuroscience Meeting (NGN-4)	https://ngn2024.wixsite.com/iisertvm	Organised by Poonam Thakur & Amrutha Swaminathan, IISER TVM	https://ngn2024.wixsite.com/iisertvm
4	7-9 Feb, 2025	Frontier Symposium in Biology (FS-BIO 2025)	https://conference.iisertvm.ac.in/fsbio2025/	Organised by School of Biology, IISER TVM	https://conference.iisertvm.ac.in/fsbio2025/

SCHOOL OF CHEMISTRY

SEMINARS / TALKS - Talks by National Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	07/10/2024	Deciphering the Reactivity of Quinoxaline and Maleimide	Prof. Bhisma K. Patel: Indian Institute of Technology Guwahati		
2	24-September-2024	Amsterdam Modeling Suite: A quick guide to molecular modeling and simulations	Mr. Sreejit Soman: Application Scientist, Nyro Research		
3	29- August-2024	Carbohydrate Antigens and Cancer Immunotherapy	Prof. N. Jayaraman, the head of organic chemistry at IISc Bangalore		
SEMINARS/TALKS - Talks by International Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	23/12/2024	Self-assembling simple building blocks to generate Smart supramolecular materials.	Prof. Krishna K. Damodaran: Department of Chemistry, Science Institute, University of Iceland		
2	08.06.2024	Machine Learning-Driven Accelerated Modeling of Disordered Materials	Dr. Sivaraman Ganesh, Research professor at molecular maker lab Institute, University of Illinois Urbana-champaign		
3	15/5/2024	Carbon Nano-Onions for Biomedical Applications	Prof. Silvia Giordani, the former Head of Chemical Sciences at Dublin City University, Ireland.		

CONFERENCE/COLLOQUIUM/SYMPOSIA – National

SI No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	31 Jan to 2nd Feb 2025	5th Frontiers Symposium in Chemistry (FS-CHM 2025)			https://conference.iisertvm.ac.in/fschm2025/

CONFERENCE/COLLOQUIUM/SYMPOSIA – International

SI No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	9-11 Dec 2024	ChemSci 2024: Leaders in the field symposium			https://www.chemsci2024.com/
2	13-16 Feb 2025	International Conference on Main Group Synthesis and Catalysis			https://www.icmgsc2025.com/
3	14-15 December 2024	The 12th International Symposium on Dynamic Exciton (ISDyEx)	Prof. Silvia Giordanì, the former Head of Chemical Sciences at Dublin City University, Ireland.		https://sites.google.com/iisertvm.ac.in/isdyex2024/home

WORKSHOPS

SI No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	07/02/2025	Workshop on Electron Paramagnetic Resonance Spectroscopy (WEPRSA 25)			https://www.iisertvm.ac.in/news/read/news-workshop-on-electron-paramagnetic-resonance-spectroscopy-weprsa-25
2	11/01/2025	Spectra 2025 workshop			
3	09/08/2024	Quantum Material and devices			

WORKSHOPS

Sl No	Date	Title	Type of Activity	Brief Comments	Website Link
1	24-27 may 2024	Masters students science enrichment program			
2	December 2024	Higher Secondary School Teachers Training Programs			



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SCHOOL OF DATA SCIENCES

SEMINARS / TALKS - Talks by National Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	06.11.2024	Emerging technologies in the IoT application domain and possibilities of association with Webyfy IoT, the application R&D company	Mr. Vijay Kumar, CEO and Director, Webyfy IOT Pvt. Ltd., Thiruvananthapuram, Kerala	IoT, the largest emerging market, the possibilities and opportunities, importance of thinking in application mode, examples of application technology development, what do we do at Webyfy IoT? Philosophy of application development, Opportunities to work with Webyfy IoT in R&D in technology development	
SEMINARS/TALKS - Talks by International Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	16.12.2024	Neoteric Frontiers in Cloud and Quantum Computing	Prof. Rajkumar Buyya, University of Melbourne, Australia	This keynote presentation will cover (a) 21st century vision of computing and identifies various emerging IT paradigms that make it easy to realize the vision of computing utilities; (b) innovative architecture for creating elastic Clouds integrating edge resources and managed Clouds, (c) Aneka 6G, a 6th generation Cloud Application Platform, for rapid development of Big Data/AI applications and their deployment on private/public Clouds driven by user requirements, (d) experimental results on deploying Big Data/IoT applications in engineering, health care (e.g., COVID-19), deep learning/Artificial intelligence (AI), satellite image processing, and natural language processing (mining COVID-19 literature for new insights) on elastic Clouds, (e) QFaaS: A Serverless Function-as-a-Service Framework for Quantum Computing, and (f) new directions for emerging research in Cloud and Quantum computing.	

CONFERENCE/COLLOQUIUM/SYMPOSIA – National

SI No	Date	Title	Speaker(s): Name and Affiliation	Brief Comments	Website Link
1	31.01.2025 - 02.02.2025	Frontiers Symposium in Data Science (FS-DSC) -2025	https://sites.google.com/view/fs-dsc-2025	An annual symposium series in School of Data Science (FS-DSC)* to enhance scientific cooperation, broaden the exposure of our student community to contemporary research, and establish a better connection among the faculty members and students of our institute to the nationwide scientific community in the Discipline of Data Science	https://sites.google.com/view/fs-dsc-2025



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SCHOOL OF EARTH, ENVIRONMENTAL AND SUSTAINABILITY SCIENCES

SEMINARS / TALKS - Talks by National Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	6 Jan 2025	Atmospheric aerosol research: why, how and more	Dr. K. Krishnamoorthy, Former Director, Space Physics Laboratory, Vikram Sarabhai Space Centre, Thiruvananthapuram Distinguished scientist, Indian Institute of Science, Bengaluru	Invited talk	
2	3 March 2025	Mantle evolution and geodynamics through the lens of cratonic alkaline magmatism	Dr. Ashutosh Pandey	Dr. J.G. Negi YoungScientist Award Lecture of the Indian Geophysical Union	
3	26 March 2025	Indian Satellites for Weather and Climate	Dr. Sathyamoorthy V. Head, Microwave and Boundary Layer Physics Branch, SPL, VSSC	Monitoring, on the occasion of world meteorological day and SEESS club inauguration.	
4	10 March 2025	Cryosphere remote sensing focused on Arctic and Antarctic sea ice and Himalayan glaciology and climate change.	Dr. Vishnu Nandan, Research Assistant Professor at the Department of Electronics and Communication Engineering at Amrita University, Bengaluru Campus		
SEMINARS/TALKS - Talks by International Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	27 Nov 2024	History of Society in Asia Related to Evolving Climate and Rivers	Prof. Peter D. Clift, Royal Society Wolfson Fellow, Department of Earth Science, University College London	Invited talk as Jubilee Chair Professor of the Indian Academy of Sciences	

CONFERENCE/COLLOQUIUM/SYMPOSIA – National					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	9-February, 2025	FSE25			https://sites.google.com/iisertvm.ac.in/fse2025/home
Other Activities					
Sl No	Date	Title	Type of Activity	Brief Comments	Website Link
		Masters students science enrichment program			
		Higher Secondary School Teachers & Training Programs			



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SCHOOL OF PHYSICS

SEMINARS / TALKS - Talks by National Experts					
Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
1	April 29, 2024	Sol Driven Interfacial Evaporator for Hydrovoltaic Power generator	Prof. Sudip Kumar Batabyal, Amrita Viswa Vidyapeetham, Coimbatore		
2	July 22, 2024	Explorations in Quantum Field Theory	Dr. Arun Thalappil, IISER Pune, India		
3	September 12, 2024	Parallels of Black Hole Phenomenons in Condensed Matter	Dr. Suraj S Hegde, IISER Thiruvananthapuram		
4	September 19, 2024	Electrochemo Mechanics in Solid State Batteries	Dr. Dheeraj Kumar Singh, Research Institute for Sustainable Energy, Kolkata	31	
5	November 5, 2024	Understanding Principles of Morphogenesis: Computational Biology Approach	Dr. Bandan Chakraborty, IISER-TVM (School of Biology)		
6	December 2, 2024	Patternable Superconducting Nano Structure above the Pauli Paramagnetic Limit using Tungsten Carbide-Ga Composite	Prof. Kantimay Das Gupta, IIT Bombay, Mumbai		
7	December 9, 2024	Power Laws in Space-Time and Complex Critical Exponents	Prof. Prasanth Gade, Nagpur University, India		
8	December 19, 2024	Development of Fible Based Nanophotonic Platform for Quantum Photonics	Dr. Rama Chandrarao Yella, University of Hyderabad		

Sl No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
9	March 6, 2025	Spectroscopic Signatures of Chirality and Chiral Resonances for Designer Magnonics	Dr. Suraj Thyagarajan, Department of Physics, National University of Singapore		
SEMINARS/TALKS - Talks by International Experts					
1	April 2, 2024	On the Alberti-Uhlmann Condition for Unital Channels	Dr. Sagnik Chakraborty Complutense University of Madrid, Spain		
2	April 18, 2024	QED Amplitudes from Quantum Mechanical Path Integrals and Recent Application	Dr. Karthik Rajeev, University of Edinburgh, UK.		
3	May 2, 2024	Unlocking Cosmic Origins: LiteBIRD's Quest for Inflationary GWs	Dr. Anto Idicherian Lonappan, SISSA, Trieste, Italy		
4	June 27, 2024	In-operando Tracking of Phase Change and Vacancy Migration in Optically Accessible Ferroelectric Memories	Mr. Atif Jan, University of Cambridge, UK		
5	August 20, 2024	Landau-Ginzburg Models and the Swampland	Mr. Muthusamy Rajaguru, Lehigh University, USA		
6	August 29, 2024	Stability and Topological Nature of Charged Gauss Bonnet ADS Black Holes in 5 dimensions	Dr. Madhu Mishra, Asia Pacific Center for Theoretical Physics, South Korea		
7	October 22, 2024	Direct Detection of Electromagnetically Interacting Dark Matter	Ms. Merlin Richard, Technical University of Munich, Germany		
8	October 24, 2024	Nitrogen Fixation in Microwave Plasma; Optimization through Optical Diagnostics	Dr. Abhyuday Chatterjee, University of Mons, Belgium		

SI No	Date	Title of the talk	Speaker: Name and Affiliation	Brief Comments	Website Link
9	November 7, 2024	Mie-Resonant Nanophotonics Probed with s-SNOM	Dr. Sukanta Nandi, Bar-Ilan University, Israel		
10	November 21, 2024	Magnetic Reconnection in the Solar Atmosphere: Observations & 3D Simulations	Dr. Sushree S. Nayak, University of Alabama in Huntsville, USA		
11	November 26, 2024	Rejuvenating the Optical Observational Facility for Deeper Sky Exploration	Dr. Jyotirmay Paul, University of Exeter, UK		
12	December 10, 2024	Electrocatalysis for a CO ₂ Neutral World: From Nature-Inspired Catalysts to Industrially Functional Electrodes	Dr. Justus Masa, Max Planck Institute for Chemical Energy Conversion, Germany		
13	February 11, 2025	Exploring the Departure from the Standard Flare Model Across Stellar Types using MM-Radio Imaging Tomography	Dr. Atul Mohan, NASA/GSFC, USA		
14	February 27, 2025	Solar atmosphere vortices and their importance for waves excitation and energy transport.	Prof. Viktor Fedun, University of Sheffield (UK)		
15	March 4, 2025	Gamma-Ray Bursts (GRBs) as electromagnetic (EM) counterparts of Gravitational Wave (GW) sources	Dr. Suman Bala, Science and Technology Institute (STI), Universities Space Research Association (USRA)		
16	March 18, 2025	Digital Quantum Simulations of the Non-Resonant Open Tavis-Cummings Model	Dr. Aby Philip, Cornell University		

CONFERENCE/COLLOQUIUM/SYMPOSIA – National

Sl No	Date	Title	Speaker(s): Name and Affiliation	Brief Comments	Website Link
1	17-19 January 2025	Frontier Symposium in Physics 2025			https://conference.iisertvm.ac.in/frontiersphysics2025/
2	9 March 2025	One day meeting on "Bridging Condensed Matter and High Energy Physics	Prof. Ashoke Sen, Prof. Sourin Das, Prof. Poonam Mehta,	Lab Visits @ IISc-IISER TVM	

WORKSHOPS

Sl No	Date	Title	Speaker(s): Name and Affiliation	Brief Comments	Website Link
1	24-Jan-2025	AFM Workshop: Cutting-Edge Scanning Probe Techniques (CSPT 2025)	<p>Dr. Bikas C. Das, IISER TVM</p> <p>Dr. Ruma Ghosh, IIT Dharwad</p> <p>Cathy Lee, Global Team Lead RPM, Park Systems Corp, South Korea</p> <p>Dr. Venkatesan, Senior Product Specialist, Lab India Instruments</p> <p>Murugan Sabarigresan, Application Scientist, Park Systems India</p> <p>Ellie Oh, Application Scientist, Park Systems Corp, South Korea</p>	Participation came from various institutes and universities across Kerala and Tamil Nadu, with nearly 200 doctoral and master's students in total.	<p>https://pages.parksystems.com/II-Tvm-Workshop-2025-IISER-TVM-Registration-LP.html</p> <p>https://www.iisertvm.ac.in/news/read/news-afm-workshop-cutting-edge-scanning-probe-techniques-cspt-2025</p>

SCHOOL OF MATHEMATICS

SEMINARS / TALKS - Talks by National Experts						
Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
1	30-03-2025	Multiple Operator Integrals and Higher-Order Operator Differentiation	Dr. Samya Kumar Ray	IISER Thiruvananthapuram	Phd Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-talk-series-talk-by-dr-samya-kumar-ray-on-03042025
2	13-03-2025	Hecke operators on the space of modular forms	Dr. Jishu Das	IISER Thiruvananthapuram	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-talk-series-dr-jishu-das-on-13-march-2025
3	11-03-2025	Quiver representations	Tanisha Talekar	IISER Thiruvananthapuram	CMIT talk series	https://maths.iisertvm.ac.in/story/read/news-cmit-talk-series-talk-by-tanisha-talekar-on-11th-march
4	05-03-2025	Reproducing kernel Hilbert spaces and (complete) Pick property	Ashish Kujur	IISER Thiruvananthapuram	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-talk-series-talk-by-ashish-kujur-on-05032025
5	27-02-2025	A connection between binary forms and 3 dimensional cube	Muneeswaran R	IISER Thiruvananthapuram	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-talk-series-talk-by-muneeswaran-r-on-27022025

Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
6	10-02-2025	Interactive Session with a team from "Allianz Technology" on 10th Feb 2025				https://maths.iisertvm.ac.in/story/read/news-interactive-session-with-a-team-from-allianz-technology-on-10th-feb-2025
7	12-02-2025	grad - div stabilization	Nishant Ranwan	IISER Thiruvananthapuram	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-talk-series-talk-by-nishant-ranwan-on-12th-feb-2025
8	05-02-2025	PhD Students' Talk series : talk by Tony Nixon Mavelly on 05/02/2025	Tony Nixon Mavelly	IISER Thiruvananthapuram	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-students-talk-series-talk-by-tony-nixon-mavelly-on-05022025
9	04-02-2025	To infinity and beyond with ordinals	Ashish Kujur	IISER Thiruvananthapuram	CMIT Talk series	https://maths.iisertvm.ac.in/story/read/news-cmit-talk-series-ashish-kujur-on-4th-february-2025-9-pm
10	06-02-2025	The many dynamics on(f) the shift space	Bharath Krishna S	IISER Thiruvananthapuram	CMIT Talk Series	https://maths.iisertvm.ac.in/story/read/news-cmit-talk-series-talk-by-bharath-krishna-s-on-6th-february-2025-9pm

Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
11	20-12-2024	Cyclic Cubic Extensions, Binary Cubic Forms and Sylvester's Conjecture	Prof. B. Sury	Indian Statistical Institute, Bangalore		https://maths.iisertvm.ac.in/story/read/news-seminar-talk-by-prof-b-sury-isi-bangalore-on-dec-20
12	28-11-2024	Vignettes in Number Theory, Analysis and Ancient Indian Mathematics	Shailesh Shirali	Sahyadri School, Krishnamurti Foundation India	CMIT:S6 Talk series	https://maths.iisertvm.ac.in/story/read/news-cmits6-talk-series-on-27th-nov
13	27-11-2024	On the Pappus' theorem in geometry	Vaibhav Vaish	IISER Mohali	CMIT :S6 Talk series	https://maths.iisertvm.ac.in/story/read/news-cmit-s6-talk-series-on-27th-nov
14	27-11-2024	Cataland: A Romance of Many Bijections	Manjil Saikia	Ahmedabad University	CMIT :S6 Talk series	https://maths.iisertvm.ac.in/story/read/news-cmit-s6-talk-series-on-27th-nov
15	24-10-2024	Representation theory of Lie algebra	Rahul Aat	IISER Thiruvananthapuram	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-students-seminar-series-talk-by-rahul-ata-on-october-24th-2024
16	17-10-2024	The cardinalities of Fatou and Julia sets of rational maps	Bharath Krishna S	IISER Thiruvananthapuram	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-talk-by-bharath-krishna-s-in-phd-students-seminar-series-on-17th-october-2024-400-pm

Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
17	03-09-2024	Some secrets of the Helmholtz equation (Part 2)	Arjun Nair	IISER Thiruvananthapuram	CMIT:Tangent Tuesdays	https://maths.iisertvm.ac.in/story/read/news-cmit-tangent-tuesdays-3rd-september-2024-4pm
18	29-08-2024	Some secrets of the Helmholtz equation (Part 1)	Arjun Nair	IISER Thiruvananthapuram	CMIT:Tangent Tuesdays	https://maths.iisertvm.ac.in/story/read/news-cmit-tangent-tuesdays-on-29th-august-2024-4-pm
19	29-08-2024	Conformal Maps and the Riemann Mapping Theorem: Bridging Complex Domains	Visesh Jyothi	IIT Palakkad	CMIT:Tangent Tuesdays	https://maths.iisertvm.ac.in/story/read/news-cmit-tangent-tuesdays-on-29th-august-2024-4-pm
20	27-08-2024	Large but finite SNS	Yogesh Kumar	IISER Thiruvananthapuram	CMIT:Tangent Tuesdays	https://maths.iisertvm.ac.in/story/read/news-cmit-tangent-tuesdays-26-aug
21	27-08-2024	Analysis of dynamical systems in Cosmology	Soumyadip Niyogi	IISER Thiruvananthapuram	CMIT:Tangent Tuesdays	https://maths.iisertvm.ac.in/story/read/news-cmit-tangent-tuesdays-26-aug
22	20-08-2024	Optimising tissue network configurations	Sinta Maria Siby	IISER Thiruvananthapuram	CMIT: Tangent Tuesdays	https://www.iisertvm.ac.in/news/read/news-cmit-tangent-tuesdays-20th-august-2024

Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
23	20-08-2024	Leveraging Single-Cell RNA Sequencing and Machine Learning to explore MicroRNA Regulation in Kidney Transplant Rejection	Suhana Nujum	IISER Thiruvananthapuram	CMIT event : Tangent Tuesdays	https://maths.iisertvm.ac.in/story/read/news-cmit-tangent-tuesdays-20th-august-2024
24	13-08-2024	Quiver me timbers	Tanisha Talekar	IISER Thiruvananthapuram	CMIT event : Tangent Tuesdays	https://www.iisertvm.ac.in/news/read/news-cmit-event-tangent-tuesdays-13-th-august
25	13-08-2024	Dinitz problem	Aparna Bade	IISER Thiruvananthapuram	CMIT event : Tangent Tuesdays	https://maths.iisertvm.ac.in/story/read/news-cmit-event-tangent-tuesdays-13-th-august
26	07-03-2025	A quadrature based regularization method for ill-posed integral equations	Prof. Thamban Nair	--		https://maths.iisertvm.ac.in/story/read/seminars-seminar-by-prof-thamban-nair-on-7th-march-2025
27	31-01-2025	An invitation to representation theory of finite groups	Mr. Rahul Ata	IISER Thiruvananthapuram	PhD talk series	https://maths.iisertvm.ac.in/story/read/seminars-phd-students-talk-series-by-mr-rahul-ata-on-310125

SI No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
28	28-11-2024	Endpoint estimate of rough maximal singular integral operator	Prof. Parasar Mohanty	IIT Kanpur	Seminar	https://maths.iisertvm.ac.in/story/read/seminars-seminar-by-prof-parasar-mohanty-iit-kanpur-on-28th-november
29	14-11-2024	Continuum and Discrete Models in Particulate Systems: Current Challenges and Future Directions	Prof. Jitendra Kumar	Department of Mathematics, IIT Ropar	Seminar	https://maths.iisertvm.ac.in/story/read/seminars-seminar-by-prof-jitendra-kumar-iit-ropar-on-14-nov-2024
30	29-10-2024	Witt vectors of associative rings	Dr. Supriya Pisolkar	IISER Pune	Seminar	https://maths.iisertvm.ac.in/story/read/seminars-seminar-talk-by-dr-supriya-pisolkar-iiser-pune
31	29-10-2024	Completeness of finite and infinite dimensional Normed Linear Spaces	Mukesh Mithun A D	BS-MS 23 IISER TVM	CMIT:talk	https://maths.iisertvm.ac.in/story/read/seminars-cmit-talk-by-mukesh-mithun-a-d-on-october-29-2024
32	09-04-2024	Importance of the class numbers	R. Muneeswaran	IISER-TVM	seminar	https://maths.iisertvm.ac.in/story/read/seminars-seminar-talk-on-5th-sept-by-r-muneeswaran-iiser-tvm

Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
33	15-07-2024	Approximation by sampling operators	Dr. A Sathish Kumar	IIT Madras	Seminar	https://maths.iisertvm.ac.in/story/read/seminars-seminar-talk-by-dr-a-sathish-kumar-iit-madras-on-15-may
34	20-06-2024	The connection between piecewise linear homeomorphisms and quasimetries of the Euclidean spaces	Prof. Prateep Chakraborty	IIT, Kharagpur	Seminar	https://maths.iisertvm.ac.in/story/read/seminars-seminar-talk-by-prof-prateep-chakraborty-iit-kharagpur-on-200624
35	22-04-2024	A simple extension of Ramanujan-Serre derivative map and some applications	Prof. Brundaban Sahu	NISER	Seminar	https://maths.iisertvm.ac.in/story/read/seminars-event-seminar-talk-by-prof-brundaban-sahu-niser-on-23rd-april
36	23-04-2024	Seminar talk by Prof. Brundaban Sahu, NISER on 23rd April	Prof. Brundaban Sahu	NISER	Seminar	https://maths.iisertvm.ac.in/story/read/seminars-seminar-talk-by-prof-brundaban-sahu-niser-on-23rd-april



SEMINARS / TALKS - Talks by International Experts

SI No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
1	27-03-2025	A stroll through dynamical systems	Dr. Sharvari Neetin Tikekar	Università di Pisa, Italy	PhD Talk series	https://maths.iisertvm.ac.in/story/read/news-phd-talk-series-talk-by-sharvari-neetin-tikekar-on-27-th-march
2	17-03-2025	Lower energy bounds in the Landau-de Gennes model for nematic liquid crystals	Lara Théallier	Humboldt-Universität zu Berlin, Germany	PhD Talk series	https://www.iisertvm.ac.in/events/index
3	10-02-2025	Stability Analysis and Numerics for Hyperbolic problems	Prof. Gerald Warnecke	University of Magdeburg, Germany	Special lecture series	https://maths.iisertvm.ac.in/story/read/news-special-lecture-series-by-prof-gerald-warnecke-uni-magdeburg-germany-from-10th-feb-2025
4	3/17/2025	Seminar by Prof. Maria Lukacova-Medvidova, Uni Mainz, Germany on 19 March 2025	Prof. Maria Lukacova-Medvidova	Institute of Mathematics, University of Mainz, Germany	Venue: PSB1104	https://maths.iisertvm.ac.in/story/read/seminars-seminar-by-prof-maria-lukacova-medvidova-uni-mainz-germany-on-19-march-2025
5	11-12-2024	Seminar by Prof Stefan Tappe, University of Freiburg, Germany on 13 nov 2024	Prof. Stefan Tappe	University of Freiburg, Germany	Venue: ..	https://maths.iisertvm.ac.in/story/read/seminars-seminar-by-prof-stefan-tappe-university-of-freiburg-germany-on-13-nov-2024

SI No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
6	11-12-2024	Seminar by Prof. Boniface Nkonga, Université de Nice Sophia-Antipolis, France on 12th nov at 4 pm	Prof. Boniface Nkonga	Professor, Université de Nice Sophia-Antipolis, CNRS UMR 7351, Laboratoire J.A.Dieudonné, France	Venue: PSB1207	https://maths.iisertvm.ac.in/story/read/seminars-seminar-by-prof-boniface-nkonga-university-de-nice-sophia-antipolis-france-on-12th-nov-at-4-pm
7	9/23/2024	Seminar talk by Mr. Kalin Krishna , University of Göttingen on 26th Sept	Mr. Kalin Krishna	Phd Student, University of Göttingen	Venue: PSB1207	https://maths.iisertvm.ac.in/story/read/seminars-seminar-talk-by-mr-kalin-krishna-university-of-gottingen-on-26th-sept

PHD THESIS DEFENCE and PRE-SYNOPSIS

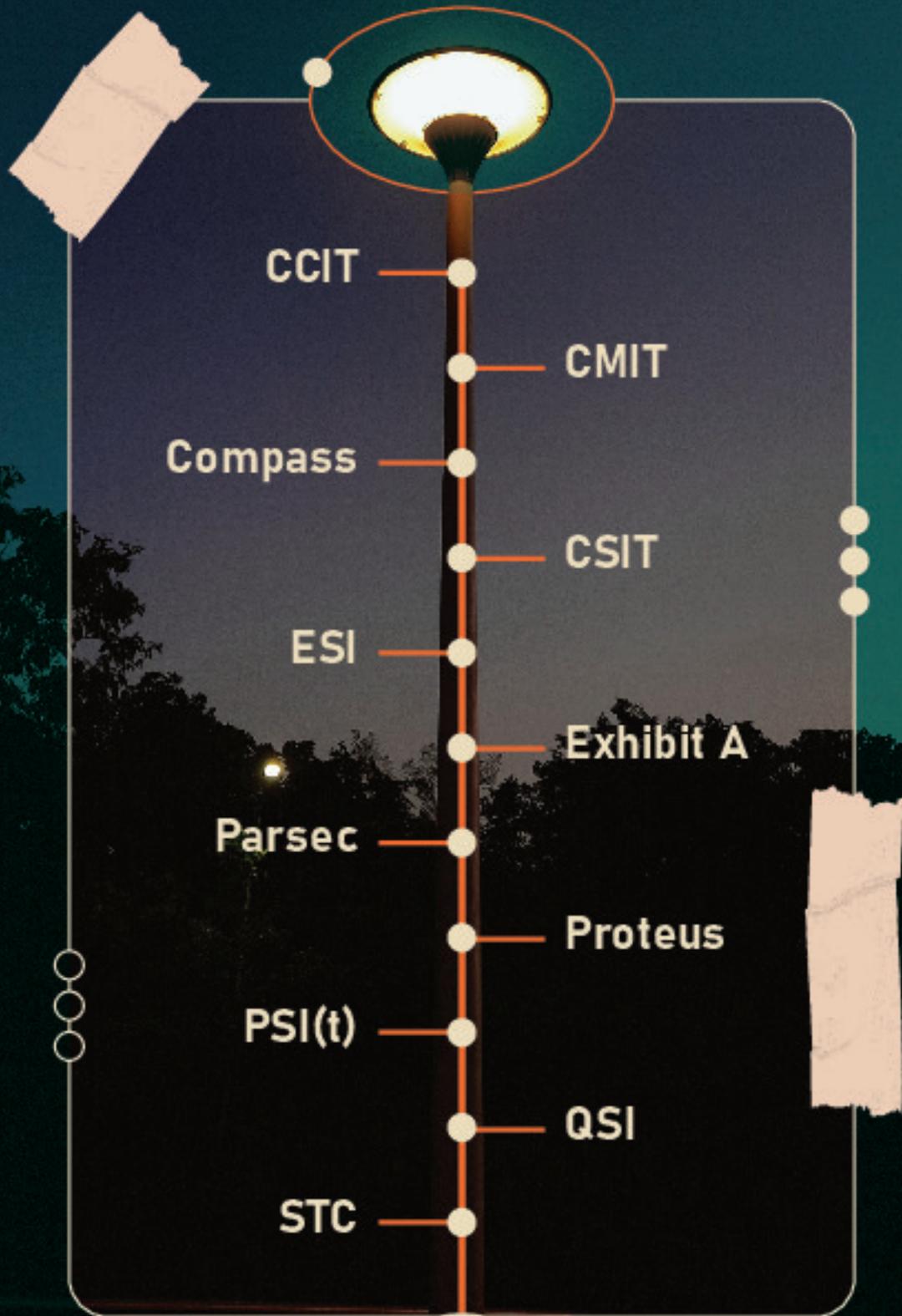
SI No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
1	30-03-2025	Pre-Synopsis Talk by Ms. Sulakhana Chowdhury on 01/04/2025	Ms. Sulakhana Chowdhury			https://maths.iisertvm.ac.in/story/read/news-pre-synopsis-talk-by-ms-sulakhana-chowdhury-on-01042025
2	27-03-2025	Pre-Synopsis Talk by Mr. R. Muneeswaran on 2nd April	Mr. R. Muneeswaran			https://maths.iisertvm.ac.in/story/read/news-pre-synopsis-talk-by-mr-r-muneeswaran-on-2nd-april
3	06-03-2025	Thesis defense of Ms. Pallavi B on 7th March				https://maths.iisertvm.ac.in/story/read/news-thesis-defense-of-ms-pallavi-b-on-7th-march

SI No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
4	19-12-2024	PhD Defence of Tony N Mavelly on Friday, 20th Dec.				https://maths.iisertvm.ac.in/story/read/news-phd-defence-of-tony-n-mavelly-on-friday-20th-dec
5	21-11-2024	Pre-Synopsis Seminar by Shrinath Hadimani on 26/11/2024				https://maths.iisertvm.ac.in/story/read/news-pre-synopsis-seminar-by-shrinath-hadimani-on-26112024
6	12-11-2024	Thesis Defence by Mainak kar on 14th Nov 2024				https://maths.iisertvm.ac.in/story/read/news-thesis-defence-by-mainak-kar-on-14th-nov-2024
7	10-09-2024	Pre-Synopsis talk by Ms. Pallavi B on 12th September				https://maths.iisertvm.ac.in/story/read/news-pre-synopsis-talk-by-ms-pallavi-b-on-12th-september
8	09-05-2024	Event - Ph. D Thesis Defence of Niloopher Salam on May 7, 2024				https://maths.iisertvm.ac.in/story/read/news-event-ph-d-thesis-defence-of-niloopher-salam-on-may-7-2024
9	09-05-2024	Event - Presynopsis talk by Mr. Tony Nixon Mavelly on 8th May 2024				https://maths.iisertvm.ac.in/story/read/news-event-presynopsis-talk-by-mr-tony-nixon-mavelly-on-8th-may-2024
10	09-05-2024	Pre-synopsis talk by Mr. Mainak Kar on 13th May 2024				https://maths.iisertvm.ac.in/story/read/news-pre-synopsis-talk-by-mr-mainak-kar-on-13th-may-2024

OTHERS						
Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
1	08-11-2024	Lectures series on DG schemes for PDE by Prof. Praveen C.	Prof. Praveen C	TIFR CAM, Bangalore		https://maths.iisertvm.ac.in/story/read/news-lectures-series-on-dg-schemes-for-pde-by-prof-praveen-c-tifr-cam-bangalore
2	31-10-2024	CMIT Event: Axiomatica 4.0 on 4th November 2024				https://maths.iisertvm.ac.in/story/read/news-cmit-event-axiomatica-40-on-4th-november-2024
3	29-10-2024	Vigilance Awareness Week				https://maths.iisertvm.ac.in/story/read/news-vigilance-awareness-week
4	31-08-2024	Interactive Session with alumni				https://maths.iisertvm.ac.in/story/read/news-interactive-session-with-alumni-31st-august
5	22-08-2024	CMIT Event: Career Guidance				https://maths.iisertvm.ac.in/story/read/news-cmit-event-career-guidance
6	20-07-2024	12th Convocation of IISER Thiruvananthapuram				https://maths.iisertvm.ac.in/story/read/news-12th-convocation-of-iiser-thiruvananthapuram

Conference/Workshop						
Sl No	Date	Title of the talk	Speaker: Name	Speaker: Affiliation	Brief Comments	Website Link
1	June 26-28, 2024	INTER IISER-NISER MATHEMATICS MEET [INMM - 2024] from 26-28 June 2024				https://maths.iisertvm.ac.in/story/read/events-inter-iiser-niser-mathematics-meetinmm-2024-from-26-28-june-2024
2	January 17-19, 2025	Frontiers Symposium in Mathematics 2025				https://maths.iisertvm.ac.in/story/read/conferences-frontiers-symposium-in-mathematics-2025

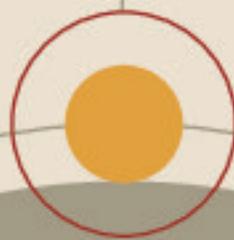
Academic Club Activities



Academic Club Activities - 01



CCIT



STC

CMIT

CCIT, Coding Club of IISER Thiruvananthapuram



Brief Introduction of the Club:

CCIT (Coding Club of IISER TVM) is a Coding, Technology and Innovation themed club operating under the Science and Technology Council (STC). CCIT aim to promote coding and programming in general, and help people find opportunities to learn and apply such skills. The club also fosters innovation and strive to keep the campus updated on the latest developments in science and technology.

To foster this tech savvy spirit, CCIT conducts seminars, webinars, alumni discussions, and movie screenings. We also conduct hands-on workshops and summer projects, for people interested in widening their skill sets. These workshops are generally beginner friendly and are designed in hopes of introducing new concepts and ideas among the students

The club has recently been revived (November, 2024) after a long period of inactivity. CCIT is currently in the process of expanding club operations to a larger scale, even having plans on collaborating with other institutions in the near future



ACTIVITIES OF THE CLUB

Student Talks

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
1	1-11-24	Let's Build AI, Run Simulations, and talk about the universe!	Adam Zacharia Anil 5th year BS-MS-SOP	A talk on the science behind how LLMs work and how LLMs in enhancements in LIGO

Alumni Talks

1	14-12-24	Alumni discussion	Ashutosh Kumar (B19) Faculty of information technology, University of Jyaskyla Krishna Kumar Singh (B19) Astrophysics, University of Leeds	An alumni discussion where the alumni shared their experiences on how coding came into play in their research, their opinions on coding in research and advice for budding scientists
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Competitions

S No	Date	Event Title	Brief Description
1	13-3-25	1303	A quiz conducted in collaboration with QSI (Quizzo Sapiens Insanus)

Screening Sessions

S No	Date	Event Title	Comments
1	10-1-25	<i>The social Network</i>	peaked at 30~ attendees
2	28-2-25	<i>Back to the future II</i>	peaked at 40~ attendees

Other Activities

S No	Date	Event Title	Brief Description
1	7-3-25	Arduino Workshop	Was a hands-on workshop conducted to teach about basic Arduino. Event hosted by N V Eshaan (B23, DS major)
2	11-3-25	Deep Learning Workshop	Was a hands-on workshop, to teach basic Deep Learning concepts and give people an introductory idea on how AI works. Event hosted by Himala Praharsha (B21, DS major), in affiliation with DiL labs



SOCIAL MEDIA CHANNELS OF THE CLUB



Photo: Vimal VM, Electrical section, IISERTVM

-  **Instagram:** <https://www.instagram.com/codingclubiisertvm/>
-  **Whatsapp:** <https://chat.whatsapp.com/DkHag5HxNk2C1d2LrC1Sl>
-  **LinkedIn:** <https://www.linkedin.com/company/ccilisertvm>
-  **GitHub:** <https://github.com/Coding-Club-of-IISER-Thiruvananthapuram>
-  **Club website:** <https://snt-iiser-tvm.github.io/codingclub/index.html>



Photo: Vimal VM, Electrical section, IISERTVM

Photographs and Posters



Let's build AI, run simulations and talk about the universe! (November 1st, 2024)



Movie screening (January 10th, 2025)



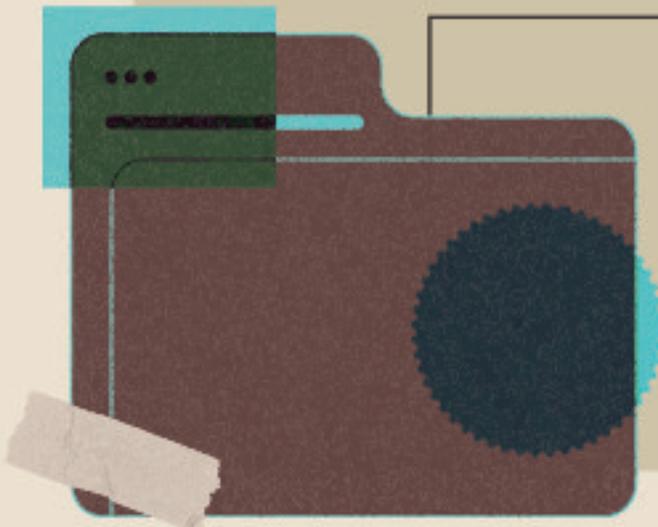
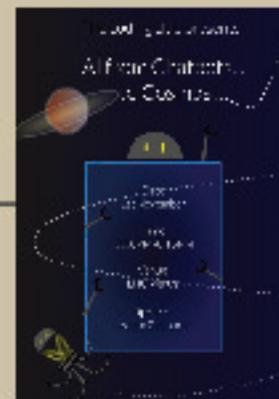
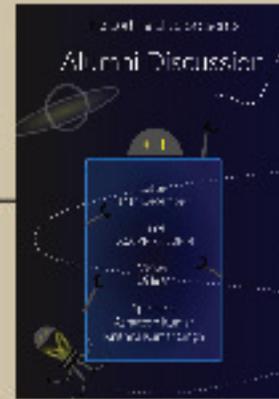
Arduino 101 Workshop (March 7th, 2025)



Deep Learning Workshop (March 11th, 2025)



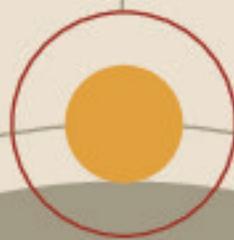
1303 QSI x Coding club Quiz



Academic Club Activities - 02



CMIT



CCIT

Compass

CMIT Club of Mathematics of IISER Thiruvananthapuram



Brief Introduction of the Club:

The Club of Mathematics -IISER TVM is a student-run club aiming to bring together ignited minds to build a strong math community. We encourage a mathematical environment for active discussions and constructive debates in mathematics. Activities at the club cover many things ranging from **Faculty Talks** and **Student Talks** to events like **Integration Bee**, **Pie Day**, and our **annual foundation week Sⁿ**. For the fashion geeks out there, CMIT also has its math merch!



ACTIVITIES OF THE CLUB

Faculty Talks/Seminars				
S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
		S6 Sixth Foundation Anniversary		These online talks were organized as a part of 6th foundation anniversary of CMIT.
1	27 11 24	On the Pappus' theorem in geometry	Dr. Vaibhav Vaish, IISER Mohali	This is a discussion focused on the historical and mathematical journey from Euclidean to Algebraic Geometry, centered around Pappus's Theorem. The talk traces how this classical result continues to inspire modern research, including recent advances by Kollár and collaborators.
2	27 11 24	Cataland: A Romance of Many Bijections	Dr. Manjil Saikia, Ahmedabad University	An alumni discussion where the alumni shared their experiences on how coding came into play in their research, their opinions on coding in research and advice for budding scientists
3	28 11 24	Vignettes in Number Theory, Analysis and Ancient Indian Mathematics	Dr. Shailesh Shirali	The talk covered four topics: an iteration problem in number theory, counting integer-sided triangles, a trigonometric approximation from ancient Indian mathematics, and a number theory problem from IMO 1988. It highlighted intriguing iterations in number theory and explored the enduring mystery behind an ancient trigonometric approximation.
Student Talks				
		Tangent Tuesdays		This is a talk series focused on student summer projects, where students share what they worked on during their internships.
1	13 08 24	Dinitz problem	Aparna Bade	This is a discussion focused on graph coloring, inspired by the famous four-color problem that shaped modern graph theory. The talk explores the Dinitz problem, a challenging coloring question posed in 1978 and elegantly solved by Fred Galvin fifteen years later.
2	13 08 24	Quiver me timbers	Tanisha Talekar	The session explored connections between Artin braid groups, Artin-Tits groups, and quivers. It covered key properties, introduced path algebras, and explained braid actions on the Zig-Zag algebra related to specific quivers.

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
3	20 08 24	Leveraging Single-Cell RNA Sequencing and Machine Learning to explore MicroRNA Regulation in Kidney Transplant Rejection	Suhana Nujum	The talk presented a study on the role of microRNAs in antibody-mediated kidney transplant rejection using single-cell RNA sequencing and an interpretable machine learning method, SLIDE. Key miRNAs and target genes associated with rejection were identified, highlighting potential biomarkers and therapeutic targets.
4	20 08 24	Optimising tissue network configurations	Sinta Maria Siby	The talk focused on using simulation-based inference with the PyTorch package sbi to estimate parameters in a 2-D tissue growth model. It explored how neural network algorithms can improve parameter estimation for mechanistic biological models.
5	27 08 24	Large but finite $\mathbb{S}\mathbb{N}\mathbb{S}$	Yogesh Kumar KC	The talk explored the mesoscopic scale of biological systems, focusing on how intrinsic randomness affects dynamics at this level. It covered methods to derive stochastic differential equations from microscopic models and discussed examples of unusual mesoscopic behaviors in biology.
6	27 08 24	Analysis of dynamical systems in Cosmology	Soumyadip Niyogi	The talk presented dynamical system analysis, highlighting mathematical techniques for solving differential equations and studying system stability. It combined numerical simulations, Bayesian inference, and theoretical physics to explore system evolution over time.
7	29 08 24	Conformal Maps and the Riemann Mapping Theorem: Bridging Complex Domains	Visesh Jyothi A	The talk explored the Riemann Mapping Theorem, covering its statement, historical background, and detailed proof involving harmonic functions, normal families, and conformal mappings. It highlighted the theorem's wide applications across mathematics and discussed its limitations and key assumptions.
8	29 08 24 (1st part) 03 09 24 (2nd part)	Some secrets of the Helmholtz equation	Arjun V Nair	The talk covered research on holographic uniqueness problems for the two-dimensional Helmholtz equation, an open problem in inverse PDEs with physics applications.
9	10 09 24	p-adic Fields	Subhradeep Ghosh	The talk introduced the p-adic absolute value on rational numbers, leading to the construction of p-adic numbers by completing the rationals under this new metric. It covered key properties of p-adic fields and methods for solving equations within them.
10	04 02 25	To infinity and beyond with ordinals	Ashish Kujur	This is a discussion focused on the theory of ordinals, introduced by G. Cantor as a foundational concept in set theory. The session explores ordinals as well-ordered sets that extend the natural numbers, highlighting their arithmetic, structure, and the subtleties that arise in this generalization.

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
11	06 02 25	The many dynamics on(f) the shift space	Bharath Krishna S	This is a discussion focused on shift spaces, a central object in symbolic dynamics with rich connections to graph theory, combinatorics, and linear algebra. The talk introduces the shift map, explores the topological and measure-theoretic structures on shift spaces, and highlights the interplay between these structures that leads to interesting dynamical behavior.
12	11 03 25	Quiver representations	Tanisha Mandar Talekar	This is a discussion focused on the theory of quiver representations and their role in classifying algebraic structures. The talk introduces path algebras, explores connections to root systems, and culminates in Gabriel's Theorem, which links quivers of finite type to Dynkin diagrams.

Alumni Talks

1	26 09 24	Meet up with Alumni	Kalin Krishna(B16) Doctoral student at the University of Göttingen, Germany	This was an informal Q&A session with our alumni Kalin Krishna (B16) where the students could ask him questions ranging from mathematics and career advice to casual, everyday topics.
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Competitions

S No	Date	Event Title	Brief Description
1	04 11 24	Axiomatica 4.0	This was a quiz competition which was organized in collaboration with QSI (Quizzing Society of IISER TVM). This contest is mainly held for the junior batches to help overcome the so-called Math phobia.
2	14 03 25	π -week competitions	These competitions were held in connection with Pi Week 2025.
		π - bytes	Participants have to memorize as many digits of Pi as possible.
		Freehand Bourbaki	It was a freehand circle drawing competition where the circularity of the circle decided the winner.
3	15 03 25	Flash-Talk on Math History.	For Pi Week 2025, we held the competition Flash-Talk on math history, where participants had to present about any incident related to the topic.
4	16 03 25	Pi-uiz 6.0	This quiz competition was held in connection with Pi Week 2025, collaborating with QSI (Quizzing Society of IISER TVM).
5	29 03 25	Epiphany 5.0	In connection Pi week 2025, Epiphany 5.0 was organized which is the math themed treasure hunt. This was conducted via Discord.

Screening Sessions

S No	Date	Event Title	Comments
1	03 09 24	A Beautiful Mind	This movie follows the life of John Nash, a brilliant mathematician whose work in game theory won him a Nobel Prize, while battling schizophrenia during the Cold War era.

S No	Date	Event Title	Comments
2	18 03 25	The Man Who Knew Infinity	This movie tells the story of Srinivasa Ramanujan, a self-taught Indian mathematician whose groundbreaking work with G.H. Hardy at Cambridge changed the world of mathematics. It was screened as a part of pi-week celebrations.

Peer Discussions

1	10 4 24	Riemann's theorem on conditionally convergent series	The talk led by Mukesh Mithun A D is about the proof of the Riemann rearrangement theorem, and introduction to it's generalization by Sierspinski.
2	29 10 24	Completeness of finite and infinite dimensional Normed Linear Spaces	The talk led by Mukesh Mithun A D is about how all normed finite dimensional spaces are complete and all normed infinite dimensional spaces are incomplete and how the case of uncountable infinite dimensions differ in the sense of completeness.

Other Activities

1	22 8 24	Career Guidance	This event is an informal discussion designed to help Mathematics majors explore opportunities for internships and PhD programs.
2	25 11 24	Review series	The review series was conducted to help the students to go through their syllabus in depth and beyond. It also provided a platform for the doubt clearance of students.



SOCIAL MEDIA CHANNELS OF THE CLUB

 **Instagram:** @cmitisertvm

 **Twitter:** Club of Mathematics, IISER Thiruvananthapuram

 **Facebook:** Club of Mathematics, IISER Thiruvananthapuram

 **LinkedIn:** Club of Mathematics, IISER Thiruvananthapuram

 **Youtube:** Club of Mathematics, IISER TVM

 **Website:** <https://cmit.iisertvm.ac.in/>

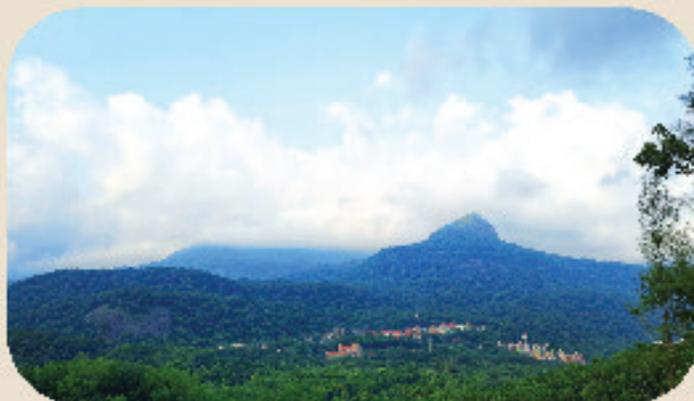
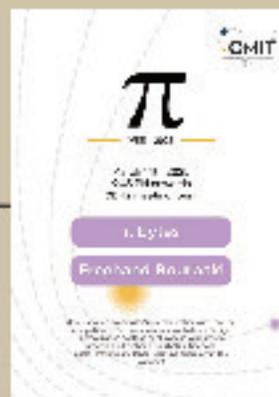


Photo: Vimal VM, Electrical section, IISERTVM

Photographs and Posters



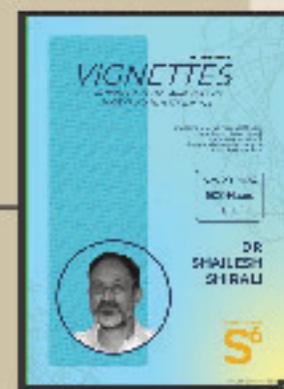
S⁶ Celebrations



PI- WEEK 2025 CELEBRATIONS



PI- WEEK 2025 CELEBRATIONS



TALK SERIES : TANGENT TUESDAYS



TALK SERIES : TANGENT TUESDAYS



TALK SERIES : TANGENT TUESDAYS



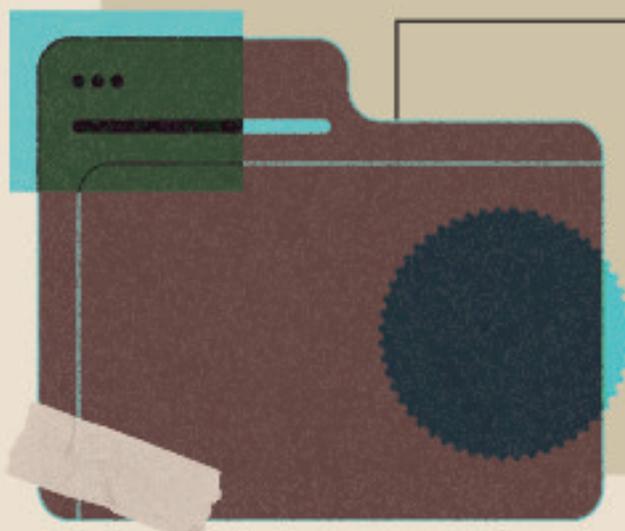
TALK SERIES : TANGENT TUESDAYS



Frontier Symposium



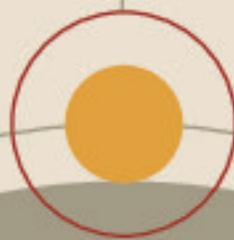
Industry-Academia session



Academic Club Activities - 03



Compass



CMIT

CSIT

COMPASS



Brief Introduction of the Club:

The newest club on campus. Under the school of earth, environmental and sustainability sciences. The club was inaugurated to promote awareness on topics of earth sciences like atmospheric sciences, geology, hydrology, sustainability sciences etc.



ACTIVITIES OF THE CLUB

Faculty Talks/Seminars				
S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
1	26/3/25	Club inauguration	J. N. Moorthy	Inauguration of the club by professor J. N. Moorthy followed by a talk by Dr. V Sathiyamoorthy from VSSC

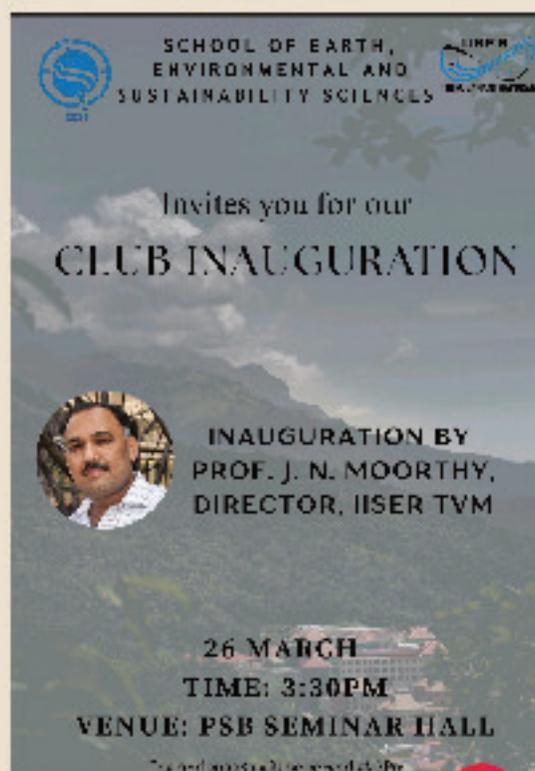


SOCIAL MEDIA CHANNELS OF THE CLUB

Instagram: https://www.instagram.com/compassiiser_tvm?lgsh=MXJ2YWxyeGt2NTNqdQ==



Photo: Vimal VM, Electrical section, IISERTVM



SCHOOL OF EARTH, ENVIRONMENTAL AND SUSTAINABILITY SCIENCES

Invites you for our
CLUB INAUGURATION

INAUGURATION BY
PROF. J. N. MOORTHY,
DIRECTOR, IISER TVM

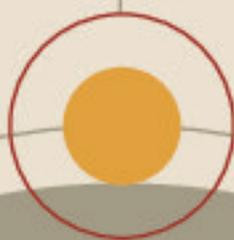
26 MARCH
TIME: 3:30PM
VENUE: PSB SEMINAR HALL

Club inauguration

Academic Club Activities - 04



CSIT



Compass

ESI



CSIT, Chemical Society of IISER Thiruvananthapuram



Brief Introduction of the Club:

The Chemical Society of IISER Thiruvananthapuram (CSIT), established on January 8, 2021 by the Honourable Director Prof. J. N. Moorthy, unites faculty, alumni, and students of SoC (Ph.D., M.Sc., and BS-MS) to foster scientific discussions and collaborations. Through the Faculty, Student, and Alumni Talk Series, we explore cutting-edge research, while our annual symposium, SPECTRA, showcases innovations via lectures, presentations, and networking. Beyond academics, CSIT organises social events like departmental mixers and events engaging our community in fun-filled scientific discussions. As a hub for chemistry enthusiasts, we bridge academia and industry, inspiring the next generation of scientists and celebrating the wonders of chemistry.



ACTIVITIES OF THE CLUB

Faculty Talks/Seminars				
S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
Spectra: Our First Ever Annual Symposium				
1	11/1/25	Molecular Beam Microwave Spectroscopy: Defining Hydrogen Bond and Discovering Carbon Bond	Prof. E. Arunan, Department of Chemistry, IISc Bangalore	For the inaugural edition of this symposium series in the Vasanth 2025 semester, the theme chosen was "Quantum science and applications," which was chosen to align with the "International Year of Quantum" as declared by UNESCO.
2	11/1/25	The Importance of Paths Less Taken in the analysis of spectroscopic data	Prof. Anindya Dutta, Department of Chemistry, IIT Bombay	
3	11/1/25	Higher Harmonic Generation from Atoms and Molecules	Dr. Balanarayan Pananghat, Department of Chemical Sciences, IISER Mohali	
4	15/1/25	Seeing Enzymatic Reactions through Computational Microscope	Prof. Nishant Nair, Department of Chemistry, IIT Kanpur	
CSIT Foundation Week 2025				
1	13/1/25	A Click that Clicked well	Prof. Kana. M. Sureshan, SoC, IISERTVM	Talk on Bridging click chemistry and Polymers
2	13/1/25	Hierarchical Assemblies of Supramolecular Block Copolymers and Star-Shaped Poly(Lactides)	Dr. Bhoje M Gowd, CSIR-NIIST	The talk covered how noncovalent polymer side-chain modification enables hierarchical nanostructures. It explored donor-acceptor assemblies, polymerizable supramolecules, and morphology-dependent emission in polylactides.

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
CRSI-CSIT Inspirational lectures				
1	17/2/25		Prof. E D Jemmis, Department of Inorganic and Physical Chemistry, IISc Bangalore, (Founding Director of IISERTVM)	Inspirational talks delivered by distinguished scientists, offering valuable insights and motivation to young students and researchers.
2	17/2/25		Prof. Robert Mulvay, University of Strathclyde, UK	
3	17/2/25		Prof. J N Moorthy, Director of IISER TVM	

Competitions

S No	Date	Event Title	Brief Description
1	1/9/24	Alpha-bait-ical	An evening of wordplay, fun, and a bit of friendly competition based on Wordle and Hangman
2	16/1/25	Plato'nium	Debate competition with a twist of Chemistry
3	19/1/25	Chemscribble	A fun chemical twist on the popular game of Pictionary
4	21/1/25	Treasure Hunt	A classic treasure hunt, including an escape room
5	22/1/25	Quizone	A chemistry-themed Trivia quiz

Screening Sessions

S No	Date	Event Title	Comments
1	3/11/24	Insider	-

Peer Discussions

S No	Date	Event Title	Brief Description
1	15/03/25 and 25/03/25	CHY 101: Demystifying Reaction Mechanisms	A rundown of the theory of organic reaction mechanisms and its application in complex total synthesis by Ananthakrishna P (BS-MS Chemistry, B21)

Other Activities

1	6/10/24	Bienvenue	Departmental mixer for the new batch of Phds, iPhds, Mscs', BS-MS, and i2Chem students
2	29/11/24	Creating Scientific Illustrations	Workshop for the use of design tools like Canva and Illustrator.
3	25-30/12/24	From Bonds to Breakthroughs	5-day online workshop for students of class 11th and 12th aimed at sparking interest and deepening the understanding of chemical research from 26th - 30th December 2024.
4	13,14/2/25	Elemental Insights: Poster Exposition	CSIT's student poster presentation for the International Conference on Main Group Synthesis and Catalysis 2025



SOCIAL MEDIA CHANNELS OF THE CLUB

 Instagram: [@csit_iisertvm](https://www.instagram.com/csit_iisertvm)

 LinkedIn: <https://in.linkedin.com/in/chemical-society-of-iiser-thiruvananthapuram-csit-0284b720>



Photo: Vimal VM, Electrical section, IISERTVM



Anvesha - Entanglement Lecture by Dr. Amrutha Swaminathan

Photographs and Posters



Spectra posters



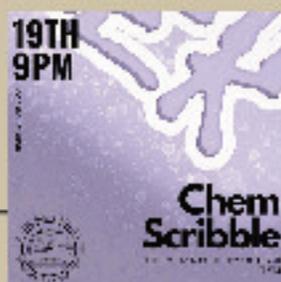
Poster exposition-CSIT



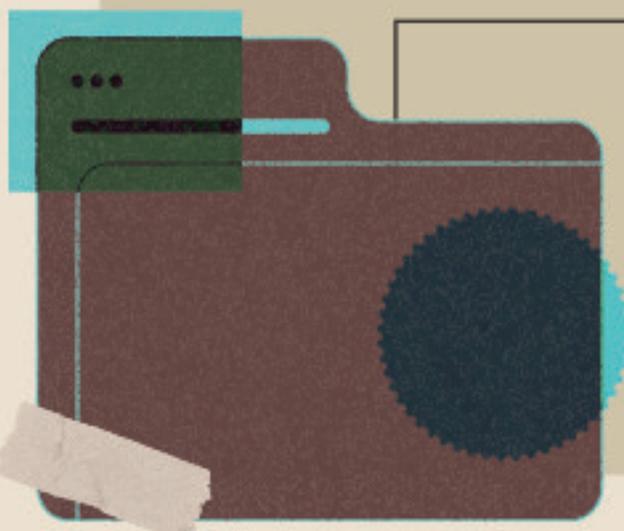
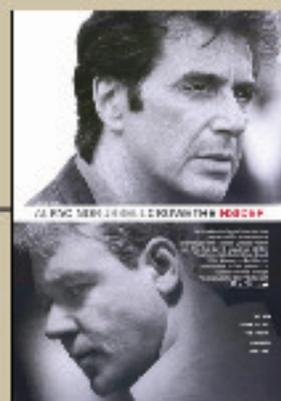
CRSI CSIT



FW 25 posters



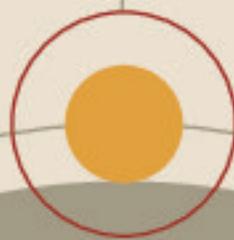
FW 25 posters



Academic Club Activities - 05



ESI



CSIT

Exhibit A

Photo: PARSEC, IISERTUM



ESI, Ecological Society of IISER TVM

Brief Introduction of the Club:

A club of ecology enthusiasts who aim to create awareness about the natural world and the importance of sustainability among our campus community. Focussing on nature education and campus-wide ecological surveys, we conduct numerous events like nature walks, species identification workshops, student talks, wildlife bingos, quizzes, documentary screenings etc. ESI is not just an ecological science-based club, but a group of people passionate about nature, climate change and the environment as a whole.

ACTIVITIES OF THE CLUB

Faculty Talks/Seminars

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
1.	01/09/2024	Butterfly walk	Led by Dr. Ullasa Kodandaramaiah; assisted by Mr. Bhanu Bhakta Sharma, Mr. Sharafudheen Thangal, Dr. Kushankur Bhattacharyya - Vanasiri Lab members	A walk around the campus, as part of Big Butterfly Month (BBM) celebrations, to learn more about different species of butterflies and their ecological importance. Participation was excellent with more than 80 students taking part.
2.	06/09/2024	Faculty talk	Dr. Ullasa Kodandaramaiah, Vanasiri Lab, IISER TVM	An in-person talk by our on-campus expert at butterflies, as part of Big Butterfly Month (BBM) celebrations. The talk was on 'Phenotypic plasticity in butterflies', aimed at undergraduate students. Student response was excellent with around 30 students joining in.
3.	05/10/2024	Much Ado about Moth-ing	Dr. Pritha Dey, Scientist-in-charge, Research Collections, NCBS-TIFR	An in-person workshop on identification of moths was conducted by an expert entomologist, covering the basic characteristics of common moth families, their life history traits, and ecological significance. Student response was excellent with around 40 students joining in.
4.	05/10/2024	Light screening for moths	Dr. Pritha Dey, Scientist-in-charge, Research Collections, NCBS-TIFR	A light screening session by an expert entomologist, following the classroom workshop, for a practical demonstration of observing moths on field. Student response was great with around 30 students joining in.
5.	01/02/2025	Fungi Identification Workshop	Mr. Harikrishnan MT, Scientist, Anthem Biosciences Pvt. Ltd.; expert identifier of Indian mushrooms on iNaturalist	An in-person fungi workshop during Wildlife Week (annual celebration of ESI), conducted by an esteemed mycologist for basic identification of various macrofungi, using characteristics observed on field. Student response was excellent with about 40 people taking part.

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
6.	01/02/2025	Fungi Walk	Mr. Harikrishnan MT, Scientist, Anthem Biosciences Pvt. Ltd.; expert identifier of Indian mushrooms on iNaturalist	A hands-on fungi walk during Wildlife Week (annual celebration of ESI), conducted by an esteemed mycologist following the fungi identification workshop, in and around the campus to learn more about fungi and fun facts about them. Student response was excellent with over 30 people joining for the session.
7.	05/02/2025	Green Talkies	Ms. Ishika Ramakrishnan, Doctoral Fellow, Centre for Wildlife Studies	An online talk conducted as a part of Wildlife Week (annual celebration of ESI), by an ecologist working on ethnographic relationships and cultural perspectives of primate-human interactions in north-eastern India.
Student Talks				
1.	09/08/2024	Insect Walk	Mr. Sanath RM, assisted by Mr. Aakash Kumar Pathak, PhD students, BEE Lab	A night-time informative walk on campus to discover nocturnal arthropod diversity and fun facts about them. Response from the student community was great with over 30 students joining.
2.	06/09/2024	Butterfly Monitoring Presentation	Campus iBMS Project Team	An in-person presentation by iBMS team, the in-house butterfly monitoring project, as part of Big Butterfly Month (BBM) celebrations. Members introduced the project and spoke about their learning journey, current status, collected data and future objectives.
3.	09/02/2025	Green Talkies	PhDs and Post-doctoral members of ICREE	An in-person series of flash talks, conducted as part of Wildlife Week (annual celebration of ESI). It was aimed at the undergraduate student community, where speakers talked about the various interesting themes and questions encountered during their research. Response from the student community was great with over 30 students joining for the talks.
		a)	Mr. Manish Ravi, PhD student, BEE Lab	'A primer on wasps' - The diverse world of Hymenoptera and ecology of wasps
		b)	Dr. Kushankur Bhattacharya, Post-doc, Vanasiri lab	'Animal nests: The epitome of architecture' - Functionality and diversity of nests in the animal kingdom
		c)	Mr. Sharafudeen Thangal, PhD student, Vanasiri Lab	'A closer look into the ordinary' - Appreciating and asking questions about complexities in nature
Peer Discussions				
1.	12/4/2024	Critter Chatter	Ms. Shreya Venkatesan, BS-MS19, IISER TVM	Speaker discussed their summer internship experience on 'Mate choice in female guppy fishes' at Australian National University
2.	16/08/2024	Critter Chatter	Ms. Akriti Pandey, BS-MS22, IISER TVM	Speaker discussed their summer internship on 'Behaviour of free-ranging dogs' at The Dog Lab, IISER Kolkata

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
3.	27/10/2024	Critter Chatter	Ms. Smriti Mahesh, BS-MS20, IISER TVM	Speaker discussed their summer internship experience on 'Spatial ecology of the Asian common toad' at ATREE

Competitions

S No	Date	Event Title	Brief Description
1.	23/08/2024	Eco-Doodles 1.0	Informal pictorial night with the goal of raising awareness about ecology and environment, among new students
2.	21/12/2024 to 15/01/2025	T-shirt Design Competition	As a part of Wildlife Week (annual celebration of ESI), a T-Shirt design competition was conducted (open to students from all colleges).
3.	31/01/2025	Eco-Doodles 2.0	Informal pictorial night, conducted as part of Wildlife Week (annual celebration of ESI), with the goal of raising awareness about ecology and environment, among new students.
4.	02/02/2025 to 09/02/2025	Wildlife Week Bingo	Bingo sheets with species found on the IISER TVM campus and fun tasks, were made and presented as an offline contest. A 6x6 sheet was to be completed within the given timeframe of one week. The event saw excellent participation with around 15 teams (45 students) taking part.
5.	05/02/2025	Wildlife Quiz	As a part of Wildlife Week (annual celebration of ESI), an ecology and wildlife-based quiz was conducted in collaboration with QSI.
6.	15/03/2025	Treasure Hunt	As a part of Wildlife Week (annual celebration of ESI), an extensive treasure hunt was conducted all around the campus. The event saw great participation with around 30 students taking part.

Screening Sessions

S No	Date	Event Title	Comments
1.	07/02/2025	Isle Of Dogs	Movie Screening (around 20 attendees)
2.	30/03/2025	Flow	Movie Screening (around 40 attendees)

Other Activities

S No	Date	Event Title	Brief Description
1.	Throughout the year	Camera Trap	<i>Long-term monitoring programme:</i> We set up multiple camera traps at different locations in the campus to record the wildlife in and around the institute.
2.	Throughout the year	Moth Documentation Project	<i>Long-term monitoring programme:</i> We set up light screens fortnightly at various sites to document the moth diversity on campus, and look for factors affecting their abundances.
3.	Throughout the year	iBMS Project	<i>Long-term monitoring programme:</i> We go on weekly walks along fixed trails on campus, to document the change in butterfly community through seasons and years at IISER TVM (following protocol of the Indian Butterfly Monitoring Scheme).
4.	Throughout the year	Spider Documentation Project	<i>Long-term monitoring programme:</i> Observation and documentation of spiders in campus using iNaturalist, a citizen science database.

S No	Date	Event Title	Brief Description
5.	Throughout the year	Bring Your Own Mug Campaign (#BYOM)	A campaign in collaboration with SWC, encouraging students to bring their own mugs to have beverages at cafes and talks to reduce paper cup waste.
6.	Environment Day and multiple weekends throughout the year	Nature Walks	Walks in and around the campus to rediscover the biodiversity and species richness of the campus.(5-20 attendees)
7.	04/10/2025	Stall at Arvesha	ESI Stall to display the camera trap data, wildlife maps of campus, and some nature education materials
8.	04/10/2025	Stall at Arvesha	A combined stall by the iBMS and Moth Documentation teams, showcasing their data collected over the past semesters and possible inferences; along with a moth screen demonstration, display of insect boxes (specimens collected and pinned by team members and ICREE labs' members), fun games and art.
9.	02/02/2025	Birding Trip to Punchakkari - Velayani Wetlands with Mr. Praveen J, Scientist, Nature Conservation Foundation	Conducted a visit to a Punchakkari-Velayani Wetlands as a part of Wildlife Week (annual celebration of ESI), arranged a commute and visit for more than 60 students. The walk was led by an esteemed birder and citizen scientist in Thiruvananthapuram birding circles.
10.	14/02/2025 to 16/02/2025	Campus Bird Count	A student-organised campus bird count in collaboration with eBird and BirdCount India. This year, IISER TVM recorded the highest, both in number of bird species (92) and submitted checklists (~100) in Thiruvananthapuram district.
11.	After each Semester	Recycling pick-up	After the end-semester exams, used paper and books are collected at assigned spots in Anamudi hostel entrances and CDH-1 and handed over to a Vithura vendor (Mr. Abdul Rahim) from where it is sent for recycling.



SOCIAL MEDIA CHANNELS OF THE CLUB

 Instagram: [@esi_iisertvm](https://www.instagram.com/esi_iisertvm)

 Twitter: [@esi_tvm](https://twitter.com/esi_tvm)

 Substack: [@esi_iisertvm](https://www.substack.com/p/esi-iisertvm)

 LinkedIn: Ecological Society of IISER TVM

Photographs and Posters



Fungi talk



Screening



Green talkies



Punchakarni Birding Trip



Creche Outreach



Creche Outreach



Creche Outreach



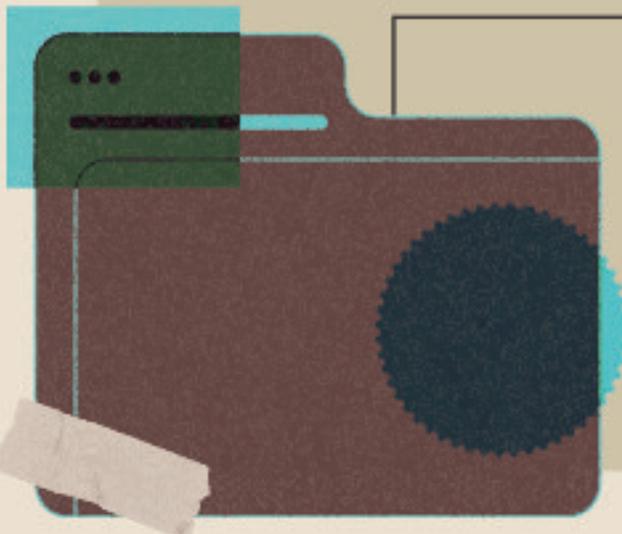
Creche Outreach



BBMwalk Ullasa



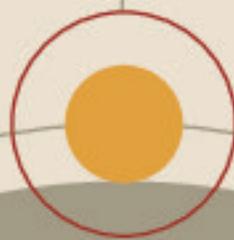
BBMtalks grouppic



Academic Club Activities - 06



Exhibit A



ESI

Parsec

Photo: PARSEC, IISERTVM



EXHIBIT A



Brief Introduction of the Club:

Exhibit A is the official publication of the Science and Technology Council of the Indian Institute of Science Education and Research, Thiruvananthapuram. In research institutes, it is paramount to have a platform where the free exchange of scientific ideas can take place. We seek to critically examine and report on everything-- from the latest in research to established paradigms, all while being a medium of expression for the students of IISER TVM.



ACTIVITIES OF THE CLUB

Competitions			
S No	Date	Event Title	Brief Description
1	03/09/2024	Recruitment Competition	1) Category I - Writing 2) Category II - Art and Design
Editions Published			
1	01/04/2024	April 2024 Edition	This satirical edition for April Fool's Day featured imaginative writing. Samyukta Anand penned tongue-in-cheek horoscopes. Harirud Thampan and S V Roshini reframed menstruation through a werewolf allegory. Bharath Krishna S spoofed mathematical academia. Adrija Basak devised a faux arc reactor blueprint. Aashlesha Chavan parodied gossip culture, and Vedaasri R offered a whimsical guide to navigating the Academic Block.
2	27/05/2024	March-April 2024 Edition	This issue housed articles such as Harirud's account on the potential of acid fly toxins for cancer treatment, Vedaasri's exploration on the interconnectedness and societal impact of vasopressin and oxytocin. Shivam Kumar delved into plant intelligence, and Ritzy Bora penned a poignant poem about chameleons and maternal figures. Bharath Krishna S shone light on the contributions of Indian mathematician S.S. Pillai, and Nirjhar Sarkar introduced readers to the resilience of tardigrades. Devashish Kalmegh shared his experiences from an astrocamp, fostering a love for astronomy. Lastly, Adrija Basak contributed with a series highlighting historical scientific breakthroughs in March and April. All of this was tied together in cover art by Hari Shiyam
3	07/09/2024	May-June 2024 Edition	Articles in this edition delve into mathematical fiction, Victorian fashion and synthetic biology by Hana Lukman, biological warfare by Aashlesha Chavan, ancient eukaryotes by Adrita Biswas, animal migration by R Vedaasri, scientific breakthroughs by Adrija Basak, Indian mathematician Sir Ashutosh Mukherjee by Bharath Krishna S, expanded genetic alphabets by Neelabh Datta, Indus Valley script by S.V. Roshini, and a humanizing poem about remains by Gayatri S. Nirjhar Sarkar discusses creatures before dinosaurs. An examination science club culture also featured. The cover illustrator for this edition was Ashin Vinod

S No	Date	Event Title	Brief Description
4	27/01/2025	July-December 2024 Edition	This edition features an account of students' summer research experiences as well as a piece that guides readers through navigating research papers. Dr. Vinayak Kamble writes about Gautam Kadam, a passionate spider enthusiast. Pranit illustrates Arnold's Cat Map in a comic strip. Adrita Biswas shares an unfiltered account of living with Bipolar Type I Disorder. Adrija Basak humorously describes common challenges faced by new IISER TVM students. Bharath Krishna S demystifies the mathematical concept of $1+2+3+...=-1/12$ and the Riemann Zeta function. Vibhavari, Hana, and Kalyani offer insights into the iGEM competition. Samyukta Anand provides a BuzzFeed-style quiz to find one's ideal Arvesha fest event. Roshini explores constructible numbers, linking geometry and algebra. Lastly, Harirud provides a guide on mastering umbrella usage. Cover illustrations were by Hari Shiyam
5	08/04/2025	April 2025 Edition	This April Fool's edition featured inventive satire across themes of student life, language, and social archetypes. Harirud Thampan and Roshini explored Non-Playable Characters. Samyukta Anand chronicled an alphabetic uprising. Adrija Basak offered a comedic manifesto of girlhood. Aaryaman Rastogi and Adrita Biswas profiled a parodistic species, <i>Homo academicus panicae</i> . Bharath Krishna S proposed a mathematical notational overhaul.
6	10/05/2025	January-March 2025 Edition	This edition featured two articles by Neelabh Datta, one exploring the unexpected dexterity of fruit flies and another examining how zebrafish can contribute to anxiety research through machine learning. Anay Mishra penned an article on patterns observed in the cosmos, while Anay Mishra and Arushi Goyal collaborated on an interview with Prof. G. Ambika, discussing fractals and their abundance in nature. Bharath Krishna S introduced Cantor's theorem in the first part of a new math series, and Keerthan Adiga presented a poem titled "Eight."
Other Activities			
1	11/12/2023	Magazine Stall @Arvesha	<p>Promoted science communication through our magazine by displaying past editions and engaging visitors with interactive games such as:</p> <ul style="list-style-type: none"> Gartic Phone: a science-themed drawing-and-guessing game where a participant received a scientific concept to illustrate, which the next participant interpreted using only the previous illustration as context. Rebus: Players decoded scientific terms using a sequence of images and symbols that phonetically or visually represented each syllable



SOCIAL MEDIA CHANNELS OF THE CLUB



Photo: Vimal VM, Electrical section, IISERTVM

Instagram: [@exhibitA_iisertvm](https://www.instagram.com/exhibitA_iisertvm)

Linktree: [Linktree](#)

Twitter: [@exhibitA](https://twitter.com/exhibitA)

Photographs and Posters



Anvesha Stall 2024



Exhibit A Editions at the Stall



Recent Instagram Posts



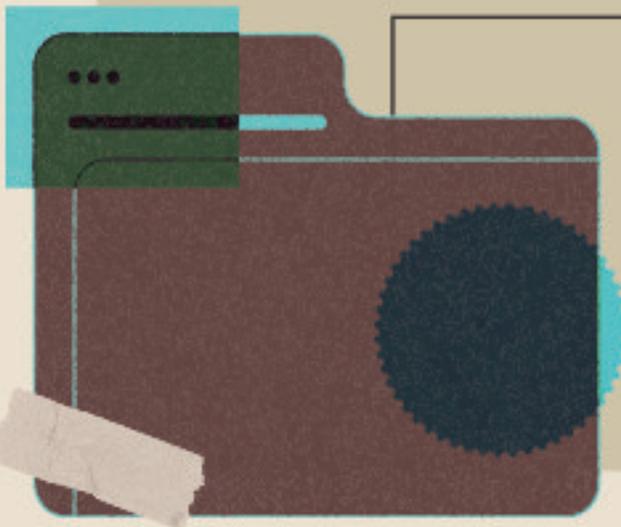
Recent Instagram Posts



Recent Instagram Posts



Recent Instagram Posts



Edition Covers of Exhibit A



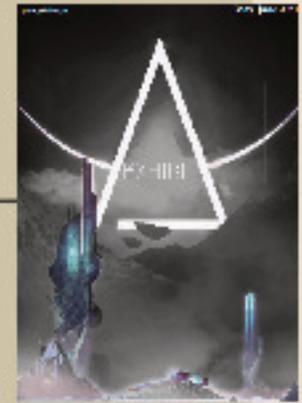
Jan-Feb-Mar 2025



April 2025



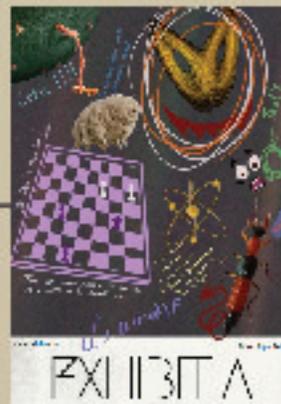
Jul-Dec 2024



May-Jun 2024



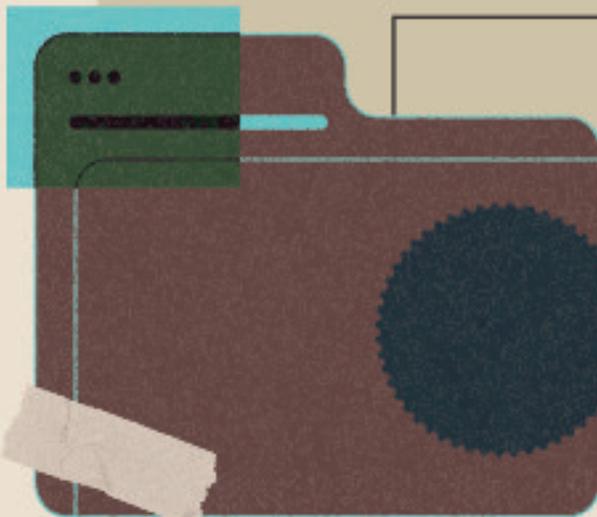
April 2024



Mar-Apr 2024



Photo: Vinal VM, Electrical section, IISERTVM



Academic Club Activities - 07



Parsec

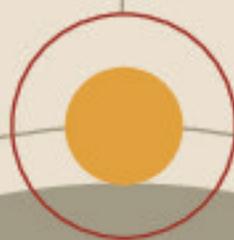


Exhibit A

Proteus

Photo: PARSEC, IISERTVM



PARSEC, Astronomy Club of IISER Thiruvananthapuram



Brief Introduction of the Club:

Parsec is a student-run club under the Science and Technology Council. The club provides a platform for students to discuss their ideas and interests through various activities. The regular activities include Peer discussions, weekly screenings, stargazing, telescope sessions, workshops, outreach activities, and various small-scale projects during the science fest. The idea behind the club is to gather astronomy enthusiasts under one roof and provide them a space to discuss, collaborate, and spread awareness regarding the mysteries of the cosmos.



ACTIVITIES OF THE CLUB

Faculty Talks/Seminars

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
1	30/8/2025	Stellar Steps	Dr. Shabnam Iyyani, School of Physics, IISER TVM Dr. Nitin Yadav, School of Physics, IISER TVM	This event was part of the Foundation Week of the club. The event featured inspiring talks by professors who shared their journeys as astronomers, highlighting their experiences, challenges, and discoveries. It offered students valuable insights into the life and passion behind a career in astronomy.

Competitions

S No	Date	Event Title	Brief Description
1.	17/8/2024	Debate: National Space Day	The debate competition was organized as part of the National Space Week celebrations by the club. Focused on thought-provoking topics related to space science, technology, and exploration, the event aimed to foster critical thinking and effective communication among students. First: Ananthakrishna P, Anushka Kairi Second: Pragun Nepal, Pearl
2.	20/8/2024	Essay Competition: National Space Day	The essay competition was conducted as part of the National Space Week celebrations by the club. Centered around themes in space science and exploration, the event encouraged participants to delve into creative and critical thinking about the cosmos. First: Muhammed Rafi E P Second: Jyoti Singh Third: Hasna Fathima Raseena

S No	Date	Event Title	Brief Description
3.	21/8/2024	Quiz: National Space Day	<p>The quiz competition was organized as part of the National Space Week celebrations by the club. Designed to test and expand participants' knowledge of space science, astronomy, and recent developments in the field.</p> <p>First: Bharat Krishna P, Tony Nixon Mavelly</p> <p>Second: Swathi U</p> <p>Third: Parikshit Yallappa Dombi, Pragun Nepal</p>
4.	26/8/2024	Quiz: Spatium Scientia	<p>The quiz competition was conducted as a part of the Foundation Week program of the club. The astronomy-based quiz was conducted in collaboration with the Quiz club of IISERTVM (QSI).</p>

Screening Sessions

S No	Date	Event Title	Comments (No. of attendees)
1.	6/3/2025	The Planets	20-30
2.	14/3/20205	The Planets 2	20-30

Peer Discussions

S No	Date	Event Title	Brief Description
1.	30/8/2024	Intern-Stellar Talk	<p>This activity was part of the club's Foundation Week. A discussion in which peers share their internship experiences with the students. This session featured discussions with Ayush Shivkumar and Goureesankar S on their astronomical experiences at the Physical Research Laboratory and the University of Heidelberg.</p>
2.	28/3/2025	Dark Matter	<p>This discussion focused on the origin, history, and mathematical foundations of dark matter, starting with fundamental quantum mechanics and extending to the concept of relic density—the current-day number density of these elusive particles in the universe. This was done in collaboration with the Physics Society of IISER-TVM (PSIT).</p>

Other Activities

1.	30/8/2024	Star Quest	<p>This activity was part of the club's Foundation Week. An exciting online treasure hunt that will test your knowledge of the cosmos. An urgent message awaits you, a cry for help from a fellow space lover.</p>
2.	31/8/2024	Telescope Session	<p>The event was organized to observe the Supermoon visible during the period.</p>
3.	4/10/2024	Arvesha: Aficionados and Expo	<p>The club played a crucial role in coordinating projects during the Science Expo, from assisting students in building their projects to managing finances and ensuring the program's smooth functioning. A few projects, like Small-scale Radio Telescope, Transit photometry, etc., were made under the club's guidance.</p>
4.	14/1/2025	Telescope Session	<p>The event was organized to observe the Partial Solar Eclipse and identify the Sunspots during the period.</p>

S No	Date	Event Title	Brief Description
5.	3/2/2025	Star Gazing Session	The event was organized to observe a rare celestial phenomenon known as the Penta-Conjunction, where five planets—Mercury, Venus, Mars, Jupiter, and Saturn—align in the night sky along with the Moon. Participants experienced guided stargazing sessions, exploring this breathtaking planetary alignment through telescopes, while engaging in interactive discussions with experts from ISRO and IISER. This was done in collaboration with the Physics Society of IISER-TVM (PSIT).



SOCIAL MEDIA CHANNELS OF THE CLUB

 **Instagram:** [@parseciisertvm](https://www.instagram.com/parseciisertvm)

 **Twitter:** [@parsec_iisertvm](https://twitter.com/parsec_iisertvm)

 **Facebook:** Parsec, Astronomy Club of IISER Thiruvananthapuram



Photo: Vimal VM, Electrical section, IISERTVM

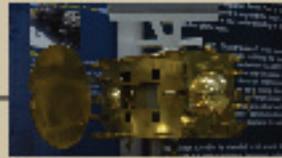


National Space Day

Photographs and Posters



Star Gazing



National Space Day



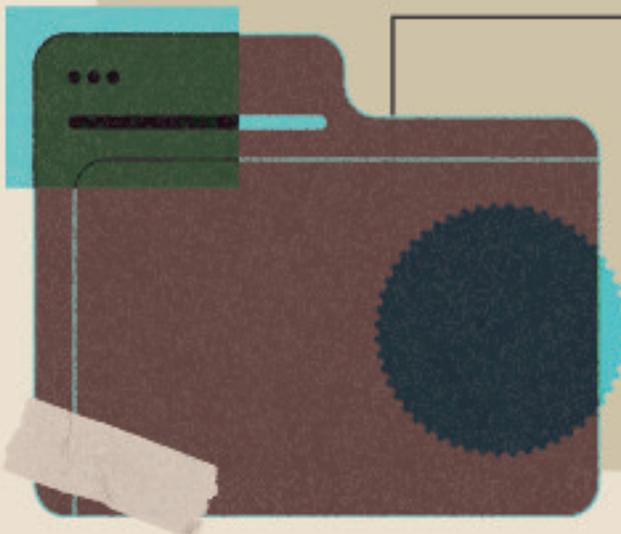
National Space Day



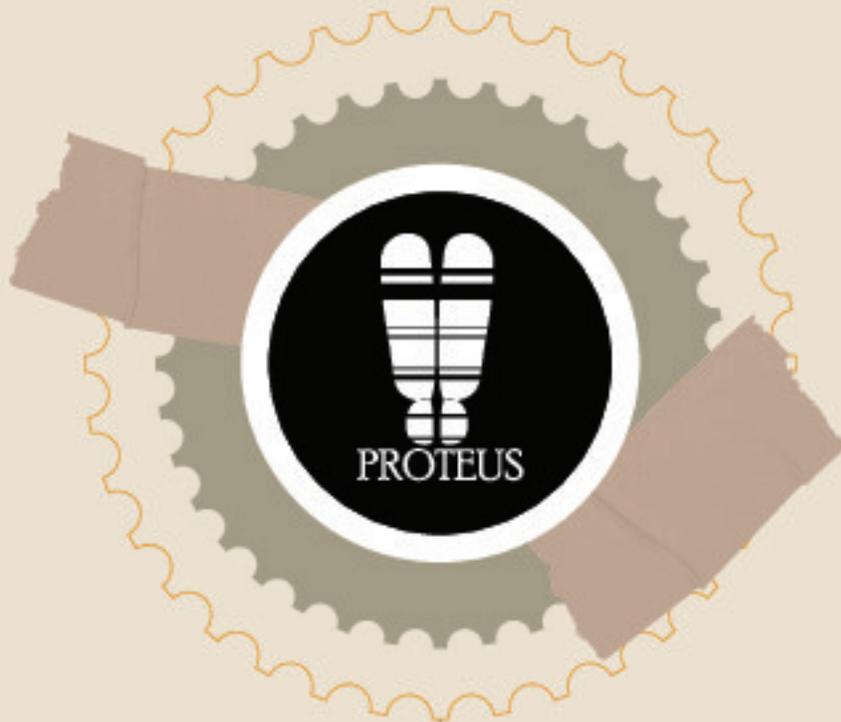
Star Gazing



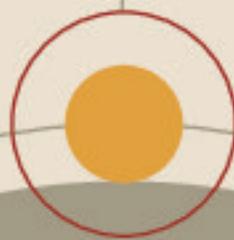
Star Gazing



Academic Club Activities - 08



Proteus



Parsec

PSI(t)

PROTEUS The Biology Club of IISER Thiruvananthapuram



Brief Introduction of the Club:

Proteus is the Biology club of IISER Thiruvananthapuram. We are passionate and enthusiastic individuals who love biology. We aim to spread knowledge of the various fields in biology and foster an appreciation for the subject among students. The club conducts multiple events throughout the academic year, including an annual symposium called Rhetor, which has been conducted successfully for the past five years. The club also runs an outreach program called Shiksha to bring the excitement of biology to schools across India.



ACTIVITIES OF THE CLUB

Faculty Talks/Seminars				
S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
1.	9/04/2024	The Zebrafish Model	Dr. Amrutha Swaminathan, School of Biology, IISER Thiruvananthapuram	Part of our Model Organism Talk Series (MOTS), this talk explored the applications of zebrafish as a model organism.
Pea Party 2.0: A celebration of Gregor Mendel's 202nd birth anniversary				
3.	19/07/2024	Unveiling the Anomalies: Mendel's Struggles with <i>Hieracium</i>	Dr. Ravi Maruthachalam, School of Biology, IISER Thiruvananthapuram	This keynote talk explored Mendel's attempts to apply his genetic principles to <i>Hieracium</i> and his resulting struggles. It provided insight into the limitations of Mendelian genetics.
4.	19/07/2024	Engineering broad-spectrum resistance to bacterial blight disease of rice	Dr. Yugander Arra, CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow	This talk discussed how CRISPR-Cas9/Cpf1 gene editing was used to develop broad-spectrum resistance against bacterial blight in rice. It also discussed how plant breeding tools were used to develop transgene-free cultivars through marker-assisted advanced back cross-breeding.
5.	19/07/2024	Uniparental Genome Elimination: genetic basis and consequences	Dr. M N Ramesh Bondada, Max Planck Institute for Biology, Germany	This talk focused on the epigenetic basis of uniparental genome elimination, highlighting its potential uses in agricultural biotechnology.
6.	20/07/2024	Using genomics to study chromatin structure and function	Dr. Srinivas Ramachandran, Department of Biochemistry and Molecular Genetics, University of Colorado	This talk explained how structural epigenomics uses computational and experimental tools to study chromatin structure and dynamics. It also discussed how cell-free DNA could help surveil disease states, leading to improved cancer diagnostics.
7.	20/07/2024	Application of transcriptomics in crop improvement	Dr. Prabhakaran Soundararajan, NIPGR, New Delhi	This talk explored the uses of transcriptomics in agriculture. In combination with traditional breeding techniques, it is a useful tool to improve crops and enhance sustainability.

Symposium: Rhetor 5.0: Twists of Life: Unravelling the Biological Helix

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
8.	24/08/2024	Connectivity of Birds in the Shola Sky Islands	Dr. V V Robin, IISER Tirupati	Dr. Robin described the Shola sky-island ecosystems in the Western Ghats, talking about their unique endemic species, and how his team used genetic and acoustic data to discover evolutionary patterns. He also highlighted how invasive species caused landscape changes in the region.
9.	24/08/2024	Fascinating Stem Cells in Unravelling the Cell Fate Decision Conundrum	Dr. Nibedita Lenka, NCCS, Pune	Dr. Nibedita discussed her research on the molecular basis of cell commitment and differentiation into various lineages, exploring the genetic and epigenetic factors influencing cell fates during embryonic development. She explained how Wnt signalling and a deubiquitinase play a role in differential fate modulation.
10.	24/08/2024	A Tale of Two Rings: How Cohesin Paralog Differentially Regulate Recombination and Chromosomal Segregation	Dr. Mridula Nambiar, IISER Pune	Dr. Mridula explained how the differential localisation of cohesin paralogs affects recombination and chromosome segregation. She also talked about the potential molecular mechanisms dictating this process.
11.	24/08/2024	Science of Ecology and Human Dimensions of Conserving Snow Leopards (<i>Panthera uncia</i>) in High Asia	Dr. Kulbhushansingh Suryawanshi, NCF Bengaluru	Dr. Kulbhushansingh spoke about efforts to conserve snow leopards, focusing on both the ecological and human dimensions. He also discussed his personal experiences working in the field.
12.	24/08/2024	Studying Insect-Released Proteins and Modulation of Host Immunity	Dr. Jyothilakshmi Vadassery, NIPGR, Delhi	Dr. Jyothilakshmi talked about how insect oral secretions regulate plant immunity. She discussed various insect-released proteins and their function in immune response modulation.
13.	24/08/2024	Sub-cellular and Cellular Compartmentalisation of Lipid Metabolism in Cancer Progression	Dr. Vinay Bulusu, IISER Berhampur	Dr. Vinay detailed the metabolic adaptations of cancer cells under nutrient stress, focusing on lipid metabolism. He also discussed his research on the mechanistic details of lipid metabolic pathways in pancreatic stellate cells.
14.	25/08/2024	The Evolution of Macroscopic Multicellularity by the Genetic Assimilation of Phenotypically Plastic Cell Clustering	Dr. Yashraj Chavhan, IISER Thiruvananthapuram	Dr. Yashraj offered insights into the evolution of macroscopic multicellularity in bacteria and the role of phenotypic plasticity in the process.
15.	25/08/2024	The Astonishing Story of Complex Cells	Prof. Mukund Thattai, NCBS Bengaluru	Prof. Mukund provided an interdisciplinary perspective on the origins of compartmentalised membrane traffic and the evolution of eukaryotes.

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
16.	25/08/2024	Structure-Function Analysis of Glucosinolate Biosynthesis and Transport Processes in Brassicaceae	Dr. Naveen Chandra Bisht, NIPGR Delhi	Dr. Naveen offered structural and functional insights into glucosinolate biosynthesis and transport processes in Brassicaceae. He also talked about how gene editing of the glucosinolate transporter genes could be used to develop improved oilseed crop varieties.
17.	27/08/2024	Sex Determination Mechanisms in Cucurbits and their Implications for Agriculture	Dr. Ravi Devani, Institute of Plant Sciences, Paris-Saclay	Dr. Ravi detailed his work on sex determination mechanisms in cucurbits and its possible applications in agriculture.
18.	29/08/2024	Exploring the Role of Histone Epigenetics in Guiding Cellular Transition during Mammalian Development	Dr. Debasree Dutta	Dr. Debasree explained how histone epigenetics guides cellular transitions of embryonic cells during mammalian development. She also explored the applications of these findings in understanding complications associated with pre- and post-implantation mammalian development.
19.	30/08/2024	The Role of Mathematical Models in Pandemic Management and Development of Vaccines (Online)	Dr. Sunetra Gupta, University of Oxford	Dr. Sunetra explored the uses of mathematical modelling in epidemiology and its roles in pandemic management and vaccine development.
20.	30/08/2024	Rejuvenation of Senescent Cells, In Vitro and In Vivo, by Low-Frequency Ultrasound without Senolysis (Online)	Prof. Michael Sheetz, UTMB Texas	Prof. Michael delineated molecular systems and treatments involved in the rejuvenation of senescent cells.
21.	31/08/2024	Reading Genomes	Dr. M S Madhusudan, IISER Pune	Dr. Madhusudan's talk described the non-random distribution of DNA motifs associated with protein binding. He also explained the data pertaining to the spatial proximity of regions between genes.
22.	31/08/2024	"What I Cannot Create, I Do Not Understand": Applying Feynman's Dictum to Synapses	Dr. Suhita Nadkarni, IISER Pune	Dr. Suhita elaborated on the complexities associated with the construction of detailed in silico models of synapses to better understand their vital role in brain function.

Competitions

S No	Date	Event Title	Brief Description
1.	7/04/2024	Blast 3.0: Shipwrecked	<p>Shipwrecked was an online pirate-themed treasure hunt conducted on Discord. Teams of four competed to solve questions based on (but not limited to) biological concepts to complete the hunt and win a cash prize.</p> <p>Results:</p> <p>First Place: Aniketh Sunil Kumar, Malavika Devi, C Karthik Krishna and Amol Anushree Panse.</p>

S No	Date	Event Title	Brief Description
			Second Place: Samyukta Anand, Nivedha Baskaran, Sweta Chandana, Paarth Manoj
2.	22/08/2024	Quiz: From Protozoa to Peter Parker	<p>The quiz was conducted in collaboration with the Quizzing Society of IISER TVM (QSI). The quiz included questions covering topics across biology. The event was guided by Gatikrushna Mishra and Jyotishko Ghosh.</p> <p>Results:</p> <p>First Place: Bharath, Roshini</p> <p>Second Place: John, Tony</p> <p>Third Place: Samyukta, Vibhavari</p>
3.	1/09/2024	Treasure Hunt: Grand Theft Bio	<p>A treasure hunt with a central theme of spy operatives attempting to acquire a vial containing a fictitious substance that is purported to cause mass destruction. Teams of at most four solved questions at various locations around campus to complete the hunt and find the location of the vial.</p> <p>Results:</p> <p>First Place: Navya P, Jacob G Kurian, Akhila S and Roshin Nazeer</p> <p>Second Place: Pranav M, Kamalika Udhayakumar, Stuti Ganesh</p>

Screening Sessions

S No	Date	Event Title	Comments
1	10/08/2024	Inside the Mind of a Dog	Proteus conducted its first-ever screening: this movie encapsulated a fascinating overview of the scientific and emotional insights regarding dogs. There were about 40-50 people who attended the screening.

Peer Discussions: DNA: Discuss, Network, Ask

S No	Date	Event Title	Brief Description
1	9/09/2024	Guidance Session: Khorana Program for Scholars	An informal session where previous Khorana Scholars Jacob G Kurian, Anagha Muralidharan and A Adheena Lakshmi gave guidance regarding applications and follow-up steps of the Khorana Program for Scholars.
2.	25/01/2025	Summer Internship Guidance Session	An informal session where students Akhila S, Harshini S, and Gopal Kulkarni gave overall guidance regarding summer internships, including mailing, applying to programs, managing expectations, etc.

Other Activities

1	25/10/2024	Grassroots 6.0	This was an orientation program for students of Batch 24 interested in joining the club. They were given a brief introduction to the club and its workings, structure and events conducted.
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SOCIAL MEDIA CHANNELS OF THE CLUB



Photo: Vimal VM, Electrical section, IISERTVM

-  **Instagram:** <https://www.instagram.com/proteus.iisertvm/> (All event pictures are available on our Instagram.)
-  **Twitter:** <https://x.com/proteus.iisertvm>
-  **Facebook:** <https://www.facebook.com/proteus.iisertvm>
-  **LinkedIn:** https://www.linkedin.com/company/proteus-iiser-tvm?original_referer=
-  **Youtube:** <https://www.youtube.com/channel/UCI2xFz0fNma-cW679jgJE0A>
-  **Website:** <https://students.iisertvm.ac.in/proteus/>



Shiksha 2.0

Photographs and Posters



FTS



DNA Session: Guidance for Khorana Program For Scholars



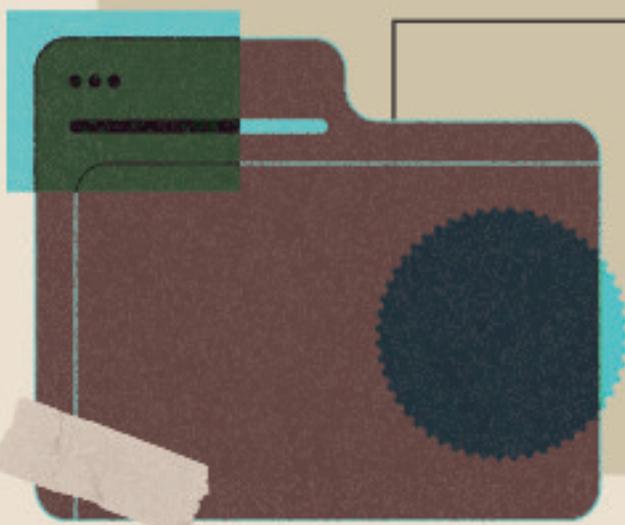
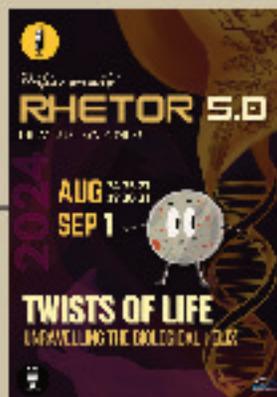
Quiz (In collaboration with QSI): From Protozoa to Peter Parker



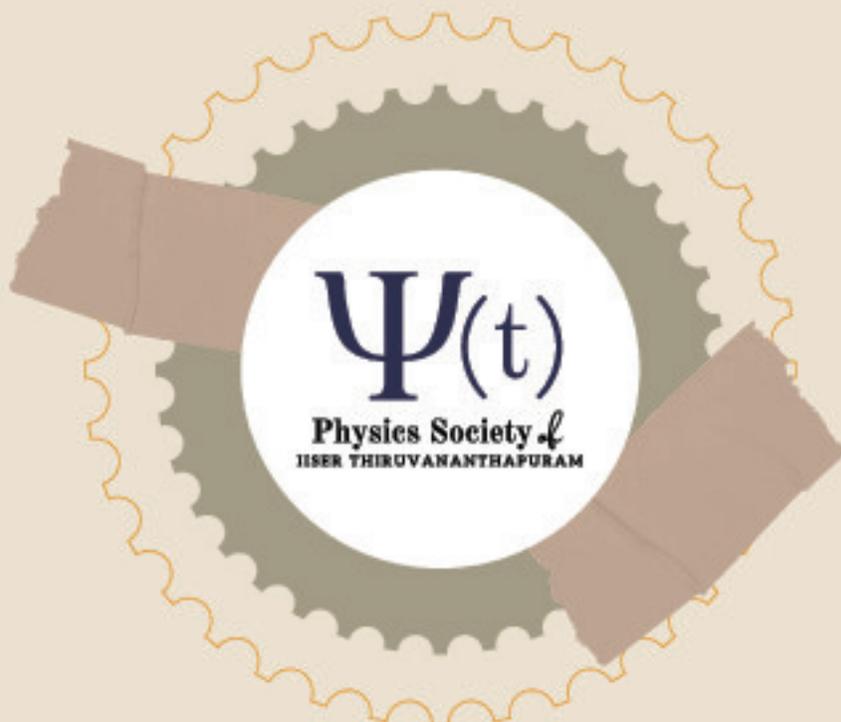
Rhetor 5.0



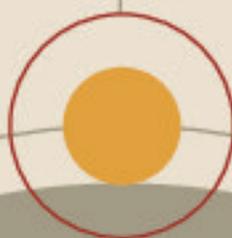
Movie screening



Academic Club Activities - 09



PSI(t)



Proteus

QSI

PSI(t), Physics Society of IISER Thiruvananthapuram



Brief Introduction of the Club:

PSI(t) is a student-run club affiliated to the School of Physics, IISER Thiruvananthapuram. The club provides a platform to the physics enthusiasts to explore, share, and innovate. The club organizes various diverse events, including symposiums, talk series by faculty and students, peer discussions, weekly screenings, outreach events and various online and offline competitions (quiz, illustrations, writing etc), fostering growth and collaboration among its members. Boasting a growing participation rate and a strong online presence over all social media platforms, PSI(t) is dedicated to nurturing curiosity and passion in the field of physics through innovative approaches.



ACTIVITIES OF THE CLUB

Faculty Talks/Seminars				
S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
1	16/5/24	Encapsulate the magic of Light	Dr. Anand Narayan Sarma, School of Earth, Environmental and Sustainability Sciences, IISER TVM	An introductory talk to commemorate International Day of Light, 2024.
2	21/08/24	National Space day celebration Institute colloquium	Dr. V. Narayanan, Distinguished Scientist, ISRO Director LPSC, ISRO	As a part of National space day celebrations, an invited talk by the guest speaker was hosted.
3	23/08/24	National Space day celebration talk	Dr. Shyama Narendranath, U.R. Rao Satellite Centre, Bangalore	An interactive talk delivered by the invited speaker to our IISER community and school students visiting our campus for National Space Day celebrations.
4	10/09/24	PSI(t) Faculty Talk series Tomonaga-Luttinger liquid and quantum criticality in spin-1/2 antiferromagnetic Heisenberg chain C ₁₄ H ₁₈ CuN ₄ O ₁₀ via Wilson ratio	Dr. Deepshikha Jaiswal-Nagar, School of Physics, IISER TVM	The speaker discussed experiments on C ₁₄ H ₁₈ CuN ₄ O ₁₀ , showing it realizes a spin-1/2 Heisenberg chain. Using magnetisation, susceptibility, and specific heat data, they mapped the phase diagram via the Wilson ratio, identifying a quantum critical cone and confirming agreement with conformal field theory predictions
5	19/01/25	PSI(t) 5th Foundation week Talk series #1 (Guest speaker at the Inaugural ceremony) Different Facets of research in Condensed matter theory	Dr. Ranjit Kumar Nanda, IIT Madras	The talk introduced students to various current research topics in the field of condensed matter theory and showed how it spans across different disciplines.

S No	Date	Event Title	Speaker(s) Name and Affiliation	Brief Description
6	21/01/25	PSI(t) 5th Foundation week Talk series #2 Geometry of Nature	Prof. G. Ambika, School of Physics, IISER TVM	This was an introductory talk on fractal geometry, which emphasizes on the abundance of fractals in nature, its benefits and how modern technology is inspired from nature. Further possible research questions related to fractals were also discussed.
7	23/01/25	PSI(t) 5th Foundation week Talk series #3 In search of molecular life in our solar system: opportunities and challenges	Dr. Umesh Kadhane, IIST	The speaker discussed India's growing role in astrochemistry, highlighting research at IIST on complex organics in space and their link to the origin of life. They presented the 2023 pan-India "Organics in Space" initiative aimed at building national labs, international collaborations, and partnerships with the space agency.
8	25/1/25	PSI(t) 5th Foundation week Talk series #4 Black hole Galaxy co-evolution	Dr. Ananda Hota, CEBS	The talk was part of the Rad@home astronomy workshop held which introduced students to image analysis.

Alumni Talks

1	8/02/25	5 years of Particle physics at IISER TVM	<p>Mr. Anirudhan A Madathil, PhD student, University of Utah</p> <p>Mr. Kartik Bhide, PhD Student, University of Freiburg</p> <p>Mr. Gokul Duraikandan, PhD student, Institute of particle and nuclear physics, Charles University, Prague</p>	As part of the 5 years of Particle Physics in IISER TVM celebrations, PSI(t), along with the Particle Physics Phenomenology group, School of Physics headed by Dr. Tanumoy Mandal organised an interactive session with alumni who had previously worked with the group.
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Panel Discussions

1	22/01/25	Women in Science	<p>Dr. R.S. Swathi, Dr. Jerry Fereiro, School of Chemistry, IISER TVM</p> <p>Dr. Priyanka Majumder, School of Data Science, IISER TVM</p> <p>Dr. Deepshikha Jaiswal-Nagar, Dr. Bindusar Sahoo Dr. Vinayak Kamble, School of Physics, IISER TVM</p>	The event was an enriching experience, offering perspectives on the contributions, challenges, and opportunities for women in the field of science. Questions for the panel were collected via Google form prior to the session. Students joined and actively participated by sharing their thoughts. On the spot questions were taken.
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Competitions

S No	Date	Event Title	Brief Description
1	16/05/24	Pictionary	This was a fun activity arranged as part of the International day of light, 2024 celebrations.
2	16/05/24	Photography competition	A photography competition with the theme "The light in our lives" was arranged as part of the International day of light, 2024 celebrations.
3	17/08/24	Debate Competition	As a part of National space day celebrations, a debate was hosted on the theme "Touching lives while touching the moon, Indian space saga".
4	20/08/24	Essay writing competition	An essay writing competition with the theme "Indian space history" was organized as part of the National space day celebrations.
5	21/08/24	Quiz Competition	To enrich our knowledge and explore about the Indian space program, a quiz competition was hosted under the National space day celebrations at SoP.
6	20/01/25	Boltzmann Brains 6.0	A physics trivia quiz was conducted as a part of the 5th foundation week program. Teams of 1-2 were allowed to participate. Winner- Jyotishko and Bidyut Runner up-Roshini and Bharath A prize pool of INR 1022 was awarded to the winners.
7	17/01/25	Photography competition	A physics themed photography competition was arranged as part of the 5th Foundation week celebrations. Winner- Shriya Dhar A prize pool of INR 300 was awarded to the winner.
8	23/01/25	Sci-fi story writing Competition	As part of the 5th Foundation week celebrations, a story writing competition was held. Winner- Megha VV. Runner up- Gayatri S. A prize pool of INR 550 was awarded to the winners.
9	26/1/25	Poster Presentation	A poster presentation competition was held as part of the 5th Foundation week celebrations where students got an opportunity to present their research work/ any topic of their interest to professors and fellow students. Winner- Aleena Grace Trojan Runner up- Arya Raj

Screening Sessions

S No	Date	Event Title	Comments
1	06/04/24	The Martian	
2	25/11/24	Back to the Future	
3	29/03/25	The Imitation Game	

Peer Discussions

S No	Date	Event Title	Brief Description
1	28/03/25	What is Dark Matter?	This discussion by Sarthak Thorat explored the origins of dark matter, beginning with fundamental quantum mechanics and extending to the concept of relic density—the present-day number density of these elusive particles in the universe. The role of baryon number violation and the observed baryon asymmetry was examined.

Other Activities

S No	Date	Event Title	Brief Description
1	19/8/24	Outreach activity for school students and exhibition of space mission replicas and allied technologies	Arranged by LPSC, ISRO, in Crucible for 2 days as part of the National space day celebrations. The exhibit was open for school students in and around Thiruvananthapuram as well as for IISER TVM students.
2	11/9/24	Internship guidance session	Adam and Jacob, BS-MS B-20 students at IISER TVM, with hands-on research experience at MIT and Caltech LIGO Labs, offered to share their knowledge of securing internships. Some of the essentials of a successful internship application are writing compelling CVs, persuasive emails – SOPs, etc were discussed.
3	10/11/24	Exam Review	A course review session was conducted for the B22 for their QM-1 course. The session was hosted by Sarthak Thorat, BS-MS B-20 student at SoP.
4	19/01/25	PSI(t) 5th Foundation week inauguration	The Inaugural session of the PSI(T) foundation week was hosted in the presence of the student body and the faculties of the school. The Director of the Institute Prof. J N Moorthy was invited as the chief guest who addressed the gathering.
5	24/1/25	Games night	As part of the 5th Foundation week celebrations, a fun night of interactive, offline games were organized for the students of IISER TVM.
6	25/1/25	Rad@home workshop by Dr. Ananda Hota, CEBS (Online)	As part of the 5th Foundation week celebrations, a hands-on session on RGB-contour image analysis of galaxies in UV-Optical-IR-Radio bands: FITS image file analysis from GMRT was arranged for IISER TVM students. The session was also kept open for external students for which Rad@home had collected registration fees.
7	3/2/25	Stargazing session - Outreach in collaboration PARSEC	A telescope session was organized as part of Janjatiya Gaurav Divas. The session was arranged for school students from Anappara and Chettachal at Crucible and was also open for IISER TVM students, Professors and their families. Inaugurated by Deputy Director Prof. S. Murty Srinivasula, followed by an interactive session with Dr. Ankush Bhaskar, VSSC, ISRO and Dr. Shabnam Iyyani, School of Physics, IISER TVM.
8	13/02/25	Merchandise	The club released its official PSI(t) merch for sale on its website. It included 2 t-shirts, 1 hoodie and stickers capturing the essence of physical phenomena in the form of creative illustrations.
9	9/03/25	BHEPC conference: Q&A session	As part of the 'Bridging high energy and condensed matter physics' conference organised by the school of physics, a Q&A session for the panel of speakers and students was organised and facilitated. Questions for the speakers were collected prior to the session from the students via a google form, on the spot questions were also encouraged.



SOCIAL MEDIA CHANNELS OF THE CLUB

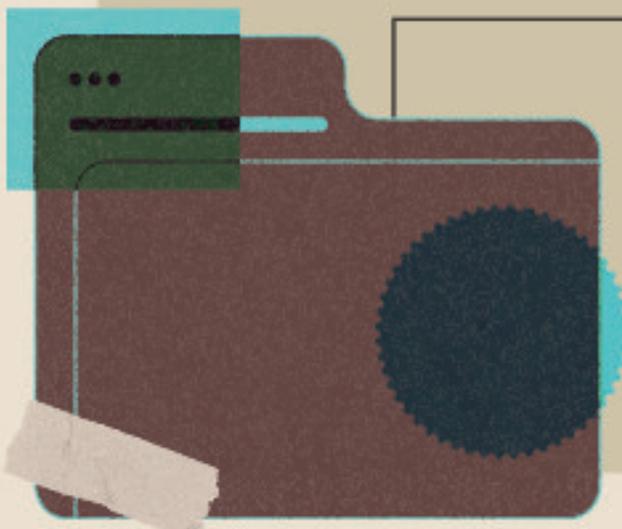
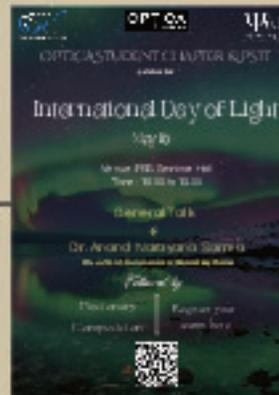


Photo: Vimal VM, Electrical section, IISERTVM

-  **Instagram:** @psitiser
-  **Twitter:** @psit_iisertvm
-  **Facebook:** Physics Society of IISER Thiruvananthapuram,
-  **Youtube:** Physics Society, IISER-TVM
-  **Website:** <https://students.iisertvm.ac.in/psit/>



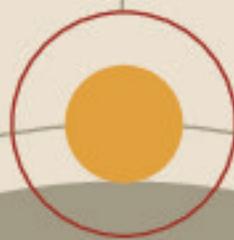
Photographs and Posters



Academic Club Activities - 10



QSI



PSI(t)

STC


Brief Introduction of the Club:

The club is a constant in life on campus, from hosting Put Funda during Ishya to Utsuk and Jigyasa during Anvesha, and everything in between (including collaborations with other clubs). They are always up for hosting a quiz on anything under the sun and, sometimes, beyond it as well. And their WhatsApp group is always abuzz with questions and conversations about everything.


ACTIVITIES OF THE CLUB

Quizzes			
S No	Date	Event Title	Brief Description
1	02/04/24	Life is Beautiful	A general quiz
2	06/04/24	Every Frame A Question	AI quiz on all things cinema hosted by Harish Adithya and Roshini
3	13/06/24	Farewell Quiz 2024	General quiz created and hosted by students from various courses graduating from IISER TVM in 2024. Streamed on Google Meet for alumni.
4	16/04/24	MindSweep (KQA)	International solo written quiz conducted by Karnataka Quizzing Association- our campus was a center
5	16/04/24	MegaWhats (KQA)	National quizzing championship conducted by Karnataka Quizzing Association- our campus was a center
6	09/06/24	QFI Invitational	Hosted a preliminary qualification to the QFI Invitational QFlesta quiz festival - our campus was a centre
7	01/07/24	India quiz	A quiz on - Bharatiya Nyaya Sanhita, 2023; Bharatiya Nagarik Suraksha Sanhita, 2023; and Bharatiya Sakshya Adhinyam, 2023
8	04/08/24	Open General Quiz DQC	A written general quiz organised by Delhi Quiz Club across India with IISER TVM being one of the centres
9	11/08/24	Bharat, Ek Quiz: Inter-Collegiate Quiz Competition	An India quiz to celebrate the 78th year of our Independence open for all college students.
10	11/08/24	Bharat, Ek Quiz: Inter-School Quiz Competition	An India quiz to celebrate the 78th year of our Independence open for all school students.
11	21/08/24	National Space Day Quiz	Hosted as a part of National Space day celebration in collaboration with Parsec
12	22/08/24	From Protozoa to Peter Parker	A biology quiz in collaboration with Proteus
13	28/08/24	Synbio Quiz	A biology quiz in collaboration with the iGEM'24 team
14	01/09/24	Sporting Century Written Quiz	A written sports quiz organised by SQL with IISER TVM being one of the centres
15	06/09/24	Indian Mythology Quiz	Quiz in collaboration with Ganesh Chaturthi Organizing Committee
16	06/10/24	Jigyasa	The official open general quiz of Anvesha, hosted by QSI. The Quizmaster for Jigyasa was Major Chandrakant Nair aka Captain

S No	Date	Event Title	Brief Description
17	16/10/24	The Last Dance	A sports quiz in collaboration with the Sports Council for ITSAV
18	19/10/24	Words Words Words	An informal etymology quiz hosted by Roshini and Jyotishko
19	20/10/24	Utsuk	A school quiz conducted by the members of QSI on the open day of Arvesha
20	22/10/24	Press Play To Start	A video games quiz by Shreya and Arpan
21	25/10/24	IICM Selection Trials	A general quiz for the IICM team selection
22	28/10/24	Taskmaster (The Quiz)	A Taskmaster themed quiz by Samyukta
23	04/11/24	Axiomatica 4.0	General Math quiz in collaboration with CMIT (Club of Mathematics) with special focus on participation of BS-MS 24
24	15/01/25	Kodambakkam Area 2.0	A Kollywood quiz as part of the Pongal celebrations
25	03/02/25	Phir Se Bharat Ek Quiz	An India quiz for the Republic Day celebrations in collaboration with Ek Bharat Shresht Bharat team
26	05/02/25	Wildlife Quiz	A wildlife quiz in collaboration with ESI for their Wildlife Week
27	04/03/25	Science Day Quiz	Interdepartmental science quiz held to commemorate National Science Day hosted by Rohan
28	07/03/25	F1 Quiz	An F1 themed quiz by Bidyut, Aarul, and Sarthak
29	13/03/25	Tech Quiz	Quiz in collaboration with the Coding Club
30	16/03/25	Pi-Uiz 6.0	Math quiz in collaboration with CMIT (Club of Mathematics) on International Pi Day during their Pi-Week celebrations
31	26/03/25	The Wheel Of Trivia Turns	A speculative fiction quiz by Akhila and Samyukta
32	29/03/25	Put Funda	The official open general quiz of Ishya, hosted by QSI. Quizmaster: Major Chandrakant Nair aka Captain
33	29/03/25	OQL Written Quiz	Online Quiz League (OQL) Individual Championship Quiz hosted in IISER TVM proctored by Sarthak



SOCIAL MEDIA CHANNELS OF THE CLUB

 Instagram: [Instagram](#)



Photo: Vinal VM, Electrical section, IISERTVM

Photographs and Posters



Put Funda '25 with quiz-master Major Chandrakant Nair



ICM Trials '24



Utsuk '24 with the school participants



Utsuk '24



Phir Se Bharat, Ek Quiz



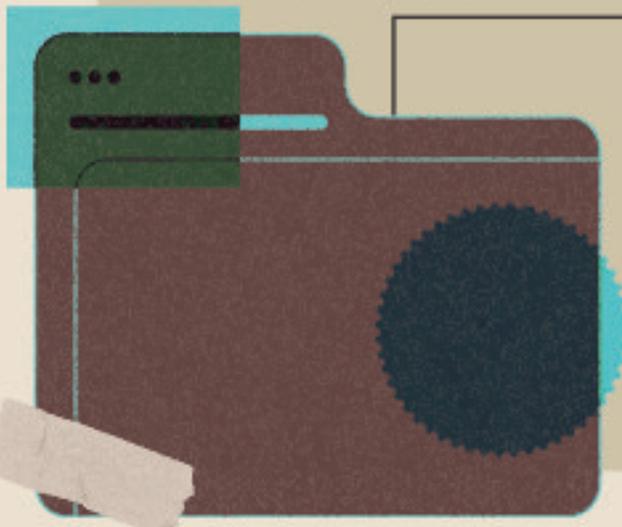
Bharat, Ek Quiz (College) '24



Bharat, Ek Quiz (School) '24



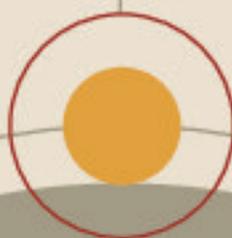
Farewell Quiz '25



Academic Club Activities - 11



STC



QSI

CCIT



Brief Introduction of the Science and Technology Council:

The Science and Technology Council (S&T) is a body of elected student representatives at IISER TVM. The council initially functioned under the guidance of Prof. Utpal Manna (Former Dean, Student Affairs), Dr. Jishy Varghese, Dr. Nisha Kannan, and Dr. Sreedhar Dutta, and since January 2025, under Prof. Rajeev N. Kini (Dean, Student Affairs), Dr. Krishnendu Gope, and Dr. Sanu Shameer. It plays an active role in fostering scientific awareness and curiosity by conducting events such as seminars, workshops, quizzes, stargazing sessions, nature trips, and science talks in our institute. It also provides assistance to new initiatives and clubs in their early stages to help them gain popularity among the student community. The council is responsible for organizing various science-themed events on the campus, including Anvesha, the annual science fest of IISER TVM. Apart from this, the council coordinates activities between various other clubs and also contributes to the growth of the scientific community outside IISER by conducting outreach programs in Crucible, schools etc. The Science and Technology Council has five clubs under its umbrella - CCIT (the Coding Club), ESI (the Ecological Society), Parsec (the Astronomy Club), QSI (Quizzing Society), and Exhibit A (the science magazine).

S&T Council '24-25'

The Science and Technology Council (2024–2025) comprises 11 student members, led by the Secretary. The council brings together students with diverse expertise, working collaboratively to organize impactful scientific activities, outreach programs, and events across the institute.

The current council members are:

- Ishaani R Kamath (IMS21083) - Council Secretary
- Aryan Bhatia (IMS21257)
- A Adheena Lakshmi (IMS21002)
- Abhiram Mahesh (IMS21255)
- Himala Praharsha (IMS21210)
- Aashlesha Chavan (IMS22084)
- Alan Varghese Jophy (IMS22031)
- Ravikiran Thalikal (IMS22206)
- Arvind Lomrore (IMS23055)
- A J Nithin (IMS23001)
- Pearl (IMS23194)



Photo: Vinal VM, Electrical section, IISERTVM

Competitions conducted by the Council

Pre -Anvesha

S No	Date	Event Title	Brief Description
1	26/09/2024	Potpourri	<p>'Potpourri' is a collection of crosswords, riddles, and brain teasers presented to challenge and engage your mental faculties. This event invites individuals or pairs to demonstrate their problem-solving skills with a variety of challenging and intriguing puzzles.</p> <p>FIRST: "RIP I am Team": Samyukta Anand (B21), Vibhavari</p> <p>SECOND: "The Misses Cellaneous": Arundhati Chaudhary, Arundhathi Indu Valsaraj</p>
2	28/09/2024	Crime Scene Investigation (CSI)	<p>One of the largest online events organized by the Anvesha '24 team, participants registered in teams of 2 to 4 members to solve a confidential crime mystery.</p> <p>FIRST (tied): Team 1: Samyukta Anand, Aryan Bhatia, Saswat Subhankar, Devashish Kalmegh</p> <p>Team 2: Arundhati Chaudhary, Anushree Panse, Arundhathi Indu Valsaraj, Ruchitha Prajwala Br</p>
3	29/9/2024	Treasure Hunt	<p>In this event, teams of three traveled across the campus, searching for agents, collecting clues, and solving the final puzzle. The activity included a variety of challenges, such as decoding ciphers and solving crossword puzzles.</p> <p>FIRST: Akalyaa, Riya</p> <p>SECOND: Devashish Kalmegh, Samyukta Anand, Shahnaz</p>
4	2/10/2024	Inquisitio	<p>Team Inquisitio organized the fifth edition of the online inter-collegiate treasure hunt, Inquisitio 6.0, as a highlight of the Anvesha festival.</p> <p>FIRST: "Chad Squad": Akshar N Kumar, Sidharth M R, Hari Govind K J (IISER TVM)</p> <p>SECOND: "Fusion of Forces": Akriti Kumari, R Subhashree, Nupur Upadhyay (IISER TVM)</p> <p>THIRD: "The Horcrux Hunterz": Rudra Sahu, Anubrata Mandal, Soumyojyoti Pal (IISER PUNE)</p>

Anvesha

5	4/10/2024	Aficionados - Science Expo	<p>The Science Expo, in collaboration with various academic clubs, offered a platform for individuals to showcase their creativity and passion for science. Participants from diverse fields presented both physical models and theoretical demonstrations, captivating and inspiring the audience. They were encouraged to think innovatively and explore new frontiers in science, aiming to engage and motivate the curious attendees.</p> <p><u>PHYSICS</u></p>
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S No	Date	Event Title	Brief Description
			FIRST: "Acoustic Levitation": Aasritalakshmi Vyshnavi, Naadia Navas, N V Eshaan, Sudip Sardar, Praneetha Velaga, Sandesh Pandey
			SECOND: "Ionic Thruster Boat": Shashwata Chattopadhyay (I PhD), Jubin George Mathew, Arpan Aryam John, Adithya A, Shahnaz, Vedaasri R
			SPECIAL MENTION: "Ionic Thruster", "Seawater Battery"
			<u>CHEMISTRY</u>
			FIRST: "Underwater Fireworks": Saikat Mandal, Chandni Kinkar Mohanpatra, Ramith Krishna Enoth
			SECOND: "Rayon": Hansika Khatri, Saurav Jyoti Das, Harekrishna Jena, Sarada Priyambada, Sibha Prasad Ghosh
			SPECIAL MENTION: "Fluorescein"
			<u>MATHEMATICS</u>
			FIRST: "Cut and Fold Theorem": Christopher, Aaryaman Rastogi, Nilanjan Goswami
			SECOND: "Rational Tangles": SV Roshini
			SPECIAL MENTION: "Quantum Walk"
			<u>BIOLOGY</u>
			FIRST: "Cell Revolution": Gauri S Menon, Dhriti A Bangalore, Ann Mary George, Ajin VL
			SECOND: "Plant Disco": Aditi Lal, Aditya Singh Chauhan, Krupa Atul Kumar, Sehaj Bhat
			SPECIAL MENTION: "Phage POCALYPSE", "Butterfly and Moth Documentation Project", "Stress Response and Regeneration in Planaria"
			<u>DATA SCIENCE</u>
			FIRST: "Muscle Wave Classifier": Eshaan Naga Venkata, Jalvadi Malini
			SECOND: "Cup Matching Game": Mandala Vikas, Kondaveeti Tejaswi, Vishwa Teja
			SPECIAL MENTION: "Human Pose Estimation"

S No	Date	Event Title	Brief Description
6	4/10/2024	Informals	No festival is truly complete without games, and in the spirit of Anvesha, we curated a range of scientific games that combined fun with learning. These interactive activities were crafted to engage both students and visitors, adding an extra level of excitement to the event.
7	5/10/2024	Black Box (PSIT)	<p>Blackbox is an exciting game that challenges your skills to the fullest as you attempt to identify and organize a circuit based on specified input and output signals.</p> <p>FIRST: Ayush Parimal Siddha</p> <p>SECOND: Keerthan Adiga, Kathirvelan</p>
8	5/10/2024	BAHfest	<p>A humorous science contest that features funny and intentionally absurd scientific theories. Participants share their satirical hypotheses with a comedic touch, often offering bizarre explanations for real-world events.</p> <p>FIRST: SV Roshini, Harirud Thampar, Aashlesha Chavan</p> <p>SECOND: Samyukta Anand, Shahnaz, Padmanabhan Kannan</p>
9	6/10/2024	Integration Bee	<p>Participants are encouraged to get ready and prepare for an exciting contest on integration methods. The event began with the Integration Bee for real functions, followed by the Integration Bee for complex functions. The top performer was awarded the distinguished title of Grand Integrator of IISER Thiruvananthapuram, 2023.</p> <p><u>Real Part</u></p> <p>FIRST: Pranit Sai</p> <p>SECOND: Harish Adhitya</p> <p><u>Complex Part</u></p> <p>FIRST: Aswin P R</p> <p>SECOND: Naga Arjun S J</p>
10	6/10/2024	Jigyasa	<p>The general open quiz of Anvesha, hosted by QSI. The Quizmaster for Jigyasa was Major Chandrakant Nair</p> <p>FIRST: Akhil Ghosh, Zaman S Khan, Rithwik K</p> <p>SECOND: Mahendra Balu, Sangeeth, Jose Thomas THIRD: Rakesh TP, Tony Nixon, Sarath V R</p>
Post- Anvesha			
11	20/10/24	Utsuk (QSI)	<p>The general school quiz of Anvesha, hosted by QSI.</p> <p>FIRST: Jian Jomy, Akhil Krishna (Assisi Vidyaniketan Public School, Kakkanad)</p> <p>SECOND: Akshaya Pradeep, Gowri S A (GGHSS Cotton Hill)</p> <p>THIRD: Vinu Hari Nair, Dakshin Chandran C.G (St. Mary's Resi.Central School, Poojappura)</p>

Workshops				
S No	Date	Title	Speaker(s) Name and Affiliation	Brief Description
1	4/10/2024	Magical Science	Prof. Anil Kumar, IIT Bombay	In this engaging workshop, Prof. Anil Kumar from IIT Bombay explores the intersection of magic, science, and education. Titled "Magic & Science: The Art of Active Learning and Research," the session aims to demonstrate how curiosity-driven methods, including scientific "magic tricks," can make learning more interactive and research more intuitive. It's a unique blend of entertainment and insight, designed to inspire creative thinking and active engagement in science.
2	5/10/2024	Much ado about moth-ing	Priya Dey, NCBS	An interactive classroom session named "Much ado about moth-ing" about moth identification and citizen science, followed by a light-trapping session, was organised by the Ecological Society of IISER-TVM.
3	22/10/2024	Arting Science	Dr. Bitasta Das, Senior Editor & Coordinator (Humanities), Indian Institute of Science	The Arting Science team at IISc is dedicated to bridging the gap between artistic expression and scientific inquiry. Through innovative workshops and projects, they showcase how creativity can enhance the understanding and appreciation of science.
4	5/10/2024	Scie-Art Workshop	Rafeeque Mavoor, Scientific Illustrator	It covered everything from Blender and its super cool interface to creating 3D models. Pro tips to make visually attractive posters and presentations, as well as resources that will help to master Blender post-workshop, were also discussed

Talks				
S No	Date	Title	Speaker	Brief Description
1	4/10/2024	Entanglement Lecture	Dr. Ashutosh Pandey, IISER TVM	The talk on "Geosciences for a Sustainable Future" by Dr Ashutosh Pandey covered the layers of the Earth and atmosphere, a brief overview of Earth's formation over time, and an introduction to research in Earth sciences, highlighting its importance in understanding our planet and contributing to a sustainable future.
			Dr Amrutha Swaminathan, IISER TVM	During the entanglement lecture on the topic "Biology Across Scales", Dr. Amrutha Swaminathan talked about how we study the science across various hierarchies -

S No	Date	Title	Speaker	Brief Description
				from collective behaviour of species to organelles that make up a single cell
2	7/1/2025	Nobel Lecture Series '24 #1 On the Economic Sciences Nobel	Dr. V. Santhakumar, Azim Premji University	The 2024 Nobel Prize in Economic Sciences was awarded to Daron Acemoglu, Simon Johnson, and James A. Robinson "for their studies of how institutions are formed and affect prosperity." In the lecture, the speaker delved into how the trio's work explains why some nations grow rich while others stay poor, emphasizing the importance of inclusive political and economic institutions. The session saw keen interest from both early-year students and faculty members, as it connected historical insights with present-day global development challenges.
3	8/1/2025	Nobel Lecture Series '24 #2 On the Physics Nobel	Dr. Suraj S Hedge, School of Physics, IISER Thiruvananthapuram	The 2024 Nobel Prize in Physics was awarded to John J. Hopfield and Geoffrey Hinton "for foundational discoveries and inventions that enable machine learning with artificial neural networks." The lecture highlighted the development of neural networks, from Hopfield's work on memory models to Hinton's pioneering contributions to deep learning. Attendees, ranging from curious undergraduates to researchers, were introduced to the scientific roots of artificial intelligence that shape much of today's technology.
4	9/1/2025	Nobel Lecture Series '24 #3 On the Chemistry Nobel	Dr. Vinesh Vijayan, School of Chemistry, IISER Thiruvananthapuram	The 2024 Nobel Prize in Chemistry was awarded to David Baker, Demis Hassabis, and John Jumper "for the development of methods for protein structure prediction and design." In the lecture, the speaker explored how AlphaFold and computational tools have revolutionized the understanding of protein structures and enabled the design of novel proteins. With applications spanning medicine, biotechnology, and sustainability, the talk engaged a diverse audience of students and faculty, sparking discussions on the future of molecular science.

S No	Date	Title	Speaker	Brief Description
5	28/02/25	National Science Day	Prof. Rakesh Bhatnagar, Former vice-chancellor, BHU. Prof. Chandrabhas Narayana, Director, RGCB	The National Science Day 2025 celebration was held on 28th February 2025 in LHC Aryabhata, IISER Thiruvananthapuram. Distinguished talks were delivered by Prof. Rakesh Bhatnagar, renowned for his pioneering work on anthrax vaccines and leadership in biotechnology education, and Prof. Chandrabhas Narayana, a leading figure in Raman spectroscopy and biophotonics research. There were about 150 people, including staff, faculty. The occasion effectively brought attention to the value of interdisciplinary research and scientific progress, motivating the IISER community to actively participate in current scientific issues.

Outreach Activities

S No	Date	Event Title	Brief Description
1	4/10/24	Institute Open Day	The annual Open Day, organized by Anvesha, attracted over 400 participants. Attendees had the opportunity to explore various projects and initiatives across departments, engaging with researchers and faculty members. Noteworthy features included Entanglement lectures covering diverse topics of interest, as well as hands-on experiences in departmental labs, fostering meaningful exchanges. A visit to the Crucible was also included, where attendees learned about different projects developed by our students. The event aimed to promote public engagement with academic and scientific endeavors, providing attendees with valuable insights and experiences.
2	08/02/25 - 10/02/2025	IISER TVM Stall at All India Science Conference	As part of the All India Science Conference held from 8–10 February 2025 at Tagore Theatre, Thiruvananthapuram, students from IISER TVM participated in a public outreach effort by setting up an interactive science demonstration stall. Organized by the S&T Council, the stall showcased hands-on experiments from Crucible, the institute's outreach centre. The aim was to spark curiosity and promote scientific thinking among the public, especially students, through engaging and informative demos. Undergraduate and postgraduate volunteers from IISER TVM explained the science behind each exhibit, encouraging discussion and learning. Part of the Breakthrough Science Society's larger mission, the stall stood out for its dynamic approach to science communication, echoing the conference's theme of "Science for Society." The volunteers were: Adhla P

S No	Date	Event Title	Brief Description
			Ann Eliza Joseph Maadhav Sahni Yash Mhatre Jaikerthan Arjun S
3		Crucible	<p>This year, we launched Crucible, an interactive science exhibit facility designed to enhance our outreach efforts. It features dedicated labs for Mathematics, Physics, Chemistry, and Biology, where visitors, especially school students, can engage with hands-on experiments. The highlight is the Exhibit Hall, which displays award-winning projects from past Anvesha editions. Crucible has quickly become a key attraction during outreach programs, offering an engaging platform for science communication. Guided tours and demonstrations are conducted during these visits, helping to inspire curiosity and scientific thinking in young minds.</p> <p>This year, we conducted the following outreaches:</p> <p>27/09/2024 - CG-Counsellors, Tamil Nadu</p> <p>09/10/2024 - GVHSS Vellanad</p> <p>25/10/2024 - Jawahar Navodaya Vidyalaya, Chettachal, TVM</p> <p>8/11/2024 - SS Samitis Higher Secondary School, South Goa</p> <p>11/11/2024 - Navodaya Vidhyalaya, Kollam</p> <p>06/12/2024 - Gifted Student Programme, Kottarakkara</p> <p>10/01/2025 - Model School, Tamil Nadu</p>

Miscellaneous activities

Sr No	Date	Title	Brief Description
1	4/10/2024	Poster Presentation	Anvesha Poster Presentation is a vibrant platform for students to showcase their scientific ideas, ongoing research, or intriguing concepts they are passionate about. Open to participants across all academic levels—from BS-MS students to PhD scholars—the event celebrates clear, engaging science communication aimed at a diverse audience, including fellow students, faculty, and visiting school groups. This year, the event saw enthusiastic participation from around 40–50 students, reflecting a rich mix of disciplines and academic stages.
2	6/10/2024	Contraption	<p>Contraption (as part of Anvesha) was one of the most fun and anticipated activities of Anvesha '24, bringing together students from all years in a spirited display of creativity and teamwork. Held in the Indoor Complex this year, the event invited participants to design elaborate chain reactions using everyday household items.</p> <p>The excitement was palpable as the Director himself graced the occasion, officially kickstarting the event. Contraption featured multiple crowd-pulling highlights, including intricately set up dominos, a floating boat mechanism, playing cards, and a spectacular Anvesha logo set on fire, which marked the grand and fiery conclusion to the event. It was a true celebration of innovation, precision, and collaborative energy.</p>
3	13/03/25	Café Scientifique	<p>The Science and Technology Council organized another session of Café Scientifique. The event featured Dr. Nitin Uttam Kamble from the School of Biology, who shared insights into his research on protein repair in seed embryos and endosperm diversity across seed species.</p> <p>Held in a relaxed setting, the session encouraged open discussion between students and the speaker. Attendees, around 15 in number, engaged actively, asking questions and exploring the real-world impact of plant biology research. The event successfully promoted scientific curiosity and helped create a relaxed and approachable environment where students can interact directly with the faculty.</p>



SOCIAL MEDIA CHANNELS OF THE CLUB

- Instagram: [@anveshaliser](#)
- Twitter: [@SciTech_Iiser](#)
- Crucible Webpage: [@crucible.site](#)
- Crucible's Instagram: [@crucible_iisertvm](#)



Photo: Parthiban, Electrical substations team, IISERTVM



Anvesha main Decor model

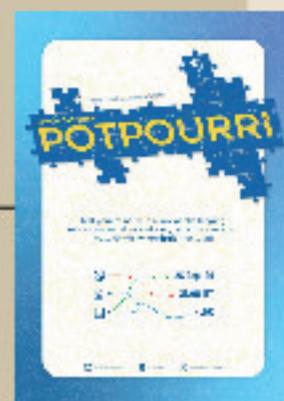
Photographs and Posters



Anvesha: Much Ado about Moth-ing



Anvesha: Contraption



Students visiting Anvesha Expo stalls



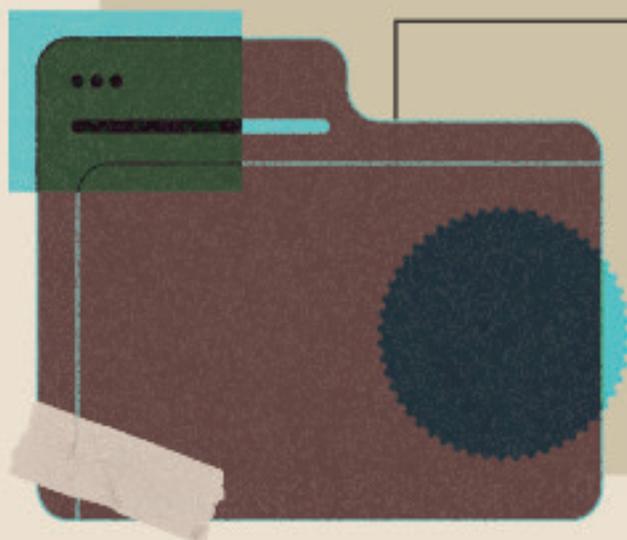
Cafe Scientifique

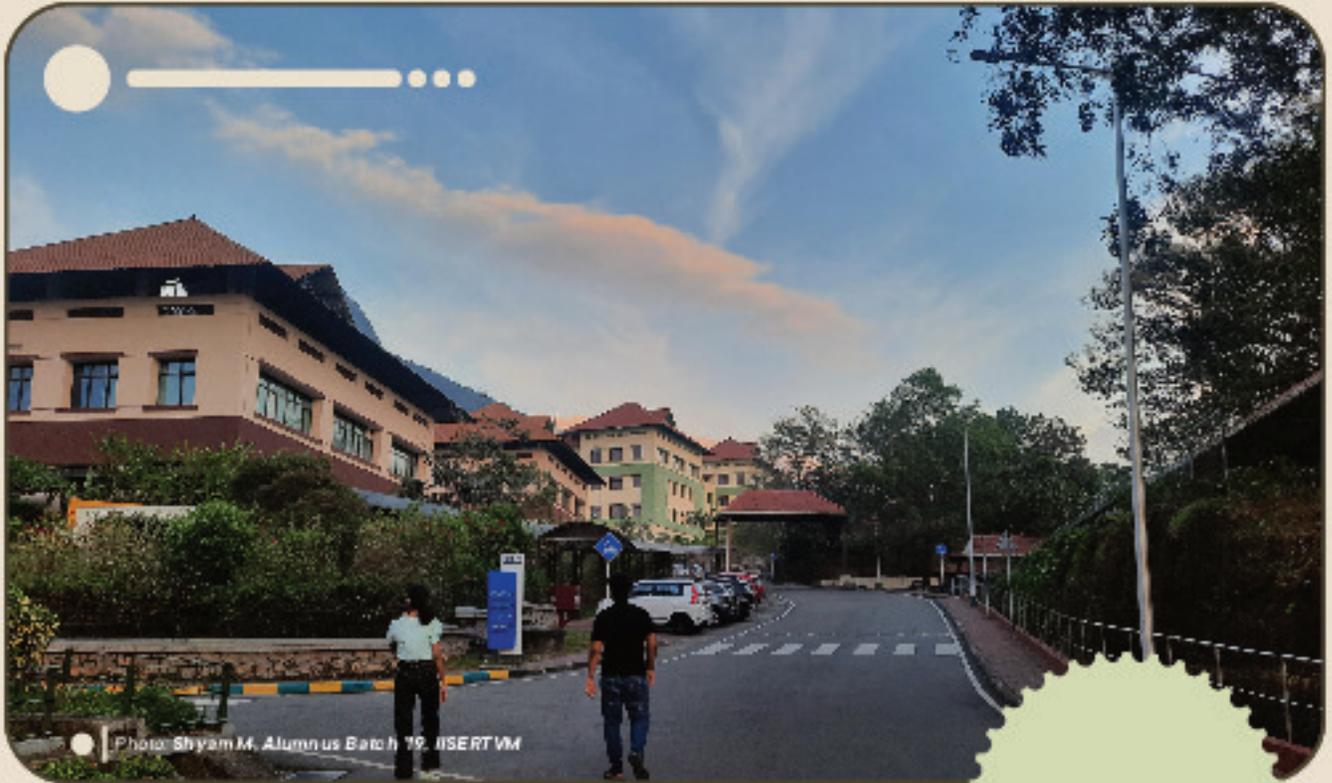


All India Science Conference



National Science Day





Cultural Council Activities...

CULTURAL COUNCIL IISER Thiruvananthapuram

Faculty in charge: Dr Amrutha Swaminathan, Dr Alwin Poulose

Secretary: Gayathri Binu, BS-MS 2021

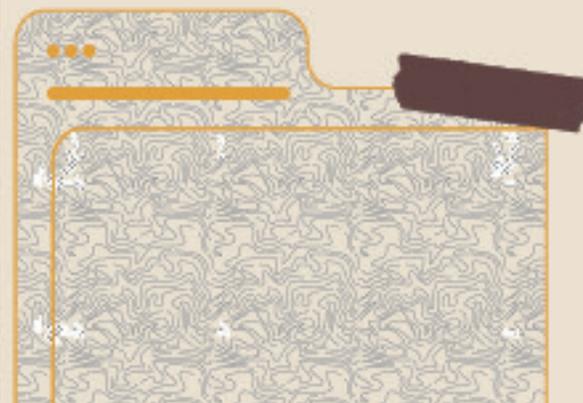
The Cultural Council is a student-elected body operating under the Student Affairs Council, dedicated to fostering and showcasing the diverse talents within the IISER Thiruvananthapuram community. Established in 2019, the Council has steadily expanded to include eight major sub-societies and five sub-clubs, all of which actively engage students through a wide array of artistic and literary events, contributing to a lively and dynamic campus culture.

One of the Council's key responsibilities is organizing *Ishya*, the institute's flagship cultural festival held during the Vasanth semester. *Ishya* is rapidly gaining recognition as one of Kerala's premier cultural events, featuring an exciting lineup of both inter and intra collegiate competitions and performances. In addition, the Council represents IISER TVM at various cultural festivals and competitions hosted by other institutions, including the Inter-IISER Cultural Meet.

The various social media platforms of the council, sub-societies and *Ishya* is linked below:

- Cultural Council: [Facebook](#) and [Instagram](#)
- [Dance Society](#)
- [Music Club](#)
- [Movie Club](#)
- [Literature and Fine Arts Society](#) (Sub-clubs: Book Club & Oratory Club)
- [Sopanam Magazine](#)
- [Media Society](#)
- [Theatrics Society](#) (Sub-Club: Fashion Club)
- [Humanities Collective](#) (Sub-club: [Mazhavil- Pride Club](#))
- *Ishya*: [Facebook](#), [Instagram](#), [Website](#) and [YouTube](#)

The elected representatives of the Cultural Council 2024-2025 during the 2023-24 term.



DANCE SOCIETY:

Spokesperson: Gayathri K G, Aysha Ferzin, Swathi Sreeram

DANCE WORKSHOPS CONDUCTED BY THE SOCIETY:

GARBA WORKSHOP (27 OCTOBER 2024):

A Garbha workshop was successfully organized on 27th October 2024 in collaboration with the Diwali

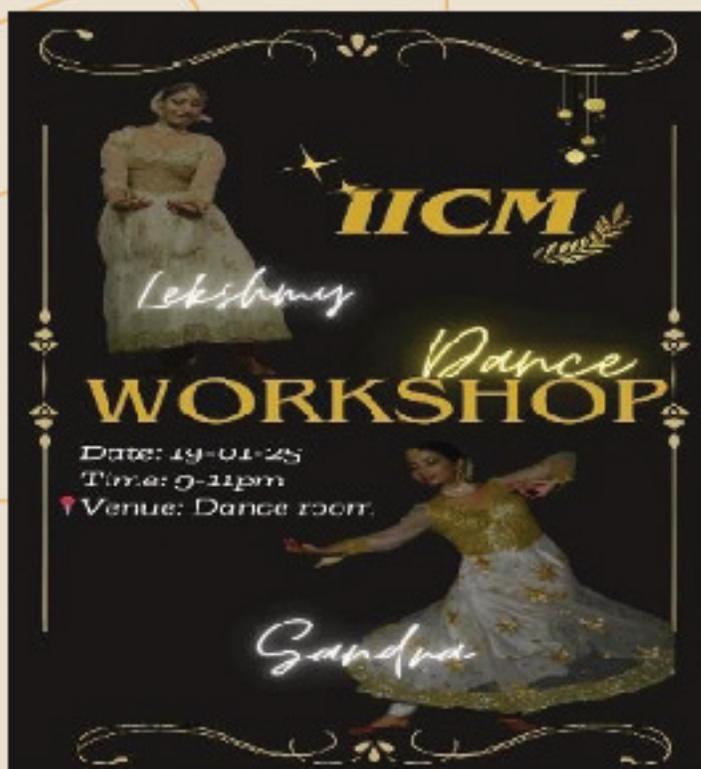
The workshop was conducted at the basketball court and saw enthusiastic participation from students across various batches. The session was aimed at teaching traditional Garba steps and promoting cultural celebration in the spirit of Diwali. On the occasion of the Diwali celebrations on campus, the participants from the workshop showcased an energetic performance.



Committee. The poster and the announcement for the same were publicised through the official Instagram page of the Dance Society.

WORKSHOP BY SANDRA AND LEKSHMY (19 JANUARY 2025):

On 19th January 2025, Sandra and Lekshmy from Batch-22 – the winners of the Synchro Dance category at the Inter-IISER Cultural Meet 2024 – conducted a classical dance workshop. The session focused on



introducing participants to classical dance techniques and expressions, drawing from the duo's rich experience and refined performance skills. They also taught a segment of the choreography that had won them the first prize.

The workshop served as both a learning experience and an inspiration for aspiring dancers on campus.



It received an enthusiastic response, with many students expressing interest in having more such tutorials on classical dance in the future.

EVENTS:

ORIENTATION FOR BATCH 24 (22 OCTOBER 2024):

An orientation session was conducted for Batch '24 to introduce them to the Dance Club and its activities. The session included a brief presentation,



interactive performances, and an open invitation to join the club.

TALK BY Dr.METHIL DEVIKA (7 JANUARY 2025):

In collaboration with the Humanities Collective of IISER Thiruvananthapuram, we had the honour of hosting Dr. Methil Devika – a renowned classical dancer, scholar, and research supervisor – for an awe-inspiring talk titled



Indian Classical Dance Explorations
From Self-Expression to Spatial Expression

Dr Methil Devika
 Indian classical dancer

7th January 2025, Tuesday
 PSB Seminar Hall
 6:15 – 7:15 PM

Logos for IISER Thiruvananthapuram, Humanities Collective, and other partners.

"From Self-Expression to Spatial Expression." Dr. Devika shared her profound journey into the world of classical dance, weaving together her personal experiences, artistic philosophy, and academic insights. The event was well-received, sparking thoughtful discussions and appreciation for the intersection of art and academia.

HOOK STEP CHALLENGE (15 JANUARY 2025):

As part of the Pongal and New Year celebrations, the Dance Club conducted a Hook Step Challenge on 15th January 2025. Participants recreated signature dance moves from popular songs, contributing to the festive atmosphere with creativity and enthusiasm. The event received active participation and highlighted the campus's vibrant dance culture.

DANCE SOCIETY ON STAGE:

INDEPENDENCE DAY



HINDI DIWAS CELEBRATIONS(28 SEPTEMBER 2024):



REPUBLIC DAY DANCE (26 JANUARY 2025):



ISHYA INAUGURATION PERFORMANCE (20 MARCH 2025):



ISHYA INAUGURATION PERFORMANCE



ACHIEVEMENTS AT IICM 2024:

The students of IISER Thiruvananthapuram secured second prize in the Group Dance and first prize in the Synchro Dance categories at the Inter-IISER Cultural Meet (IICM) 2024, held at IISER Kolkata in December. This remarkable achievement highlighted the team's talent, dedication, and collaborative spirit. The team also competed at 'Dhanak 2024' organised by IIST Thiruvananthapuram, where they mesmerised the audience with their performance.



INSTAGRAM PAGE AND REELS:

The Dance Society's Instagram handle remained active throughout the academic year, serving as a platform for engagement and creative expression.



Various online initiatives, such as the *Trending Reels Challenge* and the *Tribute Series*, were conducted, encouraging participation and showcasing the

talent of IISER TVM students.

The page was also used to promote reels featuring IISER TVM students, including the Diwali reel, Pongal reel, and International Dance Day reel, among others. It served as a key platform to publicise the annual IISER Cultural Meet, *Ishya*, thereby enhancing engagement and visibility across the student body. Posts congratulating the winners of the IICM 2024 dance categories were also shared to celebrate their achievements.



MUSIC CLUB

October

In the month of October, the new council was formed along with the election of the new Decision-Making Committee (DMC). The month of October was a vibrant and eventful period for the Music Club, marked by a series of engaging and meaningful activities that welcomed new members and celebrated musical expression in its various forms.

1. Jamming cum Orientation Session

To induct the incoming batch into the musical community of our institution, the Music Club organized a Jamming cum Orientation Session. The event witnessed an enthusiastic participation of around 40 students, all eager to engage and explore their musical interests. It served as an interactive platform for the new members to familiarize themselves with the club's activities, and express their talents.



2. Foundation Day Performance - 'Shades of Kalyan'

As part of the Foundation Day celebrations, the Music Club presented 'Shades of Kalyan', a thoughtfully curated classical music performance that paid homage to the timeless beauty of the Kalyan family of ragas. The performance offered a soulful journey through classical compositions, blending tradition with emotion. It was met with warm appreciation from the audience and stood out as a highlight of the foundation day festivities.

Spoke person: Sandra T.R, Nandu C K, R Raghav

3. IICM Auditions

The auditions for the Inter-IISER Cultural Meet (IICM) event were also conducted in October. The session attracted approximately 30 participants across various genres, including Western, classical, Carnatic, Hindustani vocal, and instrumental music. The auditions revealed



a wealth of talent among the students, and the panel had the challenging task of shortlisting performers who would represent the institution in the upcoming IICM event. From the students who participated in the audition, 16 were selected to represent the music events at IICM 2024.

November

In November, the Music Club organized a Christmas Carol-Sing Along night, a heartwarming gathering that brought our community together perfectly. The



gathering, held in front of the indoor stadium, was filled with joy, laughter, and holiday spirit. With passionate participation from all batches, the night exemplified

the true essence of Christmas: love, togetherness, and celebration. The atmosphere was radiating as the voices joined to sing classic carols, touching hearts and making memories that will last a lifetime. The night concluded with hearts full of cheer and spirits lifted high, and the joy of the season shining bright, wrapping up the semester on a festive and memorable note.

December

After the start of the winter break, most students went to their homes. This month, the music club participated in only two major events.

1. No Garland Neuroscience Conference



The music club performed at the NGN Conference as part of their open mic cultural programmes. The soothing melodies were much appreciated and well-received by the audience.

2. IICM

A 16-member contingent representing the music club performed at the Inter INCI Cultural Meet (IICM)



held at IISER Kolkata. The talented performers made the club and the institute proud with their excellent performances in the four events. The team secured

the runner-up prize in the duet singing competition and the second runner-up prize in the Battle of the Bands competition. The Mehfil and Western Instrumental teams secured a respectable 4th place in their respective competitions. None of the teams took any external help from trainers or Choreographers.



January

1. New Year, Pongal Open Mic Celebration

The year began on a high note with our participation in the New Year and Pongal Open Mic Celebration. This event saw an enthusiastic turnout of around 20 students from the batch of 2024, who took to the stage to deliver



an impressive program. The open mic format allowed our students to showcase their diverse musical talents, ranging from vocal performances to instrumental renditions. The event was a great way to kick-start the year, setting the tone for a musically enriching period ahead.

2. Tutorial Sessions - Carnatic Violin, Carnatic Vocal, and Acoustic Guitar

Following the festive beginnings, our music club officially launched its tutorial sessions for the year. Students

interested in the Carnatic violin, Carnatic vocal, and acoustic guitar had the opportunity to enrol in these sessions, which were designed to cater to varying skill levels. Our experienced instructors provided personalized guidance, helping students to hone their musical skills and explore the nuances of their chosen instruments or vocal styles.

3. Tyagaraja Aradhana

On January 18th, our music club paid tribute to the legendary composer Saint Tyagaraja through a special Aradhana event. This occasion honoured the composer's immense contributions to Carnatic music and his enduring legacy. Our students performed selected compositions of Tyagaraja, showcasing their understanding and interpretation of his works. The event was a poignant reminder of the importance of preserving and celebrating our musical heritage.

4. Republic Day Program Participation

In a celebration of national pride, our music club participated in the Republic Day program, where students presented a captivating performance featuring a medley of patriotic songs. The students' renditions were met with enthusiasm and appreciation, highlighting the club's commitment to promoting not just musical excellence but also a sense of national unity and pride.



5. Merch Release

The Music Club marked a significant accomplishment in its 9-year journey by unveiling its first-ever merchandise—the "Big Stone Blue" t-shirt. The distinctive design effortlessly merged Polo Blue,

White, and Terracotta Orange, with an arrangement of musical notes and the thought-provoking tagline "beyond the notes." The front emphasized music's transcendent power, while the Back's illustration of a young guitarist embodies creativity and passion. The response was overwhelming, with music enthusiasts embracing the tee as a symbol of their shared passion.



February

1. Outdoor Jamming Session

The Music Club organized an outdoor jamming session near the cricket nets, which unfolded like a dream beneath the twinkling canvas of night. As students from every batch gathered in large numbers to sing and perform, their voices blended in harmony, creating enchanting melodies. The Music Club's initiative brought together music enthusiasts, fostering a sense of community and shared passion for music. The jamming session was a memorable experience, filled with laughter, creativity, and the joy of music under the stars.



The DMC members presented the first printed copy of the music club's first-ever merch to the Dean of Student Affairs (DOSA), Dr. Rajeev N Kini. The dean was highly impressed with the club's activities and appreciated the team for their work.



March

1. ISHYA X Music Club Karaoke Night

The Music Club and Ishya Informals teamed up to host an unforgettable Karaoke Night in front of Cake World. The event drew a lively crowd as students took the stage to perform their favourite songs, pushing past their comfort zones. The Music Club's



open stage encouraged students to unleash their inner stars and shine in front of a cheering crowd. The night buzzed with excitement, transforming the space into a lively musical spectacle that enthralled the entire audience.

2. ISHYA Inauguration Performance

To mark Ishya's inauguration day, the Music Club delivered an extraordinary classical performance

that seamlessly fused the rich traditions of Hindustani and Carnatic music. The team mesmerised the audience with a soulful Ragamalika in Adi Talam, followed by a captivating Tukda in Madhyamavati. The performance continued with a medium-paced composition and a thrilling Drut Gat in Chandrakauns, both set in Teental. The enchanting vocals were beautifully accompanied by the soulful strains of the Sarod, the rhythmic precision of the Tabla, and the resonant tones of the Mridangam. This harmonious blend of instruments and vocals created a truly unforgettable musical experience.



Swara Saga

This year, the Music Club released 5 articles under the blog series SWARA SAGA, offering insightful and informative content to music enthusiasts. The blogs paid tribute to:



1. Liam Payne, a star of One Direction
2. Ustad Zakir Hussain, the Indian tabla virtuoso
3. December's musical charm
4. Mohammad Rafi, on his birth anniversary

5. P. Jayachandran, the evergreen voice of Malayalam music

These blogs gave readers a deeper understanding of the legends' lives and contributions, enriching their knowledge and appreciation of music's diverse heritage.

Reels and extension of activity across various social media handles We've successfully extended our activity across four major social media platforms, and we're proud to say we're now actively engaging on Instagram, X (formerly Twitter), Facebook, and YouTube. This year, the Music Club posted captivating reels on our social media pages that resonated with the audience, bringing the social media page to life. Standout creations included:

- Dheema Dheema - a mesmerizing blend of Jacob Cherry Sam's vocals and IISER TVM dancers' graceful performance.
- A soulful unplugged cover of Subhanallah song from the movie 'YJHD' by Jacob Cherry
- Sam and Arpan John.
- A heart-stealing Malayalam melody duet by Ajin and Sandra TR.
- A Women's Day special reel, in collaboration with Theatrics Society, featuring Diya

Francis and music by Jerin Abraham George. These engaging reels kept the Music Club's social media handles vibrant and interactive, fostering a strong connection with the audience.



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Milestone Achievement - Tutorial Sessions

A significant highlight of the Music Club's journey has been the launch of an innovative initiative - offering weekly tutorial sessions for Eastern Violin, Classical



Vocal, and Guitar. With a meticulously planned schedule, these sessions accommodated students of varying skill levels, from beginners to advanced learners. This ambitious project marked a significant milestone in the club's history, providing a platform for music enthusiasts to develop their skills and explore their creativity. Through this initiative, the Music Club has been able to identify and nurture hidden talents, providing students with opportunities to perform, collaborate, and grow as musicians.

Equipment Upgrade:

Ahuja Wireless Microphone System (AWM-700U2) In order to enhance the quality of our audio output during performances, recordings, and announcements, we

have procured the Ahuja AWM-700U2 dual wireless microphone system. This system comprises of two high-performance wireless microphones, known for their clear sound quality and minimal interference. The system is equipped with a robust receiver unit designed for consistent performance, even in demanding environments. This addition marks a significant upgrade to our technical capabilities, ensuring professional-grade audio support for various activities.



MOVIE CLUB

The Movie Club of IISER Thiruvananthapuram provides a platform for film enthusiasts by organizing regular screenings across campus, showcasing a wide range of films from various genres and cultures. In addition to regular screenings, the club also organized movie screenings for special events, encouraging student engagement and contributing to a vibrant cinematic atmosphere on campus.

Screenings Conducted:

Everything everywhere all at once Date: 5/10/24

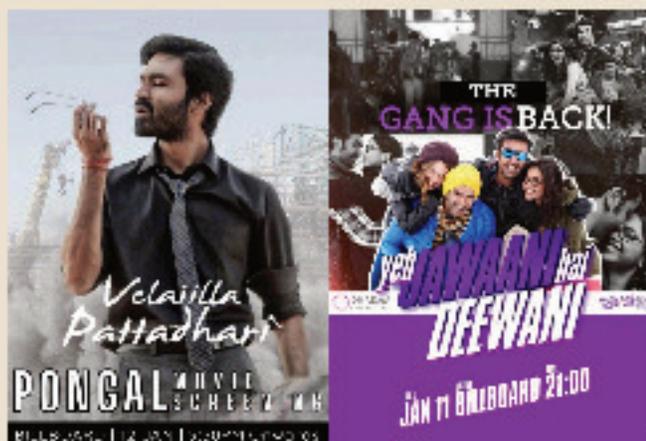


Longlegs Date: 30/10/24



VIP Date: 12/1/25

Rifle Club Date :24/1/25



Yeh Jawaani Hai Deewani Date: 18/1/25

Lucifer Date: 18/3/25

IISER SOCIETY OF LITERATURE AND FINE ARTS (ISLA)

Spokesperson: ALEENA SABU KOSHY, AVANTHIKA YADAV

The IISER Society for Literature and Fine Arts (ISLA) consists of four clubs: the Book Club, Literature Club, Art Club, and Oratory Club. Among these, the Art Club and Oratory Club are the newly established additions.

Art club

- An art exhibition was conducted during Ishya as part of Ishya Informals. The art exhibition attracted a large and curious crowd. It showcased the impressive works of talented students, many

of which drew significant attention and praise from visitors. The event received numerous compliments for its creativity and execution, and the Director highlighted the remarkable range of skills on display.

- Members of the Art Club volunteered to paint the wall of the Yoga Hall at CDH1, creating a striking visual with their unique and creative designs. The artwork stands out for its originality and adds a vibrant touch to the space.



- SCRIBBL'D was a fun and interactive event that brought out the artist in everyone. Hosted as a three-hour session, the activity involved switching

canvases every ten minutes, resulting in a dynamic blend of artistic styles. By the end, 25 unique paintings had been created, each bearing the creative touch of every participant. The collaborative spirit and vibrant results were widely loved, making it a memorable and inspiring experience for all.



Book club

MIDNIGHT IISER READS was introduced as a unique silent reading initiative aimed at fostering a vibrant reading community on campus. Held on weekend evenings, it brought together book lovers who gathered under the stars to enjoy their favorite reads in peaceful company. Each session concluded with engaging discussions on various books and authors, encouraging literary exchange and connection among like-minded individuals. The initiative successfully hosted five sessions over the semester, offering students a serene and enriching space to relax, reflect, and bond over their shared love for literature.



Literature club

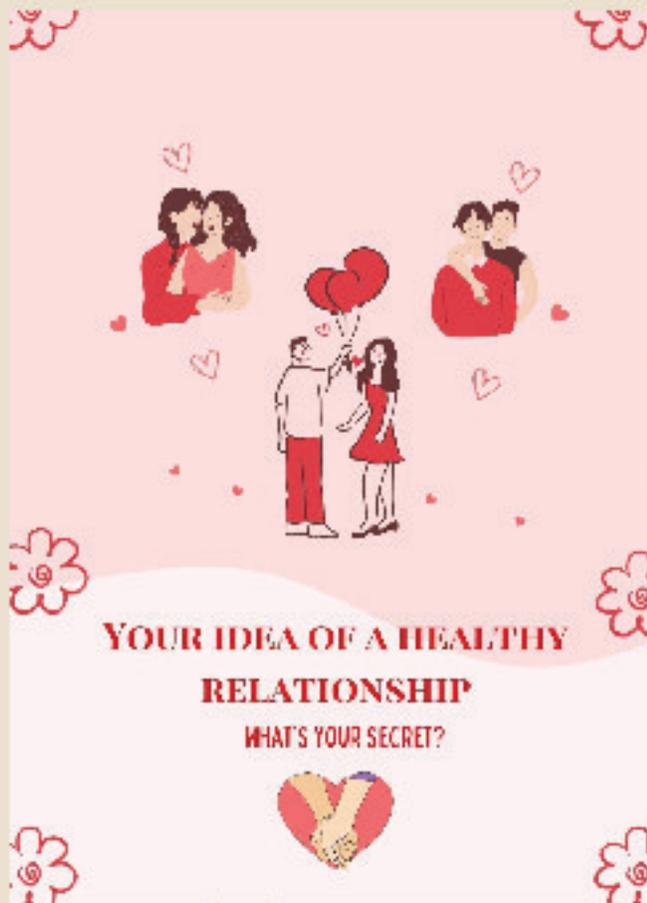
MBIFL group visit- A group visit to the Mathrubhumi International Festival of Letters (MBIFL) 2025 was



organised, with around 15 students from the campus participating. The visit aimed to expose students to contemporary literary discourse and foster a deeper appreciation for global and regional literature. Held at the historic Kanakakkunnu Palace in Thiruvananthapuram, the festival featured a diverse lineup of authors, poets, journalists, and cultural figures. The group attended a range of sessions, including panel discussions, author meet-and-greets, and book signings. Highlights included talks on climate writing, storytelling in South Asian languages, and the intersection of science and literature. The experience provided a unique opportunity for students to interact with renowned writers, explore new literary perspectives, and engage in meaningful conversations. Feedback from participants was overwhelmingly positive, with many expressing interest in future editions. The visit also helped build a sense of literary community among students.

Article writing competition- The Literature Club organized an article writing competition on the theme "Your Idea of a Healthy Relationship." The event received enthusiastic participation, with students sharing diverse perspectives. The top entries, selected for their creativity and depth, were featured on the club's Instagram page.

@ISLA, garnering positive engagement from the community. The event was a success, encouraging thoughtful discussions and creative expression.



ORATORY CLUB

The **Oratory Club** organised an introductory session to prepare members for debate sessions. Club members actively participated in the **IICM debate auditions**, the **Ishya debate**, and **JAM** events. These activities showcased the club's enthusiasm for public speaking and debates, fostering skills and encouraging participation in competitive platforms.

IICM AUDITIONS-

ISLA conducted the **IICM 2024 auditions** for literary and oratory events, including short **story writing**, **poetry**, **essay writing**, **debate**, and **JAM**.

The events were overseen by an incredible panel of judges, with DMC members efficiently managing the proceedings. The auditions showcased remarkable talent and were executed seamlessly, reflecting the dedication and coordination of the team.

INKTOBER

The ISLA community organized **INKTOBER**, an online event held throughout October. Daily prompts were shared, inspiring participants to create and post artworks, writings, poetry, and other creative works.



The event saw active engagement, with participants showcasing their talents and interpreting the prompts in unique ways. The diverse submissions reflected creativity and dedication, making INKTOBER a vibrant and successful initiative.

SOPANAM

Spokesperson: ALEENA SABU KOSHY, AVANTHIKA YADAV

Sopanam magazine '23 edition

The annual magazine, **Sopanam**, was successfully released, featuring exceptional contributions from the IISER community. The magazine showcased diverse entries, including **writings, photography, and artworks**, reflecting the creativity and talent of its members.

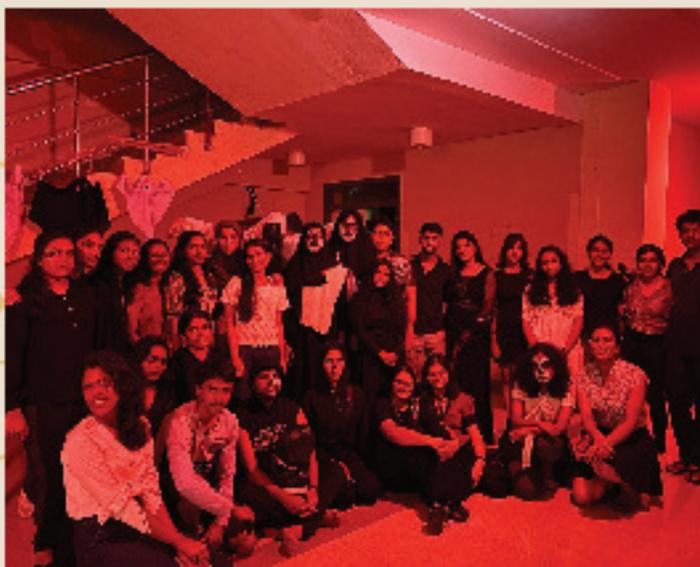
The release was a resounding success, celebrating the vibrant artistic and literary spirit of the community.



Halloween '24 Celebrations

The **Halloween '24 celebrations** were a resounding success, thanks to the enthusiastic efforts of our students. The indoor stadium was creatively transformed into a spooky haunted house, captivating visitors with its eerie ambience and intricate details.

The event featured a variety of attractions, including **henna and nail art stalls**, engaging game stalls, and a thrilling **ramp walk** where participants showcased



their unique and creative costumes. The event saw an overwhelming turnout, with people coming dressed in their best Halloween-themed outfits, adding to the festive spirit.

The collaborative effort of the organizing team and student volunteers ensured a seamless and memorable celebration. Halloween '24 was not just an event but a testament to the creativity and teamwork of our community.

THEATRICALS SOCIETY

Spokesperson: Sidharth Jagan and Swathi U

The Theatrics Society of IISER Thiruvananthapuram aims to nurture and highlight the diverse dramatics and storytelling skills of our student body, while also increasing awareness and appreciation of the depth

and diversity of these arts.

Independence Day Mime:

Each year, the Theatrics Society presents a mime commemorating Independence Day, exploring themes of nationhood, identity, and patriotism. This year's performance told the story of India—its journey through hardship, from colonisation and partition to independence. It portrayed how we resisted British rule, made peace with our divided past, and built a future by harnessing our own resources. The mime captured moments of national pride, from revolutionary progress to space missions and sporting triumphs, reminding the audience of how far we've come—and how much further we can go.

IICM Auditions:

On October 24, auditions were conducted for the drama and monodrama team to represent IISER



TVM. A preliminary round of a short monologue/monoact was followed by impromptu acting in pairs based on the interpretation of a given theme.

B24 Orientation:

In November, we conducted an orientation session for Batch 24, welcoming new members and introducing them to the Theatrics Society—its vision, workings, and the range of events we organise throughout the year. The session focused not just on information, but on experience. To break the ice and create a space for shared laughter and spontaneity, a series of improv games was held. The orientation served as both an introduction and an invitation to step into the world of drama, creativity, and collaboration that defines our club.

Inter IISER Cultural Meet Stageplay:

At this year's Inter IISER Cultural Meet (IICM) held in Kolkata, the Theatrics Society delivered a powerful and thought-provoking performance under the guidance of our trainers, Abhishek Rangaprabath and Vaisakh Krishna. The play, inspired by the renowned Malayalam work *Karutha Daivathe Thedi* (കറുത്ത ദൈവത്തെ തേടി) by Prof. G. Sankarapillai, posed bold and timely questions: Who is the true god? One who perpetuates inequality and demands sacrifice, or one who uplifts and empowers? Through the voices of characters from different social strata, the performance challenged



conventions and culminated in a stirring climax, blending theatre with traditional Kerala art forms to declare that the real god is the working class, transcending gender and caste. The performance built steadily in emotional intensity and left a lasting impression on all who witnessed it.

Inter IISER Cultural Meet Monodrama:

As part of IICM, a powerful monodrama was performed that drew emotional and historical parallels between Jasmine, a young girl from Assam, and Anne Frank, the diarist whose voice came to define the human cost of World War II.

The performance began with Jasmine celebrating her birthday, only to receive *The Diary of a Young Girl* as a gift—set against the backdrop of an uneasy conversation between her mother and teacher. From there, the narrative shifted fluidly into Anne Frank’s world, with the performer taking on Anne’s role: depicting her life in hiding, her connection with Peter, her recurring nightmares, and the eventual arrival of Nazi forces.

The story then circled back to Jasmine, who now finds herself on the brink of displacement. The transitions between the two lives—one past, one



present—brought out a striking resonance. The diary, like Anne’s “Kitty,” becomes Jasmine’s anchor,

a symbol of inner strength and the quiet toll of conflict.

Despite concerns about the fairness of judging and inconsistencies in evaluation, Pearl(BS-MS 23) was awarded third prize for the performance, a recognition of the depth and commitment that went into the piece.

ISHYA Promo:

As part of the lead-up to Ishya, the annual cultural fest, the Theatrics Society created a promotional video that aimed to capture not just the event, but the emotions, effort, and evolution behind it. The video focused on the many facets of theatrics—from rehearsals to performance, from technical craft to storytelling—and highlighted the range of emotions that Ishya evokes across the student body. It also reflected the multilingual and culturally diverse fabric of our campus, showcasing how each participant’s journey is shaped by personal growth and collective dedication. More than a showcase, the video became a reflection of the quiet work, shared memories,



and deep commitment that continue to define our engagement with the fest year after year.

Republic Day Mime:

Following up on the enthusiastic reception to our Independence Day mime, we staged another performance for Republic Day. While similar in theme, this mime shifted its focus inward—toward the core elements that shape our identity as Indians. We asked: what actions, what images, what shared experiences strike us at our depths and affirm who we are as a people? The performance wove together everyday

moments and symbolic gestures that quietly yet powerfully reinforce our sense of belonging to the nation. We first performed the mime as part of the institute's Republic Day program, and a day later at a community event organised by the Vithura Panchayat—an opportunity that allowed us to take our work beyond campus and engage with a wider audience.



Saraswati Pooja:

As part of the Saraswati Pooja celebrations this year, the Theatrics Society staged a Bengali skit titled *Abak Jalpan (Drink of Astonishment)*, written by Sukumar Ray. The play followed the journey of a weary traveller in search of water on a hot afternoon—a time when most people are resting indoors. What unfolds is a series of humorous and absurd encounters with quirky characters, each of whom wildly misinterprets his simple plea for water. Their reactions spiral into imaginative tangents, leaving the traveller ever more parched. The performance culminates in a chaotic but satisfying moment when the traveller finally quenches his thirst by grabbing water from a distracted scientist.

Blending satire with surrealism, the skit left the audience both amused and thoughtful, a fitting tribute to Ray's wit and the spirit of cultural celebration. It also highlighted the strength of Theatrics Society in drawing from a wide range of languages, literary traditions, and lived experiences,

reflecting the diversity of voices that come together to make our stage richer, funnier, and more resonant.

Fashion Club:



This year, a group from the Theatre Club came together to start something new—the *Fashion Club*. Born from a shared interest in self-expression and design, the club aims to explore fashion not just as style, but as storytelling, identity, and creative practice.

The process of setting it up—shaping a vision, planning events, and building a space for conversation—was collaborative and rewarding. To mark the launch, we put together a reel featuring fashion moments from IISER events like *ISHYA*, *IICM*, and others, alongside a visual collage. Both were received warmly by students and faculty, with many reaching out to contribute.

The enthusiasm made it clear that this was something the community had been waiting for. The club now hopes to grow as a space for experimenting with styling, curation, modeling, and event design—centered not on trends, but on individuality and aesthetic exploration.

Women's Day:

To mark Women's Day, the Theatrics Society collaborated with the Music Club to create and release a short musical monodrama. The piece aimed to reflect on and celebrate the many facets of womanhood—the quiet strength, struggles, resilience, and the layered experiences that come with being a woman. Through a blend of performance and music, it offered a moment of reflection, appreciation, and solidarity.

ISHYA:

As part of Ishya, drama and monodrama competitions were held, both of which saw a range of compelling performances. Each entry brought something unique to the stage, and the competitions were marked by thoughtful engagement from the judges, whose feedback provided valuable insight to

participants. The use of Aryabhata Hall's lighting setup was particularly noteworthy—many performers used it creatively to enhance the emotional tone and visual storytelling of their pieces. Across both formats, the stage was treated not just as a platform but as a tool, with participants pushing the boundaries of what could be done within the given space and time.

MEDIA SOCIETY

Spokesperson: Swathi Sreeram, Hridya Hareesh

AUGUST 2024

In August, the Media Society resumed duties by capturing the Independence Day celebrations on August 15th. The team efficiently documented the flaghoisting and cultural performances, contributing to the institutional archives.



SEPTEMBER 2024

September witnessed online creative participation through "Clicktember," an online themed photography event that saw entries from various batches and featured imaginative interpretations of themes. Additionally, the society hosted the "Shutterbugs Meet Shutter Stock" photography competition, encouraging students to share professional-standard photos and build a visual community within the campus.

OCTOBER 2024

October was a particularly eventful month for the Media Society, with numerous high-profile events on campus. On October 2nd, the team documented Swachh Bharat Diwas through a dedicated photography session. On October 4th and 5th, the Society covered various Anvesha events, including the inauguration, informals, and Bahfest. Simultaneous livestreaming and photography duties were successfully executed. The Vigilance Awareness campaign was documented on October 29th and 30th. Cultural events for Foundation Day on October 28th were thoroughly captured by multiple society members. Coverage of the HCIT Talk on landslide preparedness (October 24th), Diwali celebrations (October 31st), and the Unity Day pledge on October 31st further showcased the Media Society's continuous engagement and prompt reporting.

NOVEMBER 2024

The month of November began with the documentation of the Fitness Prescription event on the 2nd. This was followed by a series of significant colloquiums. On November 8th, sessions by Prof. Prasad Krishna (NIT Calicut) were photographed, followed by Prof. E.D. Jemmis' address on the 13th. The Jan Jatiya Gaurav Diwas on the 15th and the Christmas Carol Sing-along on the 25th added festive variety to the month's content. Media Society members ensured all these events were well-photographed and circulated efficiently.

DECEMBER 2024

December featured multiple academic and cultural conferences. From December 5th to 7th, the Biology Conference was documented. The ChemSci 2024 Conference took place from December 9th to 11th. These events were covered comprehensively, showcasing the academic excellence at IISER TVM. In December, the Media Society launched its first-ever merchandise—a custom-designed T-shirt. This marked the beginning of our efforts to build a stronger identity and sense of community within the society. We received a total of 37 orders, with each T-shirt priced at ₹399. The vendor for this merchandise was Zalkers. While the response was encouraging for a first release, the overall profit margin remained low due to additional expenses such as shipping and travel costs involved in the distribution process. Despite the limited profit, the initiative was a valuable experience and laid the groundwork for future merchandise launches with improved planning and budgeting.



JANUARY 2025

January began with photo coverage of FS Chemistry on the 2nd, followed by Indian classical dance explorations by Dr. Methil Devika on the 7th. The CSIT Symposium 'Spectra' held on January 11th was extensively photographed. On January 13th and 14th, the Media Society captured the festive vibes of Pongal. The Frontier Symposium in Physics (17th–19th) and a Humanities Collective Talk by Rohin Bhatt (22nd) were also covered. The month concluded with Frontier Symposium in Chemistry

from January 31st leading into February.



FEBRUARY 2025

February saw the Media Society actively documenting a variety of colorful events on campus. The month started with photo coverage of the continuing Frontier Symposium in Chemistry, which took place between January 31st and February 2nd, including comprehensive documentation of all sessions. Visual coverage followed for the upcoming Ishya's pre-events (Syaahi), including the Hindi poetry session on February 5th and the Malayalam poetry session on February 6th. The Frontier Symposium for Earth and Environmental Sciences (EES) was covered from 7th–8th February. On 9th February, the society reported the vibrant and colorful festivities of Ishya '25. The month ended with photography of the



IRTG Start-up Conference on the 27th–28th of February. The Media Society improved to excel in its quality and services.

MARCH 2025

March began with coverage of a colloquium by Dr. K K Narayanan Namboodiri (SCTIMST) on March 7th. The same day, International Women's Day celebrations were captured at both the campus and the Priyadarshini Planetarium. The Ishya-themed events began with Extempore competitions in Hindi



and Malayalam on March 6th and continued with a Mehendi competition and science talk on March



9th. Frontier Symposium - Chemistry resumed on March 12th and 14th. Ishya celebrations continued with Mehfil and Just-a-Minute on March 15th, Alekhya Wall Painting on March 16th, and the main Ishya events from March 20th-23rd. A media workshop was conducted on March 16th, handled by Mr. Sayid Najmuddeen, a professional photographer and mentor, who provided valuable insights into media documentation. The month also featured a photo exhibition during Ishya, showcasing the creative and technical capabilities of the society. The month concluded with documentation of a talk by Dr. Murthy Gudipati (NASA JPL) on March 25th.



OTHER ACTIVITIES

Throughout the year, the Media Society also provided coverage for events such as Nishkam Seva, Safai Mitra, Biosymbiotica 2024, and club activities like debates, quizzes, and cultural programs. Several members were active in managing livestreams and video documentation during various events like Ishya, Anvesha, and Itsav, expanding the Society's digital presence.

HUMANITIES COLLECTIVE

Events:

Out of Syllabus: A Workshop on Relationships, Consent, Sexuality Health, and More

Spokesperson: Subith G, Siraj T M

29th September 2024

About the speaker: **Ms. Swati Jagdish**, also known as **Maya's Amma**. Her work focuses mainly on sex

education, psychology, parenting, and lactation counseling. Over the past few years, lakhs of viewers have welcomed her educational videos on topics that were once considered taboo. She is also a certified behaviour analyst with a master's in applied psychology. She has been conducting workshops on college campuses on mental health and sex education.

The event was held in collaboration with the Student Welfare Council and was a huge success, with a turnout of about 250 people. Several controversial topics were unravelled, and myths and taboos related to the topic were busted. We also circulated feedback forms among the audience to check the scope for improvement.



Talk titled "How well are we prepared for a landslide?" with Dr. Sajin Kumar, Assistant Professor of Geology at the University of Kerala
Date: 24th October 2024

HCIT hosted an enlightening and interactive session with the renowned Dr. Sajin Kumar, Assistant Professor of Geology at the University of Kerala. The session aimed to provide insights into various aspects of geology, particularly in the context of the recent landslides in Wayanad. Dr. Sajin Kumar completed his Master's in Geology from University College, Trivandrum and his PhD from IIT Bombay. His doctoral thesis focused on 'Geoinformatics in landslide risk assessment and management in parts of Western Ghats, Central Kerala, India'. Recently, he has been involved in the exploration of the Luna impact crater and its geological implications. Along with this, he's also a TEDx speaker and has used his platform to discuss preventative measures and the

importance of sustainable land-use practices to reduce vulnerability of regions in Kerala. The interactive session commenced with an introduction to Dr. Sajin Kumar's illustrious career and notable achievements, setting the stage for an engaging discussion on the challenges related to predicting and mitigating landslides.

Participants had the opportunity to engage with Dr. Sajin Kumar through a moderated discussion, where they posed questions and sought guidance on various topics related to disaster management. His were informative and thought-provoking, drawing from his rich reservoir of knowledge and practical experience. Drawing from his experiences combating infectious diseases, Dr. Sajin Kumar provided insights into practical strategies for landslide prevention, early detection, and mitigation. The event underscored the importance of informed discourse and collaboration in advancing sustainable disaster management and preparedness.

As we continue our collective efforts to address the environmental impacts of landslides and their various causes, the wisdom shared by Dr. Sajin Kumar will serve as a guiding light in our endeavours.

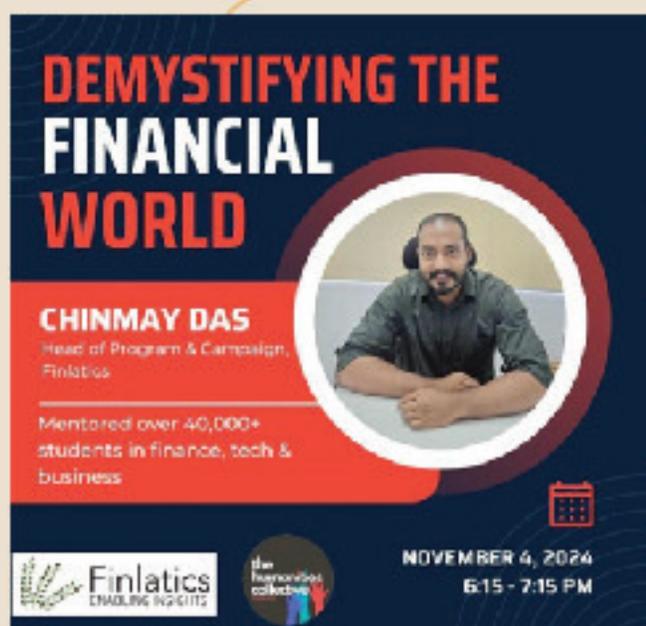


Report: Webinar on "From Research to the World of Finance"
Date: 4th November 2024

On **November 4th**, a webinar titled "From Research to the World of Finance" was conducted under the banner of **HCIT** in collaboration with **Finlatics**. Organized by **Ruchi Arya (B21)** and **Krishna Trivedi (B23)**, the session aimed to introduce students to the intersections between scientific research and finance.

The webinar provided an accessible introduction to finance, highlighting how financial literacy can complement scientific expertise and open diverse career pathways. It also emphasized the growing relevance of finance in research-related fields, encouraging students to explore opportunities beyond traditional academic trajectories.

The session marked an important step in fostering financial awareness within the IISER TVM community and bridging the gap between science and broader socio-economic domains.



“Indian Classical Dance Explorations- From Self-Expression to Spatial Expression” in Collaboration

with the Dance Society.

Date: 7th January 2025

The Humanities Collective of IISER Thiruvananthapuram, in collaboration with the Dance Society, organised a culturally enriching event titled *“Indian Classical Dance Explorations – From Self-Expression to Spatial Expression”*, featuring the internationally acclaimed Indian classical dancer, choreographer, and academician, **Dr. Methil Devika**. The event, held on **January 7th, 2025**, at the **PSB Seminar Hall**, aimed to explore the multifaceted dimensions of Indian classical dance and its evolving relevance in contemporary society. The session commenced with a brief welcome address, setting the tone for an evening of profound artistic and intellectual engagement. Dr. Devika, widely recognised for her contributions to the classical dance form of Mohiniyattam and her pioneering research that blends performance with scholarship, delivered a captivating talk. Drawing from her extensive academic and artistic journey—including her recent research under the Nava Kerala Post Doctoral Fellowship and her association with ISRO’s Indian Institute of Space Science and Technology—Dr. Devika delved into how classical dance transcends individual expression to inhabit and transform cultural, spatial, and societal landscapes.

In her address, Dr. Devika highlighted the evolving relationship between the dancer and performance spaces, particularly focusing on her study of temple terrains as alternative stages for modern women dancers. She discussed the metaphysical and philosophical underpinnings of dance while also situating it within current discourses on gender, identity, and public space. Her nuanced perspectives invited the audience to view dance not just as an art form, but as a mode of critical inquiry and cultural reinvention.

The talk was followed by an interactive Q&A session, during which attendees—including students, faculty, and art enthusiasts—engaged with the speaker on themes ranging from the aesthetics of Indian classical dance to the challenges faced by contemporary practitioners. The discussion fostered a rich dialogue on preserving traditional art forms while embracing innovation and inclusivity.

This thought-provoking session successfully bridged classical tradition and modern inquiry, leaving the audience with a deeper appreciation for Indian classical arts and their continuing relevance in shaping cultural and intellectual landscapes.

Movie Screening on International Women's Day – Hidden Figures

Date: 9 March 2025

On the occasion of the **International Women's Day**, Humanities Collective is organised the screening of **Hidden Figures**, on **9th March, Sunday** at the **billboard**.



Hidden Figures is a 2016 American biographical drama film directed by Theodore Melfi and written by Melfi and Allison Schroeder. It is loosely based on the 2016 non-fiction book of the same name by Margot Lee Shetterly about three female African-American mathematicians: Katherine Goble Johnson (Taraji P. Henson), Dorothy Vaughan (Octavia Spencer), and Mary Jackson (Janelle Monáe), who worked at NASA during the Space Race.

The movie deals with issues such as race and gender being hindrances in science, and how these three amazing women overcame such prejudices to put an astronaut in space.

Raga and Reason – A Talk by Dr. Achuthsankar S. Nair in collaboration with the Music Club

Date: 8th April 2025

As the semester drew to a close, the Humanities Collective, in collaboration with the Music Club of IISER Thiruvananthapuram, hosted an intellectually and aesthetically stimulating event titled "Raga and Reason". The talk was delivered by the distinguished scholar and polymath **Dr. Achuthsankar S. Nair** on **April 8th, 2025**, at the **PSB Seminar Hall**. Dr. Achuthsankar, a renowned academic, author, and orator, brought his multifaceted expertise to bear on the intriguing intersection between music and science. With an academic background spanning Electrical Engineering, Computer Speech and Language Processing, and Bioinformatics—from institutions such as IIT Bombay, the University of Cambridge, and the University of Kerala—Dr. Achuthsankar seamlessly blended technical rigor with artistic sensibility.

In his engaging talk, Dr. Achuthsankar explored the philosophical and cognitive contrasts between the domains of science and music. While science is grounded in logic, analysis, and empirical frameworks, music resonates with emotion, intuition, and the abstract. Through this juxtaposition, Dr. Achuthsankar encouraged the audience to appreciate how both realms, though seemingly divergent, contribute equally to the richness of human understanding and creativity. What made the session especially memorable were the *amusing and musical interludes*, which not only lightened the

mood but also illustrated his central arguments in an accessible and entertaining way. Drawing from classical Indian music and humorous anecdotes, he held the attention of the audience throughout the hour-long session.

The event concluded with a lively Q&A session, where students and faculty engaged with the

the interconnectedness of diverse fields and the



Raga and Reason
Exploring the harmony between music and science

Prof. Achuthsankar S. Nair

8th April 2025, Tuesday
PSB Seminar Hall
6:45 - 7:45 PM



value of a multidisciplinary approach in education and research. "Raga and Reason" proved to be a fitting culmination to the semester—bridging the worlds of logic and lyricism, and leaving attendees with food for thought and notes of melody lingering in their minds.

Discussions and seminars:

1. How student politics influences national politics Date: 31st August 2024

A dynamic and thought-provoking student discussion was held on the topic "How Student Politics Influences National Politics." The session, also attended by students of the brand new BS-MS 24 batch, delved into students' role in shaping national political landscapes. The discussion covered various aspects, ranging from rigorous course structures, political activities on campus to the broader generational and ideological shifts driven by social media. Parallels were drawn among universities where politics was a thriving part of the campus culture and the US public's political preferences alike.

2. Online seminar on the future of queer rights movement Date: January 22nd, 2025

On **January 22nd, 2025**, the Humanities Collective hosted a seminar titled "The Future of Queer Rights

speaker on questions ranging from the neuroscience of music to the role of creativity in scientific thinking. Dr. Achuthsankar's responses further underscored



Student's Discussion
Topic: How student politics influences national politics

31st August 2024
Cake World
9:30 PM

Movement in India”, led by **Rohin Bhatt**, a non-binary queer rights activist and Supreme Court advocate. Rohin shared a brief history of the LGBTQ+ rights movement in India and discussed the recent Supreme Court verdict denying marriage rights to queer couples. They reflected on the implications of the judgment and emphasized the need for inclusive activism that uplifts underrepresented identities, especially trans voices. The session concluded with an engaging Q&A, sparking important conversations on representation, legal reform, and the road ahead for queer rights in India.



3. Student seminar on the socio-economic impacts of the Bal Mitra Mandal Program.

Date: 31st January 2025

A talk was held to present research findings on the “Socio-Economic Impacts of the Bal Mitra Mandal (BMM) Program” implemented by the **Kailash Satyarthi Children’s Foundation**. The session provided insights into the legacy of **Kailash Satyarthi**, 2014 Nobel Peace Prize laureate, and his enduring work for child rights and community empowerment.

The talk covered the objectives and structure of the BMM program, examined the role of various

stakeholders, and addressed the sustainability of the NGO’s model. Emphasizing the need for innovative, out-of-the-box thinking, the presentation brought forward diverse perspectives and opened discussions on broader socio-economic challenges.

The session highlighted the importance of grassroots efforts in driving systemic change and underscored the impact of community-led child protection initiatives.



4. Discussion Session with Dr. S. Indumathi on the History and Philosophy of Science

Date: 6th March 2025

On **March 6th**, to mark the occasion of International Women’s Day, **HCIT** hosted an informal discussion with **Dr. S. Indumathi** at the students’ lounge near Cake World.

Following her talk on gender bias in technology, this session offered a more relaxed space for students to engage with her on topics related to the **history and philosophy of science**. The discussion encouraged thoughtful dialogue on the intersections of gender, science, and society, and provided valuable insights into how scientific narratives are shaped. The evening proved to be both enlightening and engaging, fostering curiosity and reflection among the attendees.

Merchandise:

The Humanities Collective at IISER Thiruvananthapuram

launched a series of exclusive merchandise, featuring metal lapel pin badges, notepads and postcards; designed to reflect the essence of the Humanities Collective, and each with a story of its own. This initiative is aimed at fostering a stronger sense of community and identity among the students and faculty engaged with the humanities and social sciences on our campus. The Humanities Collective is excited about the positive response received from the campus community regarding the merchandise launch. We hope that this initiative

Premium Metal Badge/Pin



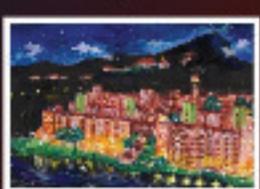
Front **Back**

Durable, stylish, and designed to complement your bag, jacket, or lanyard—because curiosity and critical thinking never go out of style. Question Everything for the qualities that define a great scientist: also shape a thoughtful and inquisitive human being.

135/-

IISER TVM Postcard

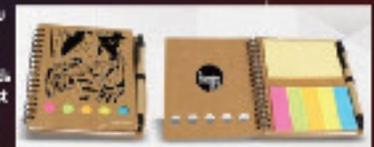
35/-



Share a piece of IISER TVM with your dear ones with this beautifully printed postcard. Capturing the beauty of story 82: 3 nights and 4 small cities, all reflected in the calmness of the river; this painting by the talented Anamath Parmer (Ph.D) has the essence of our campus, making it the perfect souvenir for you and others, both as a memento or a memorable gift for your loved ones.

Notepad

145/-



Your genius scribbles require a genius canvas. Let us meet you in this notepad, featuring Pablo Picasso's iconic Guernica on its cover—a artwork that transcends time and remains one of the most powerful anti-war statements in history. Perfect for lectures, lab notes, or spontaneous strokes of brilliance.

Sturdy, durable, and eco-friendly to make your life easier.

Available in the Text and Book!

continues to grow, enhancing the visibility of the humanities at IISER TVM, and helping us raise funds

for future cultural and academic activities.

EBSB-EK BHARATH SHRESHT BHARATH

Spokesperson: Fathima Thahliya K- Batch 21, Adithya J- Batch 20

Through our on-campus activities — from **Prayati blood donation drives** to **quiz competitions** — EBSB aims to celebrate India's unity in diversity, promote understanding of different traditions, and foster a strong sense of national integration and collaboration among the IISER TVM community.

Our Activities:

1) Conducted **IICM Quiz** Selection trials on 25th of October, 2024 in collaboration with QSI to select 2 teams to represent IISER Thiruvananthapuram in IICM.

2) **Blood Donation Camp (Prayati 7.0)**

• **Organized by:** Student Welfare Council (SWC) & Ek Bharat Shreshtha Bharat (EBSB) team in



collaboration with Health Center and Govt. Medical

College, Thiruvananthapuram

- **Date:** Tuesday, 5th November 2024
- **Time:** 9:30 am – 1:00 pm
- **Venue:** Health Center, IISER TVM

3) Blood Donation Camp (Prayati 8.0)

- **Organized by:** Student Welfare Council (SWC) & Ek Bharat Shreshtha Bharat (EBSB) team in collaboration with Health Center and Govt. Medical College, Thiruvananthapuram
- **Date:** Friday, 17th January 2025



- **Time:** 9:30 am – 12:30 pm
- **Venue:** Shopping Complex, IISER TVM

4) Phir Se Ek Bharat Quiz

- **Event:** Quiz competition to celebrate unity in diversity
- **Date:** Monday, 3rd February 2025
- **Time:** 8:45 pm
- **Team Size:** At most 2 members per team
- **Other Notes:** Prizes were awarded to the top 3 teams.
- **Turn-up:** 20 teams participated in total



CULTURAL AWARDS

Students were felicitated with Cultural Awards by Prof. J N Moorthy, Director IISER TVM, on 26th January 2025 (Republic Day).

Adithya J and Swathi Sreeram of BS-MS 20 were awarded the **Cultural Roll of Honour**. This award recognizes exceptionally talented performers who have also demonstrated consistent achievement and significant involvement in event organization and management.

The following graduating students of BS-MS 20 were awarded the **Cultural Citation**. This is awarded to students who have shown consistent excellence in cultural activities, with a focus on their overall

contributions and accolades within the IISER community.

- Sandra TR
- Diya Francis
- Sano Field S S
- Arshia M K
- J S Denuka
- Srilakshmi T Ranjith
- Athul George
- Farsana
- Gayathri S Kumar
- Divyasree M Nair
- Jacob Cherry Sam
- Jerin Abraham George
- Akshay Unni

- Riya P. Shende
- M Devanand Mallayya

The **Cultural Hall of Fame** was awarded to graduating students of BS-MS 20 who have made invaluable contributions to event organization and management, especially for central volunteers and organizers of major events such as ISHYA, IICM, and other cultural activities.

- Navya P
- Aardhra Santhosh
- Adam Zacharia Anil
- Nitha Mohan
- Shwetha Jayarajan
- Shajiya Shahanas P A
- Aaqilah A J
- Ahsana Aman M B
- Aivin C Thomas
- Ajas M Khader
- Ajin K Biju
- Eswar Krishnan N A
- Athul V B
- Krishna S Menon
- Boney Mathew

A **Certificate of Appreciation** was awarded to graduating students of BS-MS 20 who have made significant contributions to specific events or club activities.

- Ramkiran S
- Anjana Narayanan
- S Sivarenjini

The **Cultural Colour** award celebrates the rising talent of students from 1st to 4th year, (BS-MS, MSc, i-PhD, PhD) recognising the prizes they have won in various competitions over the past year. The list of students who were awarded the Cultural Colour 2025

- Sandra S Santhosh
- Lekshmy S
- Pearl
- Arjun Prakash

- Rosmy Geo
- Stuti Ganesh
- B Anjali
- Sreerag N V
- Padma Theertha TG
- Ajin V L
- VIGNESH JAYAN
- Ananthika Sajith
- Athen Vinu John
- Devarakonda Hansika
- Soumyadip Niyogi
- Krishnanand K K
- Shahnaz
- Nithin Baiju
- Priyadarshini

IICM (Inter IISER Cultural Meet) 2024

Inter-IISER Cultural Meet (IICM) is the joint annual cultural festival of all seven IISERs, IISc Bangalore and CEBS Mumbai. IICM 2024 saw participation from the seven IISERs and IISc Bangalore. IICM 2024 was hosted by IISER Kolkata from December 26-29, 2024.

New events like solo semiclassical, Livesketching, and western instrumental were added to this edition. Various sub-societies of the cultural council conducted auditions, and a 71-member contingent including two managers, was selected to represent IISER TVM in various competitions at the fest. IICM 24 had many organising glitches like last-minute rule changes, faulty judges and score sheets, but the IISER TVM contingent stood as a team cheering up the teammates, and we secured overall 4th position.



The list of prizes:

1. Bandwidth 2nd Prize
2. Battle of Bands 3rd Prize
3. Book cover designing 3rd Prize
4. Duet Singing 2nd prize
5. Face Painting 1st Prize
6. Fashion Show Fantasy 2nd Prize
7. Group Dance 2nd Prize
8. JAM 2nd Prize
9. Monodrama 3rd Prize
10. General Quiz 3rd Prize
11. Synchro Dance 1st Prize



Ishya 2025-Where Dreams Unfold

The 15th edition of *Ishya*, our institute's flagship annual cultural festival, was held with great enthusiasm and grandeur from 21st to 23rd March. With the theme "*Where Dreams Unfold*", *Ishya* 25 marked a significant milestone, celebrating fifteen years of creativity, unity, and cultural expression.

The festival commenced with a vibrant inauguration ceremony graced by the presence of esteemed dignitaries. Director Prof. J. N. Moorthy, Deputy Director Prof. S. Murty Srinivasula, Dean of Student Affairs Prof. Rajeev Kini, and the Faculty-in-Charges of the Cultural Council, Dr. Amrutha Swaminathan and Dr. Alwin Pauoise, honored the occasion with their support and presence.

Ishya 25 witnessed overwhelming participation from students, with a diverse range of events including music, dance, theatre, literary arts, and visual arts. Performances and competitions brought out the vibrant spirit of the student community, making the campus come alive with energy and excitement.

The success of the festival was made possible by the relentless efforts of the organizing committee, volunteers, and participants, whose dedication turned vision into reality. The faculty, staff, and student body played an integral role in making this celebration truly special.

Ishya launch was officially held on 11th February as part of Valentine's Day celebrations.



EVENTS:

As part of *Ishya* 2025, **we successfully hosted and conducted 33 events**, which is a mix of both offstage and onstage.

Our events kicked off with the literary and art competitions from the last week of January and continued until the third week of March. A total of 9 Literary competitions

and 7 Art competitions were conducted. We also conducted oratory competitions as part of off-stage events, which included Poetry recitation and



Extempore across 3 languages. We have organised and conducted gaming events. With regards to on-stage events, we had 15 events conducted on the span of 3 days from March 20th to 23rd, which was a mixture of Intra, Inter-collegiate and open events. Also, during the two days of Ishya, **115 cultural performances** were hosted in between the competitions.



Ishya informals:

The Music Club, collaborating with Ishya, hosted Karaoke Night near Billboard, a huge success. Carnival, the game night, was conducted inside the indoor stadium as part of the pre ishya celebrations.

MERCHANDISE:

This year, the ISHYA merchandise team provided an Oversized T-shirt, a Regular T-shirt, a mug, a magnetic bookmark, a normal bookmark, a normal sticker, a holographic sticker and 2 postcards. We also provided glow sticks and a limited edition sticker, which was for sale only during ISHYA day 1 and day 2.



PROSHOWS:

The opening act – "FUNKIE" performed for 75 minutes on 23-03-2025 at the Indoor Stadium. The main act – Masala Coffee captured all audiences. Their performance included all languages, which was a huge success. It was a power-packed performance that the audience enjoyed thoroughly.

SPONSORS:

1. Title sponsor: Alumni of BATCH 18
2. Alumni Community of IISER TVM
3. LIC
4. Loka Medicity
5. MYOP
6. KTDC
7. Moonway Travels
8. Amma Vegetables
9. Rahul Traders
10. JKG Bioscience
11. Fortune IAS
12. Tusker Tees
13. Cake World

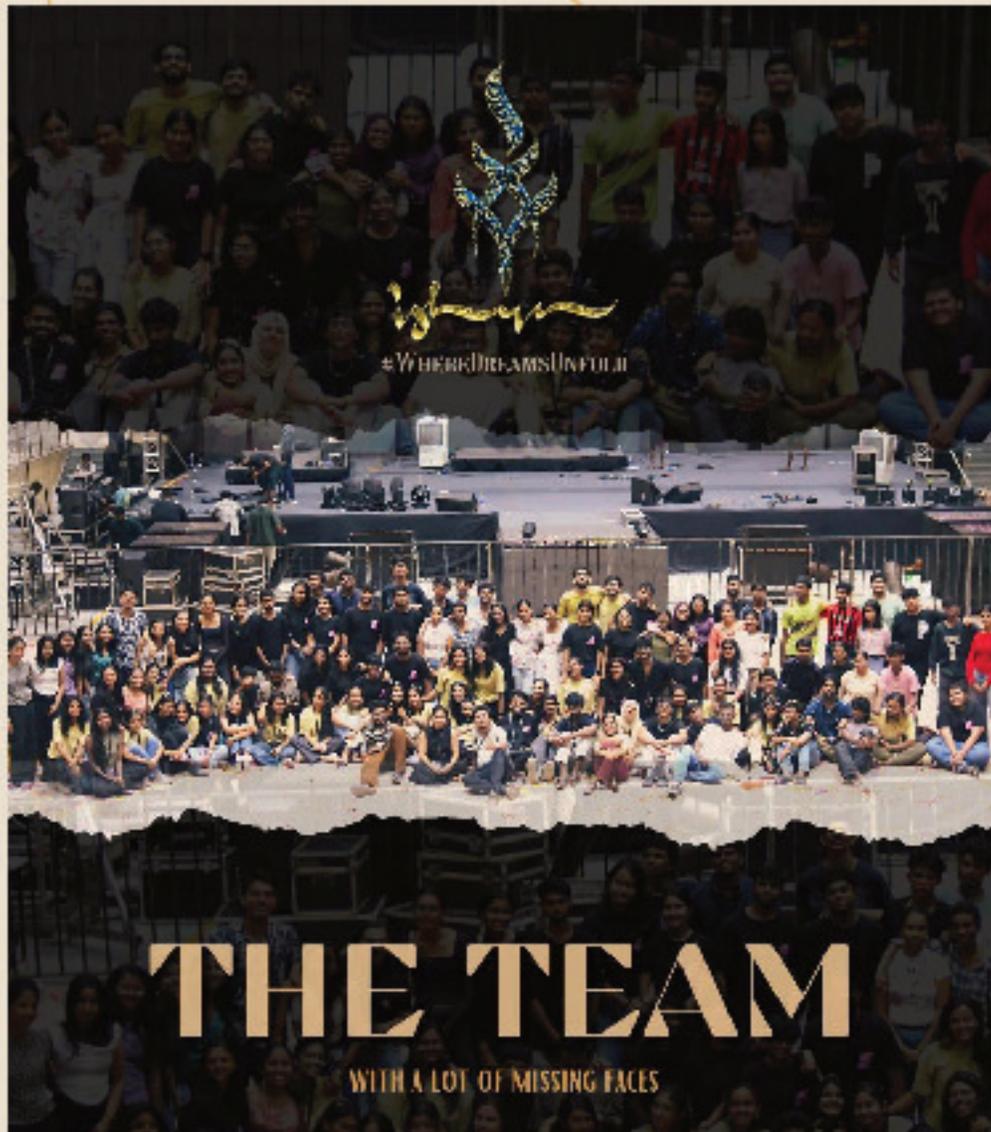
14. Tasties
15. Colour World
16. Escapes
17. Finlatics
18. Dinu Bakers
19. TIME Institute
20. SK Biosystems
21. Joseph Bistro

5. DC Books
6. Camerry
7. Pizza Hut
8. Kofi Club
9. Camerry
10. KFC
11. WOW Momos
12. Nestle

FOOD PARTNERS:

1. Nutri Ice
2. WOW Momos
3. Red Café
4. Salkara Restaurant

As the curtains fell on Ishya 25, it left behind a trail of unforgettable memories, artistic inspiration, and a renewed sense of community. The 15th anniversary of Ishya was not just a celebration of the past, but a powerful reminder of the potential and promise that lies ahead.



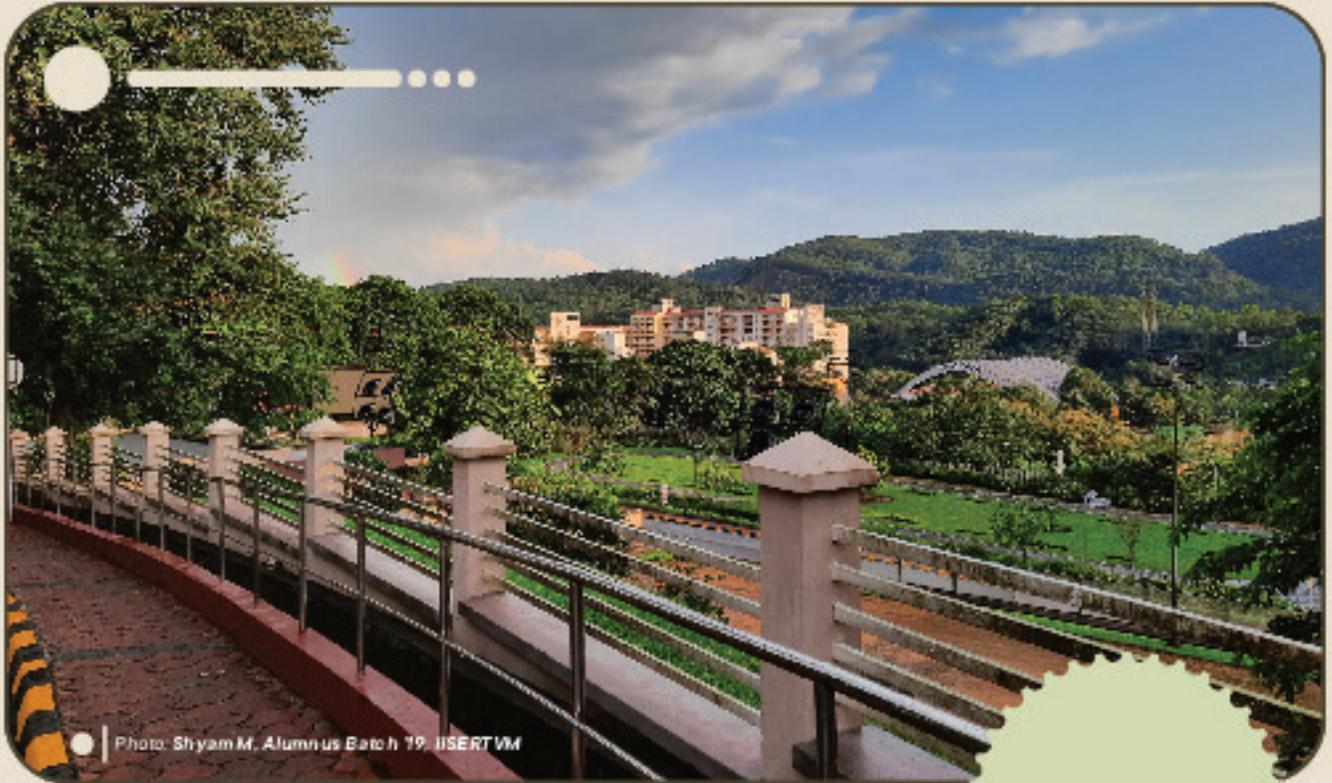


Photo: Shyam M. Alumnus Batch 19, IISERTVM

Sports Council Activities...

SPORTS COUNCIL REPORT 2024-2025

INTRODUCTION:

The IISER Thiruvananthapuram Sports Council for the academic year 2024-2025 played a key role in shaping a vibrant sports culture on campus. With several high-impact events and increased participation across batches and programs, the council worked to foster a sense of camaraderie, wellness, and competitive spirit. The Council functioned under the guidance and support of:

- **Prof. Utpal Manna** – Dean of Student Affairs (Aug-Dec 2024)
- **Prof. Rajeev Kini** – Dean of Student Affairs (Jan-June 2025)
- **Dr. Dond Asha Kishan** – Faculty In-charge, Sports
- **Dr. Mathew Arun Thomas** – Faculty In-charge, Sports
- **Dr. Arun Raj J R** – Physical Education Instructor
- **Yaswanth O S (BS-MS 2021)** – Sports Secretary

Elected Sports Council Members (2024-2025):

Yaswanth O S, Manav Murali, Jagannathan V, Nikhilesh S, Nandana Rajeev Nair, Vyshnavi K V, M Ruveen, Sreyas Lal H, Jishon Prem, S Athul Krishna, Rishikesh P, Abhipri Khanna, Devanath M, Ajas M Khader, Advait A, Joshy K Oommen, Lakshmi A S

IISM 2024 - INTER-INSTITUTIONAL SPORTS MEET:

Held at **IISER Pune** from **Dec 17 to 23, 2024**, the IISM 2024 brought together athletes from IISERs, IISc, NISER, and CEBS. IISER TVM secured an impressive **4th overall position**, displaying exceptional performances across sports.

Team Events:

Silver Medals

- Badminton (Women's)
- Basketball (Men's)
- Football (Men's)

Bronze Medals

- Badminton (Mixed)
- Basketball (Women's)
- Table Tennis (Women's)

Athletics: 4th Overall

Gold Medals

- Karan Singh – 800m, 1500m
- Athul Krishna – Long Jump, Triple Jump

Silver Medals

- Abhisu Ray Maity – 10,000m
- Saroj Meena – 5000m

Bronze Medals

- Devanath M – 200m
- Rosha Dcruz – 200m
- Josna Joseph – Triple Jump
- Vishnu Gopala T – Triple Jump
- Abhisu Ray Maity – 5000m
- 4x400m Relay (Men's): Devanath, Karan, Vishnu, Ameen



The dedication and sportsmanship shown by our athletes were commendable and truly reflective of the IISER spirit.

INTER-BATCH SPORTS TOURNAMENTS 2024-2025:

As part of the council's commitment to fostering an inclusive and competitive sports culture on campus, a comprehensive **Inter-Batch Sports Tournament** was conducted throughout the academic year.

These tournaments provided a platform for students across batches to participate, compete, and bond through sport.

A total of **17 events** were organized under the inter-



batch umbrella, with participation from all programs and levels. Events were conducted for both **men and women** in the following sports:

- Kabaddi
- Football



These tournaments not only enhanced student engagement but also helped in scouting emerging talent for inter-institutional competitions like IISM.

- Basketball
- Volleyball
- Badminton
- Table Tennis
- Kho Kho

Additionally, **Men's Cricket**, **Mixed Chess**, and **Mixed Team Carroms** were also part of the tournament lineup. The tournaments witnessed high energy, team spirit, and impressive sportsmanship across all matches. After a closely contested series of events, the **Overall Championship** standings were:

BS-MS 2022 + MSc 2024 – 1020 points

BS-MS 2023 – 690 points

BS-MS 2021 + MSc 2023 – 640 points

ITSAV 2024-2025 - INTRA-INSTITUTE SPORTS FESTIVAL

ITSAV, the annual intra-institute sports fest of IISER Thiruvananthapuram, witnessed its **most expansive edition to date** in the 2024-2025 academic year.

This season featured the **highest number of events ever conducted in an ITSAV**, with **men's and women's competitions held across almost all major sports**.



The tournament aimed not only to foster healthy competition but also to create a strong sense of house identity and community spirit. Students were sorted into four houses—**Alpha, Bravo, Charlie, and Delta**—and competed across various events throughout the season.

Events Conducted:

ITSAV featured competitions in:

- Football (Men & Women)
- Basketball (Men & Women)
- Volleyball (Men & Women)
- Badminton (Men & Women)
- Table Tennis (Men & Women)
- Kho Kho (Men & Women)
- Kabaddi (Men & Women)
- Cricket (Men)
- Chess (Mixed)
- Carroms (Mixed Teamwise)
- Lawn Tennis (Men & Women)
- Athletics (Men & Women)

After a fierce and exciting series of matches, **Charlie House** emerged as the **overall champions**, marking a **remarkable hat-trick of ITSAV victories**—their **third consecutive title**.

Delta House secured the **second place**, with commendable performances across multiple sports.



This landmark edition of ITSAV set a new standard for participation, inclusivity, and competitive excellence, reflecting the growing sports culture at IISER TVM.

INTERNATIONAL YOGA DAY 2024

Introduction:

In a vibrant display of unity and well-being, the Sports Council of IISER Thiruvananthapuram hosted a remarkable International Yoga Day celebration on June 21st, 2024. This report chronicles the event's success, capturing the enthusiastic participation of the student community and the insightful program that unfolded.

Program Highlights:

- Inauguration: The program commenced at

7:00 AM with a lamp-lighting ceremony officiated by the esteemed Hon'ble Director of IISER Thiruvananthapuram, Prof. J.N. Moorthy.

- **Welcome Addresses:** Prof. Moorthy delivered an inspirational inaugural speech, followed by a motivational address from the Hon'ble Deputy Director, Prof. S. Murty Srinivasula. Both dignitaries emphasized the importance of yoga in promoting physical and mental well-being.
- **Thematic Talk:** Dr. Ranjini Rajasekharan, the Yoga Trainer at IISER Thiruvananthapuram, provided an

insightful talk on the significance of yoga and the concept behind this year's theme, "Yoga for Self and Society."



and Coordination of Body and Mind" through yoga, scheduled from June 21st to 25th, 2024.



Positive Outcomes

The International Yoga Day celebration witnessed a significant turnout of students, demonstrating their keen interest in yoga and its holistic benefits. The program facilitated a shared experience, fostering a sense of community and well-being among the attendees. The

- **Common Yoga Protocols Demonstration:** A 45-minute session led by Dr. Ranjini Rajasekharan followed the talk, where she expertly demonstrated the Common Yoga Protocols. This interactive session allowed a large gathering of students to participate and experience the benefits of yoga postures.
- **Gratitude Expression:** Dr. Sudarshan Kumar K delivered a heartfelt thank you note to all participants, organizers, expressing appreciation for their role in the event's success.
- **Workshop Kick-Off:** The program also served as a launchpad for a 5-day workshop on "Balance



well-received program effectively kick-started the upcoming workshop, creating a platform for further exploration of yoga practices.

Conclusion

The International Yoga Day celebration on June 21st, 2024, was a resounding success. The enthusiastic participation of the student body and engaging program activities contributed significantly to its

positive outcome. The Sports Council acknowledges the dedication of Prof. J.N. Moorthy, Prof. S. Murty Srinivasula, Dr. Sudarshan Kumar K, Dr. Ranjini Rajasekharan, and its members who ensured the smooth execution of this event.

CHESS CLUB ACTIVITIES

The **Chess Club of IISER TVM** has had a dynamic and engaging year, conducting a total of **four major tournaments** across the **Varsha 2024** and

Vasant 2025 semesters. These events spanned various formats, including open and closed tournaments, and contributed significantly to strengthening the chess culture on campus.



Varsha Semester 2024

Knight's Conquest

- Format: Open, Team-based
- Teams: 8
- Format Type: Round Robin
- Description: A highly anticipated IPL-style tournament with player auctions and strategic gameplay, promoting both team spirit and individual skill.

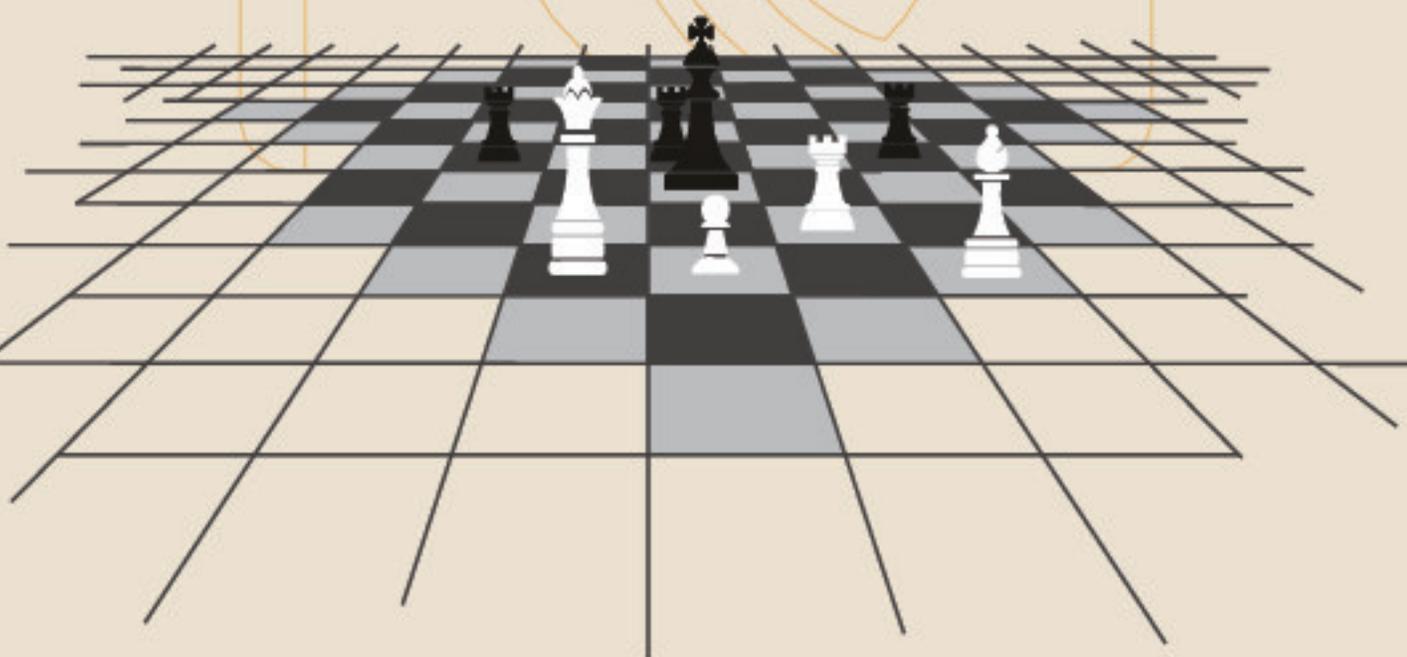


Illustration: Shyam M, Alumnus Batch '19, IISERTVM

IISM Trials

- Format: Closed
- Players: 10
- Format Type: Swiss System
- Purpose: Organized to select top performers for the IISER TVM chess contingent at IISM 2024.

Vasant Semester 2025

Eureka Cup

- Format: Open
- Players: 65
- Format Type: Swiss System
- Description: One of the largest chess events on campus, open to all students regardless of experience level, fostering wide participation.

Den of Wolves

- Format: Closed
- Players: 8
- Format Type: Round Robin



Through these well-curated tournaments, the Chess Club has consistently provided platforms for strategic growth, competitive preparation, and the overall enrichment of mind sports at IISER TVM.

FOOTBALL

During Varsha 24, ITSAV and Jogo Bonito, the open turf tournament, was completed. The plans for IFL had to be kept aside due to the unforeseen changes in climate which affected the completion of ITSAV. During Vasanth 25, football core was able to complete the inter-batch football tournament and Jogo Bonito. Apart from these, the football core arranged the farewell matches to honor the players of the passing out batch. One of the major accomplishments of the football core was the efforts it has taken to ensure an increased participation in women's football activities. The rise in the number of active participation of female football enthusiasts on and off pitch was a highlight of women's matches held last year. The football core along with the support of the sports council members were able to get the long awaited floodlight work order from

the FIC and DoSA. Unlike the past years the Jogo Bonito winners and runners up were awarded a trophy during the ISHYA 25



TABLE TENNIS

The Table Tennis community at IISER TVM had another exciting and active year with multiple events conducted across both semesters. The council successfully organized the Interbatch

- Men's Singles Champion: Alpha
- Women's Singles Champion: Delta

Interbatch 2025



Tournament, ITSAV 2024, and the Farewell Matches, all of which saw enthusiastic participation from across the institute.

ITSAV 2024

- Team Event Winners: Alpha
- Mixed Doubles Winners: Alpha

- Men's Team Champions: Batch 23
- Women's Team Champions: Batch 20

These tournaments not only enhanced batch and house-level engagement but also helped identify emerging talents for inter-institutional competitions like IISM.



BADMINTON

Badminton remained a high-energy and widely enjoyed sport at IISER TVM, with a series of competitive events organized throughout the year. The ITSAV Tournament, Interbatch Championships, and Farewell Matches all contributed to the active badminton culture on campus.

- Champions: Delta
- Runners-up: Charlie

Interbatch 2025

Men's Team

- Winners: Batch 22
- Runners-up: Batch 20

ITSAV 2024

Women's Team

- Winners: Batch 21
- Runners-up: Batch 20



Farewell Matches

Special farewell matches were conducted for the Batch of 2020, marking their contribution to the badminton community with fun, spirited games.



VOLLEYBALL

Volleyball has seen a significant rise in participation at IISER TVM this year, with more students actively engaging in the sport across all levels. The council successfully conducted the Interbatch Tournament, ITSAV 2024, and the highly anticipated IISER Volleyball League (IVL).

All three events witnessed enthusiastic participation, reflecting the growing volleyball culture on campus.

IISER Volleyball League (IVL)

IVL was conducted as a campus-wide league-format event, encouraging both experienced players and newcomers to compete in a structured environment. The league was a great success and contributed greatly to building a larger volleyball-playing community on campus.

TENNIS

Tennis saw a growing interest within the IISER TVM community this year, with enthusiastic participation in the ITSAV 2024 tournament. This marked a significant step in nurturing a tennis-playing culture on campus, especially with dedicated events for both men and women.

ITSAV 2024

Men's Category

- Champions: Charlie
- Runners-up: Bravo

Women's Category

- Champions: Charlie
- Runners-up: Delta

With Charlie house winning both men's and women's titles, their dominance in tennis was clearly established this season. The successful organization

of these events set the groundwork for future tennis initiatives and competitions.

KABADDI

Kabaddi at IISER TVM saw remarkable growth in 2024-25, with multiple events organized and increased participation across batches and genders.

ITSAV 2024

- Champions: Bravo ● ● ●
- Runners-up: Delta

Interbatch 2025

Men's Category

- Winners: Batch 2022

- Runners-up: Batch 2021

Women's Category (Inaugural Event)

- Winners: Batch 2024
- Runners-up: Batch 2022

Friendlies & Team Trials

Friendly matches were conducted with Kattakada and Vithura Kabaddi Clubs under the IISM initiative, offering valuable match experience. Open team trials were also held to induct new players into the IISER squad.

KHO KHO

Kho Kho continued to draw strong participation at IISER TVM, especially through the Interbatch Tournament held during the Vasant 2025 semester. However, due to poor court conditions, the ITSAV Kho Kho event could not be conducted this year.

Interbatch 2025

Men's Category

- Winners: Batch 2023

- Runners-up: Batch 2021

Women's Category

- Winners: Batch 2022
- Runners-up: Batch 2023

Despite challenges, the tournament was well-received and showcased the agility, strategy, and teamwork characteristic of this traditional sport.

BASKETBALL

Basketball remained one of the most energetic and widely followed sports on campus during the 2024-25 academic year, with strong participation across both Interbatch and ITSAV tournaments for men

and women.

Interbatch 2025

Men's Category

- Winners: Batch 2022
- Runners-up: Batch 2021

Women's Category

- Winners: Batch 2022
- Runners-up: Batch 2020

ITSAV 2024

Men's Category

- Champions: Alpha ●●●
- Runners-up: Charlie

Women's Category

- Champions: Charlie

- Runners-up: Bravo

All matches reflected high levels of athleticism, coordination, and crowd engagement, further boosting the popularity of basketball at IISER TVM.



CRICKET

Cricket continued to be one of the most popular sports at IISER TVM, with multiple tournaments organized throughout the academic year across different formats and team structures. The year saw competitive and spirited participation in the ITSAV Cricket Tournament, Interbatch Tournament, and the IISER Cricket League (ICL).

- Champions: PhD + IPHD
- Runners-up: Batch 24

IISER Cricket League (ICL)

- Champions: IISER Blasters
- Runners-up: IISER Titans

ITSAV 2024

- Champions: Charlie
- Runners-up: Alpha

All tournaments were held at Kathipara Ground, and the ICL featured leather ball matches, giving players a professional and competitive platform to showcase their skills

Interbatch 2025

FAREWELL MATCHES - "THE LAST DANCE"

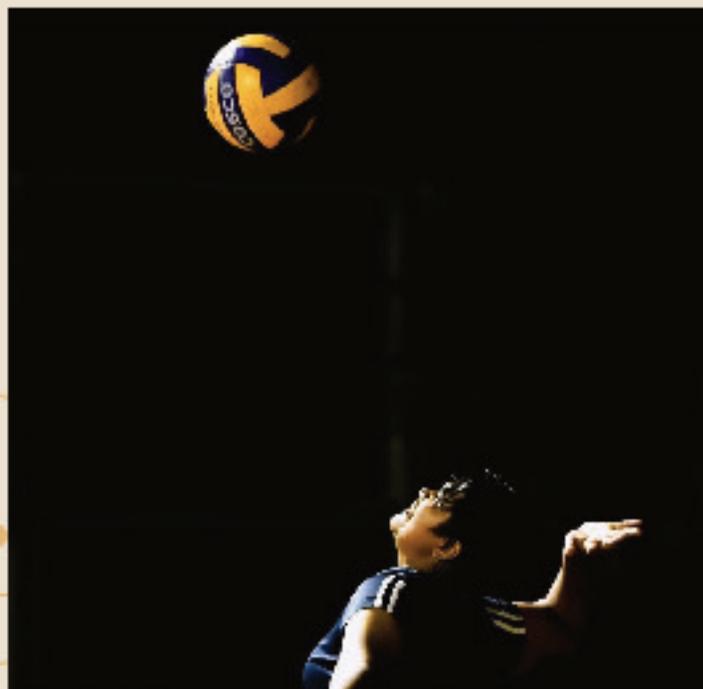
Emotional and energetic, these farewell games were held across:

- Football
- Cricket
- Basketball

- Kho Kho
- TT



- Volleyball
- Badminton



SPORTS AWARDS 2025

The Sports Awards 2025 ceremony recognized the outstanding athletes of IISER Thiruvananthapuram for their excellence, dedication, and contributions to the institute's vibrant sports culture throughout the academic year.

These awards celebrated performance across major events including IISM, ITSAV, Inter-batch tournaments, and continuous commitment to sportsmanship and leadership.

Sportsperson of the Year

- S Athul Krishna

Roll of Honour

- Vishnu Gopala T
- Rosha Dacruz
- Goutham Raj

Citations

- Joshy K Oommen

- Sano Field SS
- Ruth Ann Mathew
- Aishwarya K
- Avinash Hari
- Nehal B
- Josna Joseph
- Muhammed Raees A
- Aardhra Santhosh
- Suhana Nujum G
- Akshara M
- Abhinand Lal
- Jadov Menaka
- Akshay S Sundar
- Rishan Haasib

Citations – Special Mention

- Adithyan P
- Pragya Balot
- Athul V B
- Harshini S

Sports Colour

- Kritin Prabhu P
- Pushpanjali Bankira
- Devanath M
- Kaviraj Meena
- Kushal Agarwal
- Abhinav P A
- Yaswanth O S
- Abhisu Ray Maity
- Ruveen M
- Pragya Balot

Sports Colour – Special Mention

- Aravind Lomrore
- M Venkadesen

- Anzil Muhammed K

Sports Streak

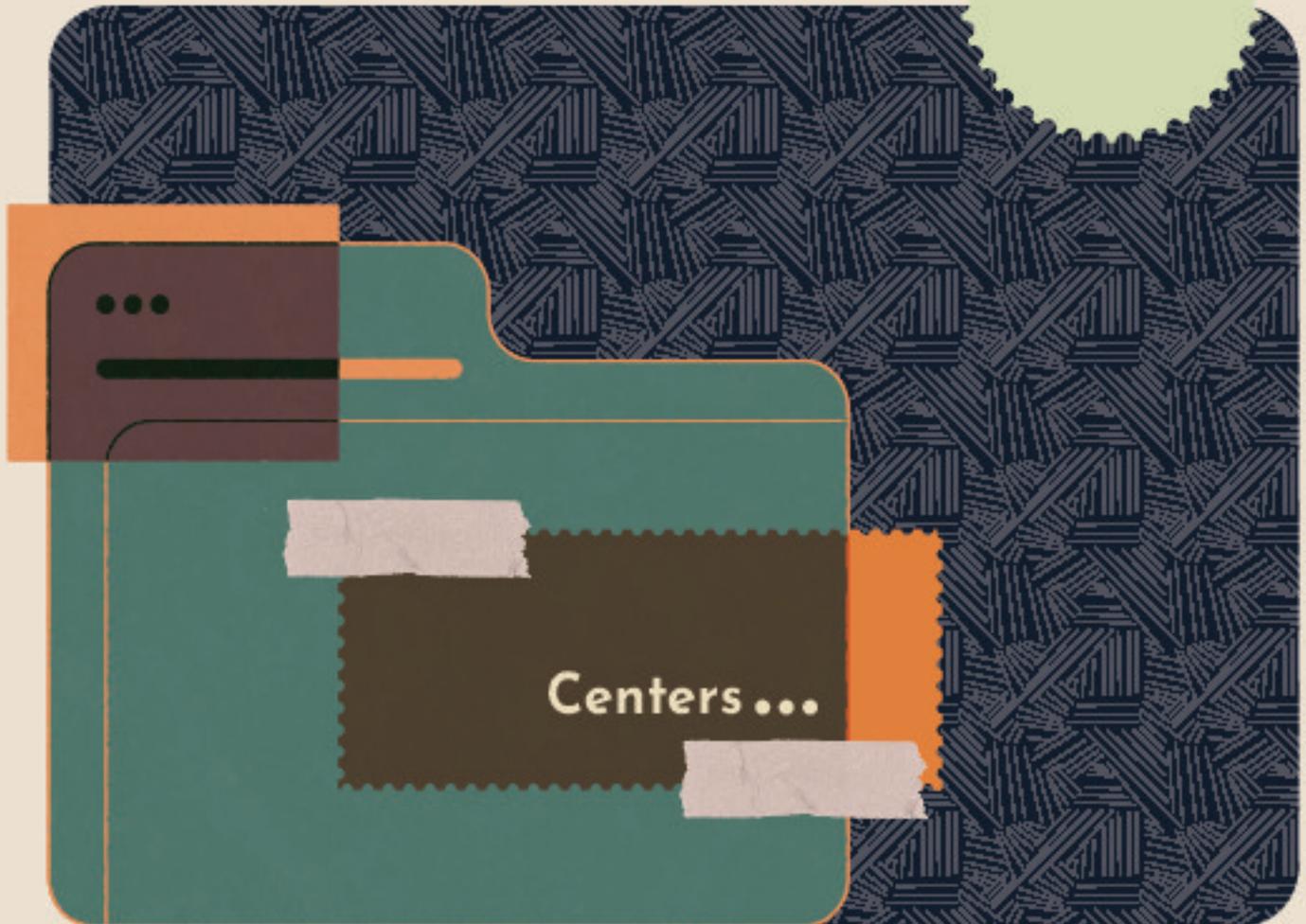
- Soorya Gayathri A K

Emerging Players

- Shadaan Hassan
- B Gopika Raj
- Adrija Misra
- Rajdeep Das
- Naman
- A J Nithin
- Aleef C K
- Vipul Dilip More



Photo: Parthiban, Electrical substations team, IISERTVM



CAMRIE

Centre for Advanced Materials Research with International Engagement

The Centre for Advanced Materials Research & Innovation in Energy (CAMRIE) continued to strengthen its role as a national hub for advanced materials research, interdisciplinary collaborations, and high-impact knowledge dissemination during the year 2024–2025. The Centre supported scientific activities across frontier areas including quantum materials, supramolecular systems, electrochemical energy storage, and functional nanomaterials. Currently there are 20 faculty members associated with the centre from various other schools, and a total 27 students are registered for the Ph.D. program under CAMRIE.

CAMRIE hosted several talks by eminent scientists from leading institutions across the globe, fostering vibrant academic exchange and exposure to cutting-edge research. During the year, CAMRIE successfully organized two major workshops that attracted participants from academia, research laboratories, and industry. ‘National Workshop on Quantum Materials & Devices’ covered emerging challenges in 2D materials, topological systems, and device engineering, offering participants technical exposure and research networking opportunities. Organized under the Indo–German International Research Training Group (IRTG) at IISER TVM, workshop on ‘Photoluminescence in Supramolecular Matrices’ focused on advanced photoluminescence techniques, supramolecular assemblies, and light–matter interactions.

CAMRIE continued to facilitate interdisciplinary collaborations across departments at IISER Thiruvananthapuram and with national and international partners. The Centre also supported student-driven research discussion meetings and thematic seminars, strengthening the research ecosystem on campus.



Picture: Group photograph of the participants of the National Workshop on Quantum Materials & Devices, organized under CAMRIE on 9th August 2024.

CENTER FOR HPC *High Performance Computing*

The Center for High-Performance Computing (Center for HPC) at the Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM) stands as a premier interdisciplinary core facility dedicated to advancing scientific computing and research in parallel algorithms. Established in 2021, the Center serves as a hub for cutting-edge research across diverse fields of science and technology, leveraging the power of high-performance computing (HPC) to address complex and computationally intensive problems.

Mission and Objectives

The primary mission of the Center for HPC is to foster innovation and excellence in scientific research by providing state-of-the-art computing resources and expertise. The Center aims to facilitate high-impact research across a broad spectrum of disciplines, including but not limited to physics, chemistry, biology, engineering, and data science. By offering advanced computational tools and support, the Center empowers researchers to tackle sophisticated problems, develop novel algorithms, and gain deeper insights into their respective fields.

Organizational Structure

The Center for HPC is home to a dynamic team of 13 associated faculty members drawn from various schools within IISER-TVM. These faculty members bring a wealth of expertise and contribute to a collaborative research environment that spans multiple disciplines. Additionally, the Center supports 7 full-time Ph.D. students and 9 final-year BS-MS project students, who actively engage in research and development activities. This diverse and talented group forms the backbone of the Center's research endeavors and contributes to its vibrant academic community.

Infrastructure and Facilities

A cornerstone of the Center is the Padmanabha HPC cluster, which has been operational since 2019. This high-performance computing infrastructure is supported by a generous contribution from faculty members through the FAST scheme funded by the Ministry of Human Resource Development (MHRD) and the IISER-TVM administration. The cluster is instrumental in providing computational power to over 120 users, including undergraduate and graduate students, who utilize its

resources for their research projects.

The Padmanabha cluster is equipped with:

1. CPU Cluster: Over 88 nodes, each featuring 28 cores, totaling 2464 cores. Each node is outfitted with 128 GB of system memory, ensuring substantial computational and memory resources for demanding simulations and data processing tasks.
2. GPU Nodes: 3 nodes dedicated to high-performance graphical processing, which are essential for accelerating computational workloads in fields such as machine learning, data analysis, and complex simulations.

User Access and Support

The Center for HPC operates as an open-access facility



Picture: Computing facility at Padmanabha cluster at IISER Thiruvananthapuram

for IISER-TVM faculty, researchers, and students. All users benefit from the computing resources at no charge, reflecting the Center's commitment to supporting academic and research excellence. The Center provides

comprehensive support and guidance, helping users to effectively harness the cluster's capabilities and achieve their research objectives.

Research Impact and Future Directions

Since its inception, the Center for HPC has played a crucial role in advancing research at IISER-TVM by enabling high-performance computational studies and fostering

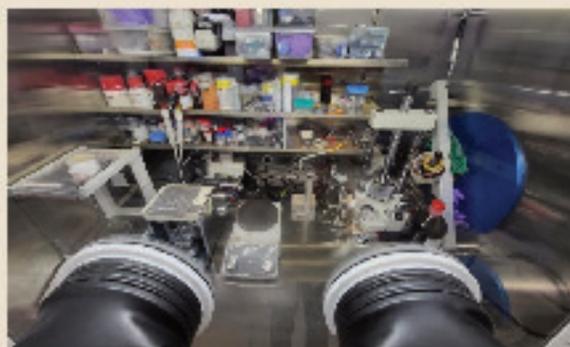
interdisciplinary collaborations. Looking forward, the Center aims to further enhance its infrastructure, expand its research initiatives, and continue contributing to breakthroughs in science and technology. The ongoing development of the Padmanabha cluster and the integration of emerging technologies will ensure that the Center remains at the forefront of high-performance computing and scientific research.

DST-IISER TVM *IC-MAP on storage*

DST-IISER TVMIC-MAP on Storage is one of the three Materials Acceleration Platform (MAP) consortiums established by Department of Science and Technology, Govt. of India, and Mission Innovation, to drive cutting-edge materials research in India. The centre, headed by Prof. M. M. Shaijumon, IISER TVM (Admin PI) and Yogesh Sharma, IIT Roorkee (Lead PI), commits to the accelerated development of solid-state battery technologies providing high power and energy densities, safety, and longevity.

The consortium, consisting of a core team of 16 researchers from 15 partnering institutes, aims to accelerate the development of Solid-State Battery technology incorporating Machine learning and Artificial Intelligence for automated processes. The project is supported by Mission Innovation, a global initiative catalyzing a decade of action and investment in research, development and demonstration to make clean energy affordable, attractive and accessible for all.

Since last year, researchers have been involved in developing various next-generation energy storage systems, specifically the cost-effective, scalable sulfide-based solid-state batteries and anode-free batteries. To facilitate this cutting-edge research, a couple of in-house developed instruments were fabricated and installed, like pressure cells, pressure monitoring cells and the high-temperature cycling facility. To track the progress and contributions from the other members of the consortium, several internal review meetings were conducted. The research output from this centre was also presented in various national and international meetings. Apart from that, the centre has collaborated with various industries like BPCL, Reliance for developing the pouch-level cells with the materials indigenously developed by these industries.



Picture: Sulfide-based solid-state battery fabrication and testing facility inside the Ar Glove Box



Picture: Testing facility for solid-state Lithium Batteries

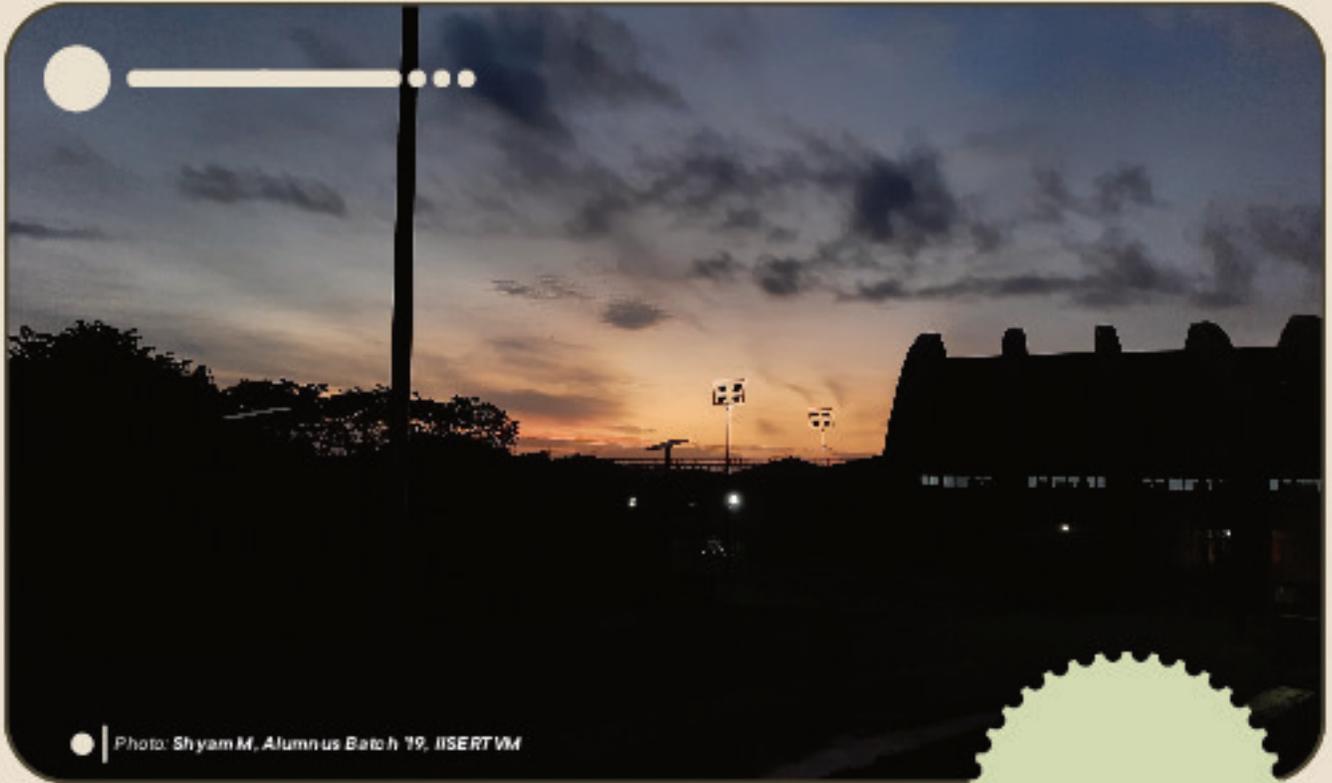


Photo: Shyam M, Alumnus Batch 19, IISERTVM



Ancillary
Facilities...

CENTRAL LIBRARY

Brief Introduction of the Central Library

The Central Library of IISER Thiruvananthapuram continues to play a pivotal role in supporting the academic and research activities of the institute's community. With state-of-the-art infrastructure and services, the library offers seamless access to a wide range of print and digital resources. Today, the majority of scholarly resources are available in electronic format, enabling users to access the library's collections 24/7.

The library has joined the One Nation One Subscription (ONOS) project of the Government of India, through

resource pool. Additionally, new journals such as *The Journal of Geology*, *Geological Society of America Bulletin*, and *American Mineralogist* have been added to the library's collection through the IISER Library Consortium. Major bibliographic databases, including Scopus, MathSciNet, JSTOR, and others, have also been made available. Prominent magazine platform *Edzter* was introduced during this period to enhance digital reading.



SciFinder Training for Academic Research



Exhibition of Hindi Books held in the Central Library

which it now accesses academic journals from over 30 publishers, further enhancing the institute's scholarly

Beyond online resources, the library holds a collection of print books, CD-ROMs, theses, and other materials in core and allied subjects. The facility is equipped with an advanced RFID-based self-service kiosk, enabling users to check books in and out independently.

The Central Library also maintains and regularly updates the IRINS (Indian Research Information Network System) faculty profiles, showcasing the publication output of IISER Thiruvananthapuram. To further strengthen academic and career support, the library has launched two dedicated web portals: one to keep faculty informed about grants and funding opportunities, and another to help students explore job openings and higher education prospects.

The library provides access to web-based plagiarism

detection and originality checking services such as Drillbit and Turnitin. Additionally, it offers access to Grammarly, an online grammar-checking tool. The OpenAthens remote login facility has been widely utilised by faculty and students for off-campus access to online resources.

During this period, IISER Thiruvananthapuram signed a "Read & Publish" agreement with the Company of Biologists. An extensive training series, *Re-Search-360*, was also organised to promote greater usage of online resources. The Central Library conducts several orientation sessions for newly admitted BS-MS, MS, IPhD, and PhD students.

External Collaborations

The IISER Thiruvananthapuram Library holds membership and affiliations with major library consortia and networks, including the ONOS initiative, the IISER

Library Consortium, and the Developing Library Network (DELNET).



Workshop on Web of Science, EndNote and JCR

Activities carried out by the Central Library

S No	Date	Event Title	Brief Description
1	2.05.2024	Training Session on Using Web of Science for Career Growth	Speaker: Dr. Sainul Abideen P, Deputy Librarian, IISER Thiruvananthapuram
2	28.5.2024	Webinar on "Accelerating Your Research with the Web of Science"	Speaker: Jaswanth Jenny P, Solution Consultant, Clarivate Analytics
3	05.7.2024	Training Session on SpringerLink	Speaker: Dr. Sainul Abideen P, Deputy Librarian, IISER Thiruvananthapuram
4	10.7.2024	Training on EndNote	Speaker: Shahinshah, Library Trainee, IISER Thiruvananthapuram
5	15.7.2024	Training on Turnitin Plagiarism Prevention System	Speaker: Dr. Sainul Abideen P, Deputy Librarian, IISER Thiruvananthapuram
6	06.8.2024	Training Session on SpringerLink	Speaker: Dr. Sainul Abideen P, Deputy Librarian, IISER Thiruvananthapuram
7	08.8.2024	Usage Awareness Workshop on Web of Science, EndNote and JCR	Speaker: Mr. Vishav Sharma, Clarivate Analytics

S No	Date	Event Title	Brief Description
8	14.8.2024	Exhibition on Partition Horrors Remembrance Day	Central library organized exhibition on partition horror remembrance day. Deputy Director Prof. S. Murthy Srinivasula, Deans, HoDs, Faculty, staff, and students visited the exhibition.
9	27.8.2024	Scifinder Training for Academic Research	Speaker: Millind Wagh, Principal Account Manager, ASCI Pvt. Ltd. India
10	03.9.2024	User Awareness Webinar on Springer Nature	Speaker: Ms. Alpana Sagwal, Head-Account Development, Springer Nature
11	26 & 27.9.2024	Exhibition of Hindi Book	<p>Hindi Book Exhibition, jointly organized by the Central Library and the Official Language Implementation Committee of the Institute, was held during 26-27 September 2024.</p> <p>A large number of Hindi books were displayed in the exhibition, which was held in the Lecture Hall Complex of the institute. Prof. J N Moorthy, Director, IISER Thiruvananthapuram, inaugurated the Exhibition. Prof S. Murthy Srinivasula (Dy. Director), Prof. Mahesh Hariharan (Registrar), Deans, HoDs, faculty members, staff, and students of the institute visited the exhibition held in the Lecture Hall Complex. The exhibition was conducted as part of the Hindi Week celebrations organized by the Institute.</p>

IT SECTION

IT Section activities during 2024-2025:

- **Network and Communication Infrastructure at BSL-3 Facility:**

A complete network infrastructure, including Wi-Fi and IP phone facilities, was installed at the BSL-3 facility located near the Animal House.

- **Network Infrastructure with Biometric-Based Door Access System:**

In addition to the setup of network and wireless infrastructure, a biometric access control system was implemented at the Crucible Science Activity Centre to enhance security and regulate access to sensitive areas.

- **Face Reader-Based Attendance Management System for Students:**

Face readers were installed to automate and streamline the attendance process for students.

- **Enhanced Surveillance Infrastructure**

Additional IP cameras were installed to monitor access to water tanks across the campus. Two Network Video Recorders (NVRs) were also deployed to record surveillance footage.

- **Installation of Display TVs for Faculty Profiles**

Several additional TVs were installed for displaying faculty profiles in various locations, including the Earth, Environmental and Sustainability Sciences Department, Central Dining Hall 2, PSB, and other key areas.

- **New FIST Computer Lab Installation and NFS Configuration**

A new FIST computer lab was installed and equipped with 70 computers. The Network File System (NFS) infrastructure was also configured to enable seamless data sharing and centralized storage for users.

- **Audio Visual support for class rooms**

Audio Visual support for 8 class rooms and Auditorium of Lecture Hall Complex, 3 Seminar Halls and department class rooms

- **High Performance Computing cluster (Padmanabha)**

IT Section handles the system administration and maintenance of the cluster

- **LAN and Internet connectivity**

IT Section manages the LAN infrastructure and Internet connectivity for the campus

HEALTH CENTRE

Submitted by: Dr.Hemalatha, Medical Officer

Activity Report for the Academic year 2024-25

1. HEALTH SCREENING CAMP

Date: 02.10.2024

Health Centre in collaboration with UBA IISER-TVM, organized a Health Screening Camp as part of the Safai Mitra Suraksha Shivar for Swachhata Hi Seva 2024 conference hall, Shopping Complex. The event was inaugurated by Prof. J. N. Moorthy, Director IISER TVM, who emphasized the importance of health and safety for those who contribute to campus cleanliness.

Prof. Murty Srinivasula, Deputy Director IISER TVM, welcomed the gathering. The event also featured a special address by Prof. Rajan, Nodal Officer UBA, and felicitation speeches by Prof. George Thomas, Dean and

Prof. Mahesh Hariharan, Registrar IISER TVM.

In a heartwarming gesture, the housekeeping staff were honored for their hard work and dedication by Prof. J. N. Moorthy, and Prof. Murty Srinivasula.

The camp included an awareness session on lifestyle disorders led by Dr. Hema Francis, followed by health screenings, which included diabetes and anemia screenings, along with the distribution of free medicines. The initiative focused on the well-being of the housekeeping staff, acknowledging their vital role in maintaining a clean and healthy environment.

2. HEALTH & FITNESS SESSION

Date: 02.11.2024

Health Centre in collaboration with Sports Council, held a Health and Fitness session titled "Fitness Prescription: Gen Alpha Edition" at Aryabhata ,LHC.The event focused on promoting wellness and healthy lifestyles for



the Gen Alpha generation. The session was inaugurated by Deputy Director Prof. S. Murthy Srivasula, and the Chief Guest, Dr. Joseph Benaven, President of IMA Kerala, delivered an inspiring address to the attendees.

Dr. Bipen P. Mathew, Chairman Committee for Health, Sports and Wellness led the session, IMA Kerala engaging participants with a variety of fitness challenges tailored to Gen Alpha. The event began with a warm welcome from Dr. Mathew Arun Thomas, FIC sports and Dr. Hema Francis, MO offered a gracious vote of thanks to close the session.

The session was interspersed with Fitness Challenges which were well received. The session concluded with a Q & A session wherein the students posed questions seeking answers to lead a healthy lifestyle.

3. BLOOD DONATION DRIVE ORGANIZED BY HEALTH CENTER IN ASSOCIATION WITH SWC

Date: 05.11.2024

Health Centre in collaboration with the Blood Bank, Govt



Medical College Trivandrum, successfully organized a Mega Blood Donation Drive at IISER-TVM. The event saw enthusiastic participation from students and staff, resulting in the collection of 46 units of blood. This collective effort underscores the commitment of young minds to support life-saving causes.

4. BLOOD DONATION DRIVE ORGANIZED BY HEALTH CENTER IN ASSOCIATION WITH SWC

Date: 17.01.2025

The Health Center, in collaboration with Blood Bank Govt Medical College Trivandrum, successfully organized a Blood Donation Drive. The drive was conducted in association with the Blood Bank of Government Medical College, Trivandrum.

The event witnessed active participation from students and staff. A total of 41 units of blood were successfully collected. However, it was observed that most of the female students were unable to donate blood due to anemia, underlining the importance of addressing nutritional health concerns within the student



community.

This initiative underscores the need for regular health awareness campaigns and nutritional interventions to promote better health among students. Future efforts will focus on addressing these issues to encourage greater participation in such drives.

5. BLS Training Session for students

Date: 26.01.2025

As per the directive from the Ministry of Education, the Health Centre, in collaboration with the SWC, organized a Basic Life Support (BLS) Training for students on 26th January 2025 at 3:00 PM at Kaumudi LHC.

The session was led by Dr. Shiju Stanley, Chief Consultant



and Head, Department of Emergency Medicine, Anantapuri Hospitals and Research, Trivandrum.

Participants received hands-on training, equipping them with essential life-saving skills, including CPR techniques and emergency response measures. The session was highly interactive, ensuring that students gained practical experience and confidence in handling emergency situations.

The event successfully enhanced awareness and preparedness among students, aligning with the

initiative to promote health and safety education.

6. FOOD SAFETY & HYGIENE SESSION FOR CAMPUS FOOD HANDLERS

Date: 07.12.2024

A Food Safety and Hygiene session was successfully conducted for the food handlers of CDH 1, CDH 2, and other eateries on campus. The session was led by Dr. Gopika S. Lal, Food Safety Officer, Trivandrum, who emphasized the significance of safe food practices and hygiene in daily life.

The event saw an enthusiastic response, with around 43 participants actively engaging in the discussions. The interactive nature of the session and the relevance of the topics were widely appreciated by the attendees.

As part of the event, Dr. Pooja Raveendran, Food Safety Officer, Trivandrum, handed over a certificate of participation to Mr. Sasidharan, Supervisor, CDH I, in recognition of his successful completion of a training program held at Kattakada organized by food safety department, Kerala

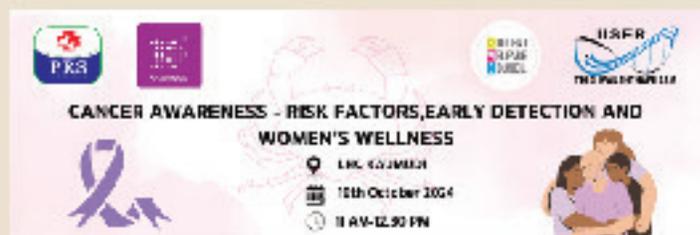
It is worth noting that all six food outlets on campus, Thanal, Tasty, and Zykka did not participate in this



crucial session. Given the importance of the session to their operations, it is recommended that they be formally cautioned for their absence.

Health Center Key initiatives from Aug 2024 to July 2025

1. Organized and conducted a program on Cancer Awareness - Risk Factors, Early Detection and Women Wellness on 19.10.2024 in BSB Seminar Hall, IISERTVM. It was held in association with PRS Hospital Karkinos Cancer Center, Trivandrum and SWC IISERTVM. The aim was to make the IISERTVM community and especially the womenfolk aware of Cancer and work towards its prevention. The education and empowerment of all participants with the risks and perils of cancer, vaccination and other preventive measures, made the participants of willing partners and proactive participants in Humanity's fight against the universal scourge of cancer. Over all, the program had enthusiastic participation from 160 plus persons. Apart from talks by renowned Oncologists covering the essentials of cancer, the program included an audio visual presentation on how to do a proper self breast Examination. It served to educate women to detect suspicious, precancerous lesions or breast lump by themselves. This'd make them seek early and proper medical evaluation/ treatment if need be and that'd would reduce morbidity and mortality due to cancer. The importance of Vaccination to prevent Cancers, especially cervical cancer and relevant recommendations were also highlighted during the program. Last but not the least, for the benefit of contract staffs, specially female cleaning staffs , a



session on cancer in Malayalam by Guest speakers, along with audio visual presentation was held in the same venue, shortly afterwards. During said program, Deputy Director Prof.S. Murty Srinivasula gave a brief talk on the history, problems and pitfalls of Cancer research and high lighted some of the latest ongoing research in the field. Prof. Dr. Ramadas Kunnambath, Rtd. Additional Director cum Head of Radiation Oncology Dept of RCC and Present Director of Clinical Operations & Services- PRS Hospital, gave an insightful talk coupled with a multimedia presentation, on Cancer - Risk Factors and Early Detection. He spoke on Cancer as disease touching upon the pathogenesis, progression, risk factors, screening recommendations for early detection, complications, preventive measures to be employed including LSM, tips for alleviation and treatment modalities. This was followed by Dr. Aswathy G Nath, a Gynecological Oncologist who speech on Cervical cancer - Screening, Early Detection, progression, complications, Prevention, vaccination, treatment and Women Wellness.

2. Organized and conducted a program on Dental Health Awareness cum Disease Prevention and Treatment on 16.3.2025 in Venus Hall, LHC complex, IISERTVM. It was held in association with Kamala Dental Speciality Hospital, Trivandum and SWC, IISERTVM. The aim was to a) to prevent and reduce the incidence of dental problems and b) to make IISERTVM community of aware of of latest treatment modalities in Dentistry, so as to enable them to utilize the option if need be, best suited to them. It was also intended to reduce the anxiety and suffering due to dental diseases. Dental problems arise most often due to improper dental hygiene and gets complicated due to delay in seeking proper medical attention. Dr. Segin Chandran KR, Maxillo facial Surgeon and Director of said Hospital gave an overview about the advanced treatment facilities in Dentistry. The



talk with a multimedia presentation was on dental issues dealt by his specialty i.e Maxillofacial surgery. The audience got exposed to and were able to understand the nuances of Maxillo facial surgery as a result. The role of Dentistry in reconstruction face of in cases of traumatic head injuries, cosmetic Dentistry, remedial implantations, Dental Prosthetics, useage of lasers, robotics and AI in dental surgery were all, the topics dealt by the speakers.

The guest speakers were as follows:

- Dr. Archana Sanjith and Dr.Nanda Kishaore Rajagopal - Orthodontics,
- Dr. Jency Sara George- Prosthodontics and oral

implantology

- Dr. Vyshak K Mohan - Endodontics
- Dr. Sajna H R - Periodontics
- Dr. Sanjeevini - Prosthodontics
- Dr.Aiswarya Madhu- Pedodontics

On General Dentistry-by Associate Dental Surgeons -

- Dr. Ardhara Justin, Dr. Nishita Thomas, Dr. Greeshma, Dr. Gopika Krishna, Dr. Arya S Pillai , Dr. Jeeshma J and Dr. Rengitha JR

Practice of proper Dental Hygiene was also impressed upon the audience.

The program was well received by the participants.

COUNSELLING CENTRE

Counselling centre IISER TVM Annual Report April 2024-March 2025

Mental health problems are very common among college students. Student mental health services are not only needed to support the psychological wellbeing of students, they are also an important part of academic success and retention. Here at the IISER Trivandrum Counselling centre, we offer mental health services to the students in order to reduce their psychological problems and distress and enhance their mental health, well-being, and quality of life. The centre consists of a psychologist (Dr. Neelima Gopinath) and a psychiatrist (Dr. Mary P R) who provide effective counselling services to students who come to them with a wide range of problems.

Overall, the student turnover was good for the last one year (April 2024- March 2025) and also student satisfaction seems to be adequate as majority of students are coming for regular follow-ups. More students are aware of the centre and is willing to come forward seeking help.

In total 261 students (87 male and 174 female) came for counselling in the specified period. There were new students and few who had already come before had to

be seen again. Some of the students were seen more number of times as per their requirement. This past year 574 counselling/psychotherapy sessions was conducted. There were in total 172 BS-MS students, 52 Ph.D/ IPhd, 20 MSc, and 17 others which include Post Doc, Project students etc. Out of the new students, 24 have been referred to the psychiatrist for further evaluation and treatment.

The predominant problems faced by students were stress related to academic issues as well as due to non-academic reasons, i.e. relationship issues, family issues, guide issues, work pressure, addictions, personal problems, overthinking, procrastination, low self-esteem, sleep issues, sexual assault, bereavement, choosing a career, psychological issues due to medical illness etc to name a few. Primary psychiatric illnesses are also detected in few of the students. Borderline personality traits were noticed in some of them. Students are given supportive counselling, psychotherapy, stress management programs as well as medication in indicated cases.

As per the statistics of students who consulted the

psychiatrist there were in total 202 students (males :68; females :134) and 233 sessions were conducted. There were in total 130 BS-MS students, 34 Ph.D/ IPhd, 34 MSc, and 4 others. Mood and adjustment disorders, anxiety, acute stress, ADHD, depressive symptoms, panic attacks and obsessive compulsive disorder etc were the predominant diagnosis of those who came for psychiatric consultations. Detailed case files are being maintained for every student who comes for counselling/psychiatric consultation with at most confidentiality.

In the beginning of the semester an orientation program was conducted for the new comers in which the

importance of counselling were briefed. Also a brochure for counselling centre has been send to the students so as to give them an overall idea about the functioning of the centre and how they can make use of the facilities being provided to them. Mails regarding how to handle stress, exam anxiety and other relevant materials are send to them regularly.

A counselling centre Facebook page and Instagram page made with the idea to share information that promote mental health and bring awareness among students has been well received and more students are aware of our services and it has helped reduce stigma in seeking help.

PROJECT ENGINEERING OFFICE



The following are the Key initiatives/Major infrastructural augmentation at the institute during the Financial year 2024-25.

1. Construction of Administrative building was taken up through CPWD and was almost completed during this period.
2. A research Lab Ultrafast Molecular Dynamics Laboratory at PSB B201 was set up.
3. A Balloon facility for School Earth and Environmental Science facility was constructed near the Football stadium.
4. A New Discussion Hall for School of Physics was set up at PSB concourse basement
5. Climate and Extreme Events Dynamics Laboratory was set up for SEESS.
6. BioCIAS research Laboratory was set up for SEESS.
7. Mantle Petrology and Chemical Geodynamics Laboratory was set up for SEESS
8. New 400mHZ NMR and EPR was set up at CIF
9. Collaborative Learning & Networking Lab is being set up at CIF B21 (AI Smart Lab)
10. New Computer Lab at Basement floor of the LHC is being done.
11. Hydro geochemistry and Aquifer Systems lab was set up at SEESS building.
12. A Bio Safety Level - 3 lab constructed near Animal House.
13. Setting up of Monsoon research laboratory at EESSC first floor in IISER campus, Vithura
14. Setting up of labs (Mantle Petrology and chemical Geodynamics), Office space at EESSC building ground floor in IISER campus, Vithura
15. Four discussion rooms were set up in the LHC entry level
16. Self supported roof was provided for the Kabadli court near Indoor stadium.
17. Roofing provided at the terrace of Indoor stadium for keeping sports items
18. New HDPE 4" pipe line from Stream near OHT-1 to WTP at IISER campus Thiruvananthapuram for water supply
19. A new Cafeteria constructed near Admin block.
20. Solar Street lighting are provided at Community Welfare centre and Students park.
21. Fixed flow meter in WTP, Various Hostels and Academics Buildings for IISERTVM Campus.
22. Residence's Chill Zone park was constructed adjacent to the existing children's park in the residential area with LED post top lanterns.

HOSTEL & STUDENTS' CO-OPERATIVE MESS

HOSTELS

IISER Thiruvananthapuram has eleven halls of residences, namely- A, B, C, D & E- blocks, Eravimala, Sispara, Mukurthi, Pushpagiri, Agasthya and Ponmudi. Of these 11 hostels, six are girls' hostels, and the rest are boys' hostels. Students are usually accommodated in a double or triple-sharing type of accommodation. Senior most PhD/iPhD students are accommodated in single rooms. Every hostel has washing machines, water purifiers, and some recreational facilities. High-

speed internet access is available in every room in the halls of residences. Hot water for the shower is also available. The institute operates buses connecting the hostels and different parts of the campus at frequent intervals. The elected hostel secretaries, along with two representatives from each hall of residence, liaise with the administration, facilities, and service section to ensure a smooth residential experience for all students.

STUDENTS' CO-OPERATIVE MESS

The Student Cooperative Mess is a not-for-profit, student-run organisation formed in 2013 to provide quality food to students at affordable prices to cater the needs of students from each and every part of India.

The SCoM is divided into the Mess Supervision Committee (1 year tenure) and the Daily Activities Committee (4 months x 3). The SCoM currently looks after the smooth functioning of three CDHs (CDH-1, CDH-2 & CDH-3) and two cafes (i-café & j-café) and has generated employment for around fifty-seven staff from different parts of the country.

Six members from the Student Welfare Council (SWC) and six volunteers with experience from Daily Activity Committee (DAC) constitute the Mess Supervision Committee (MSC) and help ensure the smooth functioning of SCoM.

Apart from serving regular meals, the SCoM helps organise special meals for students for festive and special occasions with the help of volunteers from the general student body.

Special meals served by SCoM (2024 - 25)

S No	Date	Event Title	Brief Description (Max 100 words)
1.	20/7/2024	12th Convocation day	Special lunch was served for the students in CDH-1. For the graduating students and their family (1000+ people) lunch was served in CDH-2
2.	08/9/2024	Theythaka'24	In view of the Onam celebration, traditional Onam sadhya of Kerala was prepared and served to all the staff and students.
3.	09/9/2024	Ganesh Chaturthi	Special dinner served with some traditional dishes of Maharashtra and Andhra Pradesh

4.	31/10/2024	Diwali Celebration 2024	Special dinner was served to the student community on the occasion of Diwali with delicacies from Northern part of India.
5.	04/12/2024 - 12/12/2024	IISM 2025	As part of IISM, the mess provided a special diet for eight consecutive days to IISM contingents of IISER TVM.
6.	14/1/2025	Pongal'25: FESTIVAL OF HARVEST	Traditional Tamil cuisines were served.
7.	02/2/2025	Saraswati Puja 2024	Special lunch served in traditional Bengali style.
8.	16/3/2025	Rang barse: Holi	Additional Refreshments in the lunch consisting of delicacies from the northern part of India were served.
9.	14/09/2024	Special Dinner	Special Dinner was served to the student community for a fruitful start to the semester.
10.	26/10/2024	Special Dinner for the Odia community get-together	Special Odia Lunch was served to facilitate the get-together arranged by the Odia community of IISER TVM.
11.	27/10/2024	Special Food provided for Kannada Community event	Special Kannada Menu was provided to facilitate the Kannada community event.

Miscellaneous Activities (2024 – 25)

S No	Date	Event Title	Brief Description (Max 100 words)
1.	02/3/2025 - 30/3/2025	Sehari and Iftaar arrangements for fasting students	Sehri and Iftar were served to fasting students as part of the Ramadan month.
2.	All over the academic year		SCoM also provides food for outreach participants for different departments of the institute.
3.	02/12/2024 - 22/12/2024	Food provided to facilitate the Winter School 2024	Food was arranged for the participants of the Winter School 2024.



Theythale' 2024



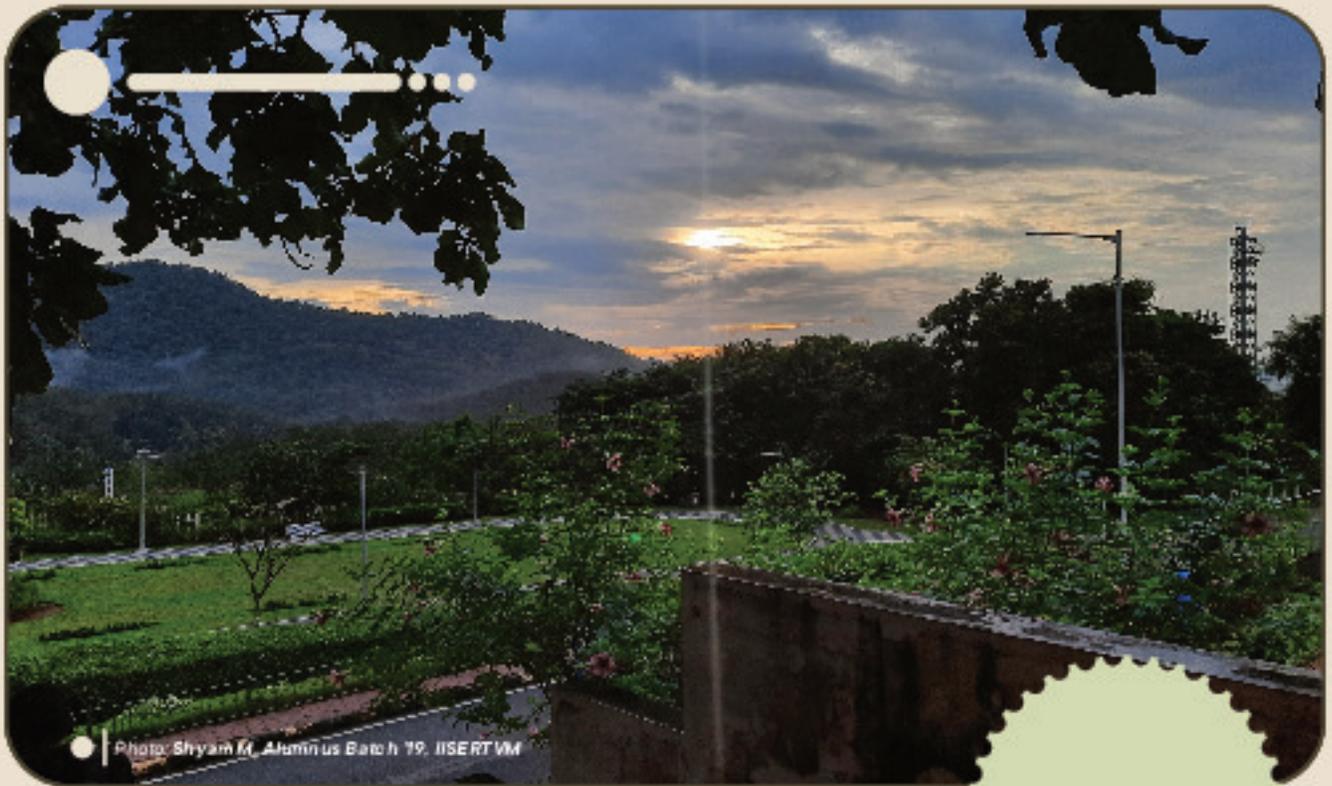
Pongal' 2025

SOCIAL MEDIA CHANNELS

 **Instagram:** @icafeliserivm

 **Whatsapp:** <https://chat.whatsapp.com/J0mcBJTVa3U4oqlwagaSCm>

 **Website:** mess.iiserivm.ac.in



Right to
Information (RTI) ...

RIGHT TO INFORMATION (RTI)

Right to Information has been recognized as a fundamental right under Article 19(1) of the Constitution. The Right to Information Act, 2005 empowers citizens to obtain information from any 'Public Authority'. All Public Authorities are mandated to provide timely responses to any queries from citizens on the functioning of the Public Authority. The main objective of the RTI Act is to empower citizens, promote transparency and accountability in the working of the Government, and make democracy work for people in the real sense.

The Government of India has an online portal, the RTI Request & Appeal Management System (RTI-MIS) through which an applicant can seek information on any Public Authority. IISER TVM is registered with the RTI-MIS. An applicant can obtain information about the Institute either through this online portal or by sending a request directly to the Public Information Officer, IISER Thiruvananthapuram, Maruthamala P.O, Vithura Grama Panchayath, Thiruvananthapuram - 695551. The Institute also files the statutory returns of RTI applications, details of appeals received and appeals disposed, on a quarterly basis.

The Institute has systematically implemented the proactive *suo-moto* disclosure, as per the guidelines under Section 4 of the RTI Act 2005, issued by the Government of India, Ministry of Personnel, Public Grievances and Pensions, Department of Personnel and Training, vide O.M. No.1/6/2011-IR, dated 15.04.2013. This is available on the Institute website under the link https://www.iisertvm.ac.in/pages/rti_act. Training Institutes under each Ministry/ Department/ Public Authority are authorised to conduct third-party Transparency Audits of proactive *suo-moto* disclosures of Public Authorities. The Third-party transparency audit of the proactive *suo-moto* disclosure of IISER TVM was conducted by Prof. Virender Kumar Bharti, Nodal Officer, RTI Cell, Indian Institute of Mass Communication, New Delhi.

IISER TVM, received a total of 127 RTI queries in the financial year 2024-25, of which 111 queries were resolved in the first instance, 10 were resolved after the first appeal and 6 queries were rejected in line with the provisions of the RTI Act.

Table I - Month-wise details of RTI queries received in the financial year 2024-25

Section	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Total
Academics	5	3	2	2	3	-	1	-	1	2	1	3	23
Academics/ DOFA	-	1	-	-	-	-	-	-	-	-	-	-	1
HR	5	5	8	4	3	1	1	9	12	1	1	3	53
HR/F&A	-	-	-	-	-	1	-	-	-	-	-	-	1
HR/Acad	-	-	-	-	1	-	-	-	-	-	-	-	1
DOFA	3	2	-	2	-	-	-	-	-	1	2	-	10

DOFA/HR/F&A	-	-	-	-	-	1	-	-	-	-	-	-	1
F&A	2	-	-	-	-	1	1	-	-	-	-	2	6
F&A/DoFA/ Acad	-	-	-	1	-	-	-	-	-	-	-	-	1
Academics/ Finance	1	-	-	-	-	-	-	-	-	-	-	-	1
HR/ DOFA	-	-	-	-	4	1	-	1	-	1	-	-	7
Project Office	-	2	-	-	-	-	-	-	-	-	-	1	3
R&D	1	-	-	-	-	-	-	-	-	-	-	-	1
HR/DoFA/ Academics	-	-	1	1	-	-	-	-	-	-	-	-	2
Rejected	-	-	-	-	1	1	1	-	-	-	2	-	5
Total	17	13	11	10	12	6	4	10	13	5	6	9	116
Grand Total	116												

Table II - Month-wise details of RTI appeals received in the financial year 2024-25

Section	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Total
HR	-	2	1	1	1	-	-	-	1	3	-	-	9
DoFA	-	-	-	-	-	1	-	-	-	-	-	-	1
Rejected	-	-	-	-	-	-	-	1	-	-	-	-	1
Total	-	2	1	1	1	1	-	1	1	3	-	-	11
Grand Total	11												

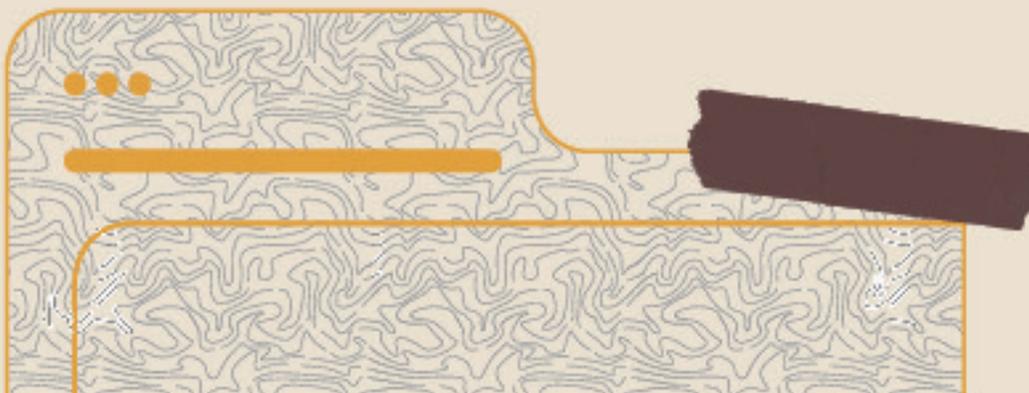




Photo: Shyam M. Alumnus Batch '19, USERTVM



Faculty
info...

FACULTY INFORMATION

Faculty Strength

Faculty	Mode of Engagement	Numbers
	Regular Faculty	116
	Contractual Faculty	01
	Emeritus Professor	01
	Visiting Professor	10
	Adjunct Professor	10
	Ad Hoc Faculty	08

Faculty Positions

Position	Departments	Numbers
Professors	School of Biology	05
	School of Chemistry	08
	School of Mathematics	04
	School of Physics	06
Associate Professors	School of Biology	06
	School of Chemistry	10
	School of Mathematics	09
	School of Physics	13
Assistant Professor - Grade I	School of Biology	14
	School of Chemistry	09
	School of Mathematics	07
	School of Physics	09
	School of Data Science	07
	School of Earth Environmental and Sustainability Sciences	09
Assistant Professor - Grade II	School of Data Science	01

SCHOOL OF BIOLOGY

Sl. No.	Name of Faculty	Designation
1	Prof. Hema Somanathan	Professor
2	Prof. S. Murthy Srinivasula	Professor
3	Prof. Tapas Manna	Professor
4	Prof. Nishant K. T.	Professor
5	Prof. Ullasa Kodandaramaiah	Professor
6	Dr. V. Stalin Raj	Associate Professor
7	Dr. Ramanathan Natesh	Associate Professor
8	Dr. Ravi Maruthachalam	Associate Professor
9	Dr. Jishy Varghese	Associate Professor
10	Dr. Nisha N. Kannan	Associate Professor
11	Dr. Satish Khurana	Associate Professor
12	Dr. N. Sadananda Singh	Assistant Professor (Grade I)
13	Dr. Sabari Shankar Thirupathy	Assistant Professor (Grade I)
14	Dr. Poonam Thakur	Assistant Professor (Grade I)
15	Dr. Sandhya Ganesan	Assistant Professor (Grade I)
16	Dr. Kamalakannan Vijayan	Assistant Professor (Grade I)

17	Dr. Nishana Mayilaadumveettil	Assistant Professor (Grade I)
18	Dr. Sanu Sameer	Assistant Professor (Grade I)
19	Dr. Amrutha Swaminathan	Assistant Professor (Grade I)
20	Dr. Vijay Jayaraman	Assistant Professor (Grade I)
21	Dr. Bandan Chakarborty	Assistant Professor (Grade I)
22	Dr. Yashraj Chavhan	Assistant Professor (Grade I)
23	Dr. Ravi Sureshbhai Devani	Assistant Professor (Grade I)
24	Dr. Nitin Uttam Kamble	Assistant Professor (Grade I)
25	Dr. Manish Kumar	Assistant Professor (Grade I)

SCHOOL OF CHEMISTRY

SI. No.	Name of Faculty	Designation
1	Prof. J. N. Moorthy	Professor & Director
2	Prof. K. George Thomas	Professor
3	Prof. Kana M. Sureshan	Professor
4	Prof. Mahesh Hariharan	Professor
5	Prof. Sukhendu Mandal	Professor
6	Prof. R. S. Swathi	Professor
7	Prof. Reji Varghese	Professor
8	Prof. Vinesh Vijayan	Professor
9	Prof. Ajay Venugopal	Professor
10	Dr. A. Thirumurugan	Associate Professor
11	Dr. Alagiri Kaliyamoorthy	Associate Professor
12	Dr. Ramesh Rasappan	Associate Professor
13	Dr. Gokulnath Sabapati	Associate Professor
14	Dr. V. Sivaranjana Reddy	Associate Professor
15	Dr. Rajendar Goreti	Associate Professor
16	Dr. Subrata Kundu	Associate Professor
17	Dr. A. Muthukrishnan	Associate Professor
18	Dr. Basudev Sahoo	Associate Professor
19	Dr. Veera Reddy Yatham	Associate Professor
20	Dr. Soumen De	Assistant Professor (Grade I)
21	Dr. Y. Adithya Lakshmana	Assistant Professor (Grade I)
22	Dr. Rajendra Kurapati	Assistant Professor (Grade I)
23	Dr. Pushpita Ghosh	Assistant Professor (Grade I)

24	Dr. Jerry Alfred Fereiro	Assistant Professor (Grade I)
25	Dr. Ramaraj Ayyappan	Assistant Professor (Grade I)
26	Dr. Ravi Yadav	Assistant Professor (Grade I)
27	Dr. Sreejith Jayasree Varma	Assistant Professor (Grade I)
28	Dr. Ayan Mukherjee	Assistant Professor (Grade I)

SCHOOL OF MATHEMATICS

Sl. No.	Name of Faculty	Designation
1	Prof. M.P. Rajan	Professor
2	Prof. Utpal Manna	Professor
3	Prof. P. Devaraj	Professor
4	Prof. Viji Z. Thomas	Professor
5	Dr. Sachindranath Jayaraman	Associate Professor
6	Dr. Shrihari Sridharan	Associate Professor
7	Dr. Dharmatti Sheetal	Associate Professor
8	Dr. K. R. Arun	Associate Professor
9	Dr. Saikat Chatterjee	Associate Professor
10	Dr. Sarbeswar Pal	Associate Professor
11	Dr. Srilakshmi K.	Associate Professor
12	Dr. Chamakuri Nagalah	Associate Professor
13	Dr. Geetha Thangavelu	Associate Professor
14	Dr. Dond Asha Kisan	Assistant Professor (Grade I)
15	Dr. Dhanya Rajendran	Assistant Professor (Grade I)
16	Dr. Sudarshan Kumar K.	Assistant Professor (Grade I)
17	Dr. Mohammed Ramiz Reza	Assistant Professor (Grade I)
18	Dr. Samya Kumar Ray	Assistant Professor (Grade I)
19	Dr. Jyothisnaa S.	Assistant Professor (Grade I)
20	Dr. Mitra Koley	Assistant Professor (Grade I)

SCHOOL OF PHYSICS

Sl. No.	Name of Faculty	Designation
1	Prof. Anil Shaji	Professor
2	Prof. R. C. Nath	Professor
3	Prof. Joy Mitra	Professor
4	Prof. M. M. Shaijumon	Professor
5	Prof. Manoj A. G. Namboothiry	Professor

6	Prof. Rajeev N. Kini	Professor
7	Dr. Madhu Thalakulam	Associate Professor
8	Dr. Bindusar Sahoo	Associate Professor
9	Dr. Soumen Basak	Associate Professor
10	Dr. Somu Kumaragurubaran	Associate Professor
11	Dr. Deepshikha Jaiswal Nagar	Associate Professor
12	Dr. Amal Medhi	Associate Professor
13	Dr. Ravi Pant	Associate Professor
14	Dr. Bikas C. Das	Associate Professor
15	Dr. M. Suheshkumar Singh	Associate Professor
16	Dr. D. V. Senthilkumar	Associate Professor
17	Dr. Sreedhar B. Dutta	Associate Professor
18	Dr. Tuhin Subhra Maity	Associate Professor
19	Dr. Vinayak B. Kamble	Associate Professor
20	Dr. Tanumoy Mandal	Assistant Professor (Grade I)
21	Dr. Shabnam Iyyani Syamsunder	Assistant Professor (Grade I)
22	Dr. Debashis Saha	Assistant Professor (Grade I)
23	Dr. Nitin Yadav	Assistant Professor (Grade I)
24	Dr. Chandrakala Meena	Assistant Professor (Grade I)
25	Dr. Souvik Paul	Assistant Professor (Grade I)
26	Dr. Krishnendu Gope	Assistant Professor (Grade I)
27	Dr. Mathew Arun Thomas	Assistant Professor (Grade I)
28	Dr. Suraj S. Hegde	Assistant Professor (Grade I)

SCHOOL OF DATA SCIENCE

Sl. No.	Name of Faculty	Designation
1	Dr. Priyanka Majumder	Assistant Professor (Grade I)
2	Dr. Shyamal Ghosh	Assistant Professor (Grade I)
3	Dr. Raji Susan Mathew	Assistant Professor (Grade I)
4	Dr. Mainak Adhikari	Assistant Professor (Grade I)
5	Dr. Alwin Poullose	Assistant Professor (Grade I)
6	Dr. Saptarshi Bej	Assistant Professor (Grade I)
7	Dr. Suresh Chavhan	Assistant Professor (Grade I)
8	Dr. Dhanyamol Antony	Assistant Professor (Grade II)

SCHOOL OF EARTH ENVIRONMENTAL AND SUSTAINABILITY SCIENCES

Sl. No.	Name of Faculty	Designation
1	Dr. Pramitha M.	Assistant Professor (Grade I)
2	Dr. Prasanth V.	Assistant Professor (Grade I)
3	Dr. Bhavya P. S.	Assistant Professor (Grade I)
4	Dr. Anand N.	Assistant Professor (Grade I)
5	Dr. Vishnu S. Nair	Assistant Professor (Grade I)
6	Dr. Manoj Kumar	Assistant Professor (Grade I)
7	Dr. Ashutosh Pandey	Assistant Professor (Grade I)
8	Dr. Fousiya A. A.	Assistant Professor (Grade I)
9	Dr. Subhajit Ghosh	Assistant Professor (Grade I)

VISTING PROFESSORS

Sl. No.	Name of the Faculty	School
1	Prof. N. Sathyamurthy	School of Chemistry
2	Prof. G. D. V. Gowda	School of Mathematics
3	Dr. Shantanu Godbole	School of Data Science
4	Dr. T. V. Anil Kumar	School of Biology
5	Prof. Ajayan Vinu	School of Chemistry
6	Prof. M. R. N. Murthy	School of Biology
7	Prof. M. K. Mathew	School of Biology

ADJUNCT PROFESSORS

1	Prof. R. B. Sunoj	School of Chemistry
2	Prof. Vinay Namboodiri	School of Data Science
3	Prof. Amit Mitra	School of Data Science
4	Prof. Michael Gromiha	School of Data Science
5	Prof. N. Ravishankar	CAMRIE
6	Prof. Ligy Philip	School of Earth, Environmental and Sustainability Sciences
7	Prof. Neela Nataraj	School of Mathematics
8	Prof. Dipshikha Chakravorthy	School of Biology
9	Prof. Ajayaghosh	School of Chemistry

EMERITUS PROFESSOR

Sl. No.	Name of the Faculty	School
1	Prof. Shyamalava Mazumdar	School of Chemistry

HONORARY PROFESSOR

1	Prof. G. Ambika	School of Physics
2	Prof. E. D. Jemmis	School of Chemistry



Photo: Shyam M. Alumnus Batch '19, IISERTVM



**Administrative
Personnel Info...**

ADMINISTRATIVE & SUPPORT PERSONNEL

Sl. No	Name of the Official	Designation
01	Prof. Mahesh Hariharan	Registrar
02	Shri. Siva Dutt V. K.	Superintending Engineer
03	Shri. B. V. Ramesh	Joint Registrar (Finance & Accounts) (resigned on 27.06.2024)
04	Shri. Hariharakrishnan S.	Joint Registrar (Administration)
05	Shri. Sudin B. Babu	Joint Registrar (Finance & Accounts, Purchase & Stores & Faculty Affairs)
06	Shri. Vijay Anavaratham	Deputy Registrar (Finance & Accounts)
07	Dr. Sainul Abideen P.	Deputy Librarian
08	Simi Seelan	Executive Engineer (Civil)
09	Shri. Priji E Moses	Assistant Executive Engineer (Civil)
10	Shri. Sreehari S.	Assistant Executive Engineer (Electrical)
11	Smt. Nimi Joseph Chaly	Assistant Registrar (Research & Development)
12	Shri. Satya Srinivas Narahariseti	Assistant Registrar (Student Affairs)
13	Shri. Anvar Sadath	Assistant Registrar (Purchase & Stores)
14	Shri. Sreeram V. K.	Assistant Registrar
15	Dr. Goldwin Hemalatha M.	Medical Officer
16	Dr. Thiraviam P.	Medical Officer
17	Smt. Divya V. J.	Technical Officer
18	Shri. P. Y. Sreekumar	Scientific Officer (IT)
19	Shri. Ashkar K.	Assistant Librarian
20	Shri. Arun Raj J. R.	Physical Education Instructor
21	Smt. Darli K. G.	Private Secretary
22	Smt. Navya Paul	Senior Technical Assistant
23	Shri. Vijesh K.	Senior Technical Assistant
24	Shri. Krishna Kumar A.	Senior Technical Assistant
25	Shri. Sangeeth M.	Senior Technical Assistant
26	Shri. Jins Joseph	Nurse
27	Smt. Athulya Thomas	Nurse
28	Smt. Nafeessa C. K.	Library Information Assistant
29	Shri. Jayaraj J. R.	Library Information Assistant
30	Shri. Alex Andrews P.	Technical Assistant
31	Shri. Adarsh B.	Technical Assistant
32	Shri. Anilkumar P. R.	Technical Assistant

33	Shri. Naveen Sathyan	Technical Assistant
34	Smt. Sandhya P. S.	Technical Assistant
35	Shri. Aneesh A.	Technical Assistant
36	Smt. Nithya Rani	Technical Assistant
37	Smt. Lekshmi Thampi	Technical Assistant
38	Smt. Deepthi P.	Technical Assistant
39	Smt. Lekshmi Devi L.	Technical Assistant
40	Smt. Sarika Mohan	Technical Assistant
41	Shri. Packiya Rajan	Technical Assistant
42	Shri. Praveen Peter	Junior Engineer (Civil)
43	Shri. Ashinraj D.	Junior Engineer (Civil)
44	Shri. Sarath Kumar R.	Junior Engineer (Electrical)
45	Shri Havas Mohammed	Junior Engineer(HVAC)
46	Smt. Mini Philip	Personal Assistant
47	Smt. Veena P.	Personal Assistant
48	Shri. Ajith Prabha	Superintendent
49	Shri. Satheesh Raghavan	Superintendent
50	Shri. Arun Raghunath	Superintendent
51	Shri. Manoj M. T.	Accountant
52	Smt. Sruthi U. A.	Junior Hindi Translator
53	Smt. Suja V. R.	Office Assistant (Multi Skill)
54	Smt. Vidya Senan I.	Office Assistant (Multi Skill)
55	Smt. Archana P. R.	Office Assistant (Multi Skill)
56	Smt. Beena N. K.	Office Assistant (Multi Skill)
57	Shri. Muruganandam A.	Office Assistant (Multi Skill)
58	Shri. Rajesh A. P.	Office Assistant (Multi Skill)
59	Shri. Rakesh M. V.	Office Assistant (Multi Skill)
60	Smt. Sruthi R. Balu	Office Assistant (Multi Skill)
61	Shri. Anil Prakash M.	Office Assistant (Multi Skill)
62	Shri. Pradeep Kumar C.	Office Assistant (Multi Skill)
63	Shri. Santhosh B. S.	Office Assistant (Multi Skill)
64	Smt. Anupama J. Prakash	Office Assistant (Multi Skill)
65	Rijin Chandra A.	Office Assistant (Multi Skill)
66	Shri. Vivek V G.	Junior Technical Assistant
67	Shri. Pradeep Kumar G. T.	Junior Technical Assistant
68	Shri. Nibith Kumar K. P.	Junior Technical Assistant
69	Ms. Lakshmi C.	Junior Technical Assistant
70	Shri. Muthukumaran A.	Junior Technical Assistant

71	Ms. Amritha Sivan	Junior Technical Assistant
72	Smt. Lincy Varghese	Junior Technical Assistant
73	Ms. Aathira S.	Junior Technical Assistant
74	Shri. Subin S.	Junior Technical Assistant
75	Shri Adersh V.	Junior Technical Assistant
76	Ms. Ansumol Cherian	Junior Technical Assistant
77	Shri Regin G.	Junior Technical Assistant
78	Shri. Arun Kumar M.	Attendant – Electrical
79	Shri. Ratheesh C.	Attendant – Plumber
80	Shri Akhil B.	Attendant – Plumber
81	Shri Pankaj Kumar Jha	Attendant – Electrical (resigned on 21.02.2025)

CONSULTANTS AND CONTRACTUAL OFFICERS

Sl. No	Name of the Official	Designation
01	Shri. Santhosh Kumar	Assistant Security Officer
02	Shri. Sunil Kumar	Assistant Security Officer

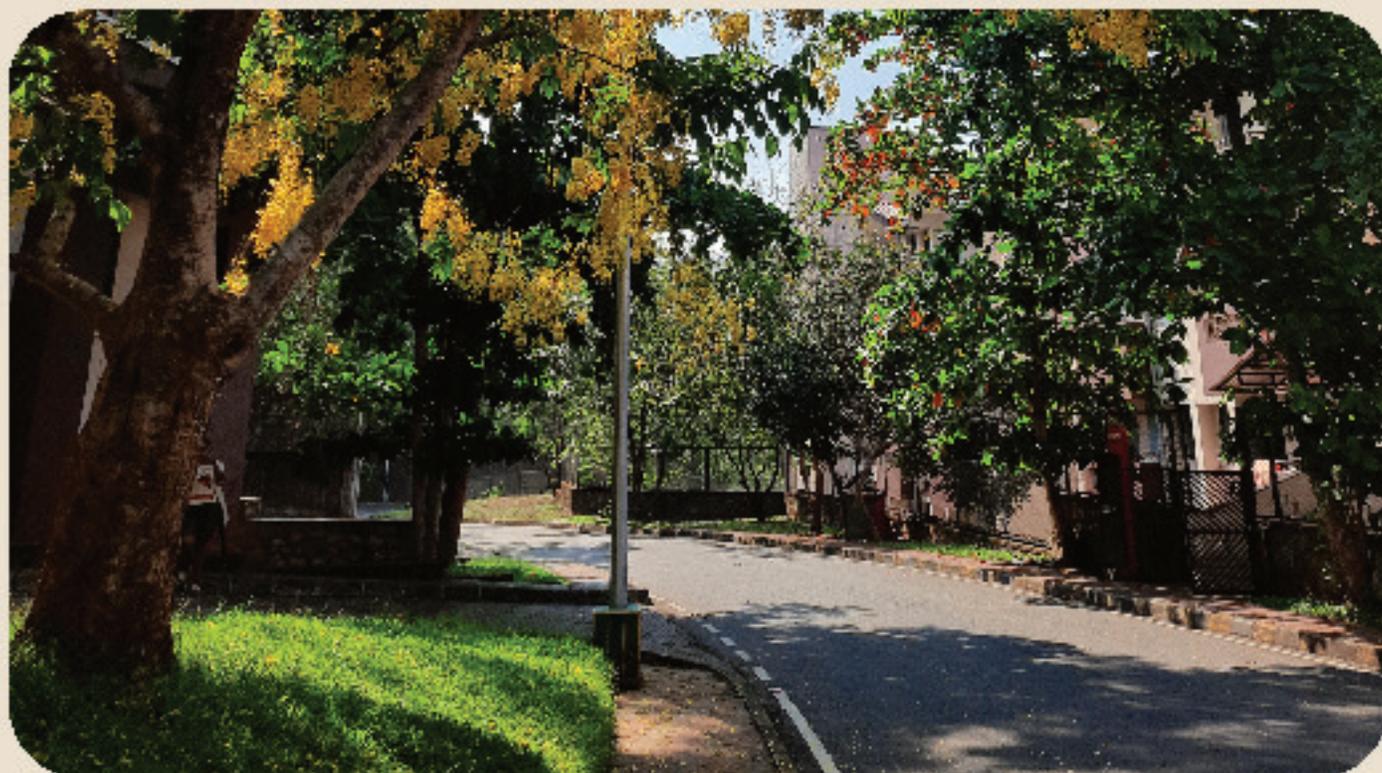


Photo: Shyam M, Alumnus Batch '19, IISERTVM



Photo: Shyam M, Alumnus Batch '19, IISERT VM

CARE
and UBA...

COLLECTIVE ACTION FOR RURAL EMPOWERMENT (CARE) UNNAT BHARAT ABHIYAN (UBA)

BRIEF INTRODUCTION TO CARE UBA

Indian Institute of Science Education And Research Thiruvananthapuram has become the Regional Coordinating Institute of UBA for the district Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha. Since the inception of Unnat Bharat Abhiyan the UBA cell of IISER Thiruvananthapuram campus actively conducting and participating in the development process of the villages adopted by the Institute. UBA IISER Thiruvananthapuram worked closely with various sectors including schools, colleges, and Panchayaths. UBA IISER, Thiruvananthapuram has a strong group of student volunteers group. These student member's acts as tutors and volunteers for UBA academic and social activities. IISER Thiruvananthapuram, a pioneer in scientific education and research, takes on a new, transformative role as the **Regional Coordinating Institute (RCI)** for the **Unnat Bharat Abhiyan (UBA)** in southern India. A flagship initiative of the Ministry of Education, UBA aims to elevate rural India through the power of education, innovation, and sustainable development. By aligning itself with UBA's vision, IISER Thiruvananthapuram bridges the gap between cutting-edge scientific research and grassroots solutions, becoming a key player in fostering holistic rural development.

In its capacity as RCI, IISER Thiruvananthapuram serves as a catalyst for change, guiding and mentoring various academic institutions in the region to actively engage with rural communities. The institute's deep-rooted commitment to **community engagement** and **socio-economic upliftment** drives a shared vision for a more inclusive and sustainable future. Through UBA, IISER Thiruvananthapuram empowers students, researchers, and faculty to collaborate with rural populations, applying scientific knowledge to address local challenges — from water conservation to renewable energy, healthcare to education.

The institute's multi-disciplinary approach ensures that research is not only confined to labs but reaches the heart of India's rural landscape. This initiative strengthens the connection between the world of academia and real-world challenges, fostering innovation that has a direct, positive impact on society. With its rich expertise and resources, IISER Thiruvananthapuram is positioning itself as a pivotal force in Unnat Bharat Abhiyan, shaping a future where scientific advancements work hand-in-hand with the sustainable development goals of rural India.

In the process, IISER Thiruvananthapuram is not just advancing academic excellence, but also creating a thriving ecosystem of community-driven innovation that will redefine the future of rural India.



Activities carried out by the UBA			
S No	Date	Event Title	Brief Description
1	16/04/2024	Conducted tutoring sessions for tribal students .	Project Aksharam is an initiative by Unnat Bharat Abhiyan (UBA) at IISER Thiruvananthapuram that focuses on providing academic support and tutoring to tribal students in the surrounding rural areas. The project is powered by the enthusiastic involvement of student volunteers from IISER, who dedicate their time and skills to help these students improve their educational outcomes.
2	28/04/2024	Workshop for participating institutes.	A two-day workshop was conducted on the topic " WASH for All: Strengthening Social Outreach Through Water, Sanitation, and Hygiene Initiatives " with the objective of addressing critical issues related to water, sanitation, and hygiene (WASH) across communities. The workshop was organized by UBA RCI IISER Thiruvananthapuram , in collaboration with Kerala Agricultural University (KAU) and Indian Institute of Technology (IIT) Palakkad . The event saw the participation of various educational institutions, local authorities, NGOs, and community workers engaged in WASH initiatives.
3	12/05/2024	Digital Literacy Campaign	UBA IISER collaboration on Digi Kerala project, where UBA worked with the Kerala government. As part of this initiative, UBA volunteers conducted surveys and organized classes to help promote digital literacy across the region. Additionally, UBA has made significant strides this year in providing essential services. Kerala, digital literacy campaigns in adopted panchayats like the "Digi Kerala" project aim to empower residents with digital skills, bridging the digital divide and enabling access to e governance and other services. This project under the Kerala state digital literacy scheme, aims to make Kerala fully digitally literate. It concentrates on panchayats with low digital literacy rates, aiming to narrow the digital divide.
4	05/06/2024	Online workshops for participating institutes.	The Regional Coordinating institute IISER Thiruvananthapuram organized a one-day workshop on 13th July 2024 for the participating institutes to start UBA activities in the adopted village clusters. The workshop was conducted in google meetup. The workshop marked the attendance of around 34 participants.
5	18/07/2024	Science awareness workshop for school students.	Science awareness workshop for school students can be highly engaging and educational offering hands on activities and interactive learning experiences to foster scientific curiosity and understanding. These workshops create more benefits for school students. Marg darsan is an initiative focuses to improve the quality of education in the adopted villages.

6	28/08/2024	Gram sabha in adopted villages.	UBA RCI IISER Thiruvananthapuram required to conduct gram Sabha to find out the specific development needs of the adopted villages and to understand the peoples elected representative's perspective on the major development issues that that stunt the development of the village. The gram Sabha meetings give an over view of the development activities initiated in the current financial year. It also discussed the major activities that need to be undertaken by the next financial year.
7	10/09/2024	Distribution of sanitary pads for school students.	As part of its commitment to community development and health awareness, the UBA cell of IISER Thiruvananthapuram has undertaken a sanitary pad distribution initiative for tribal schools in its adopted villages. This program aims to address the critical issue of menstrual hygiene management among adolescent girls in tribal areas, where access to sanitary products is limited and menstrual health remains a taboo subject. Through this initiative, UBA IISER TVM seeks to promote awareness, dignity, and school attendance among girl students. Sanitary pads were distributed to girl students in selected tribal schools. teacher's health workers and local leaders were involved to ensure sustainability and community support. This initiative by UBA IISERTVM reflects a strong step toward ensuring health equity, educational continuity, and empowerment of tribal girls. The program helps create a more inclusive and supportive learning environment.
8	20/09/2024 02/10/2024 22/11/2024	Medical camps in adopted villages.	In a collaborative effort to enhance healthcare access in rural and underserved communities, the Unnat Bharat Abhiyan (UBA) cell of IISER Thiruvananthapuram (TVM), in association with the Indian Medical Association (IMA), has been conducting medical camps in its adopted villages. These camps aim to provide basic healthcare services, early diagnosis, and health awareness to the residents, particularly in tribal and remote areas with limited access to medical facilities.
9	22/12/2024	Basic life support training for participating institutes.	Basic Life Support (BLS) training is essential for equipping participants with the necessary skills and knowledge to respond effectively in emergency situations, particularly in cases of cardiac arrest, choking, and respiratory failure. The training is designed to teach lifesaving techniques that can be performed by individuals with minimal medical knowledge.
10	01/01/2025	Campaign on reducing the usage of plastics.	As part of the Unnat Bharat Abhiyan (UBA) initiative under the Rural Community Interface (RCI) at IISER Thiruvananthapuram, a significant campaign is being conducted to raise awareness about the harmful effects of plastic and promote sustainable alternatives. The focus of the campaign is to educate and engage local communities in the effort to reduce plastic usage, thereby contributing to environmental conservation and promoting a cleaner, healthier planet.

11	19/02/2025	Mathematics workshop for school teachers.	In celebration of Mathematics Day, we are organizing a Mathematics Workshop for School Teachers , aimed at enhancing their teaching skills and deepening their understanding of mathematical concepts. The workshop will focus on innovative teaching methods, problem-solving techniques, and how to make mathematics more engaging and accessible for students.
12	06/03/2025	School intervention activities.	The Unnat Bharat Abhiyan (UBA) initiative at IISER Thiruvananthapuram is dedicated to fostering sustainable development and improving the quality of education in rural and underserved areas. As part of this initiative, IISER Thiruvananthapuram conducts School Intervention Activities aimed at enhancing the educational experience for students and empowering teachers in rural schools.



Photo: Shyam M, Alumnus Batch '19, IISERTVM

Photographs and Posters



Workshop for participating institutes



Tutoring sessions for tribal students



Workshop for participating institutes



Distribution of sanitary pads for school students.



Distribution of library books in school students.



Conducted medical camps in several areas.



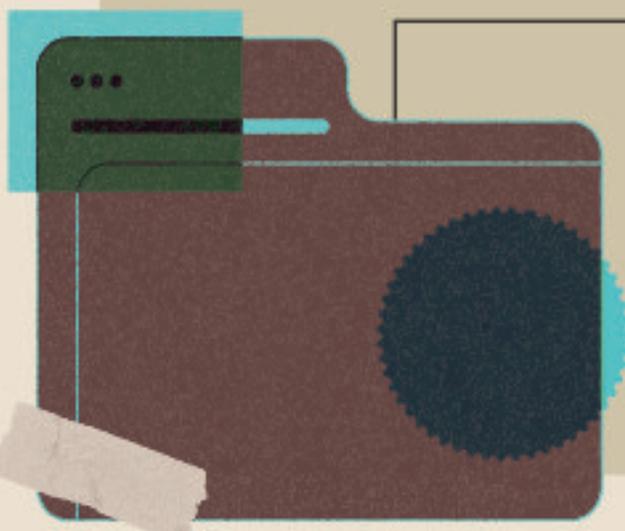
Campaign on reducing the usage of plastics.



Basic life support training for participating institutes.



Mathematics workshop for school teachers.



Annual Accounts

Balance Sheet

01

02

Income and
Expenditure
Account

Schedules of
Balance Sheet

03

04

Schedules of
Income and
Expenditure
Account

Receipts and
Payment
Account

05

06

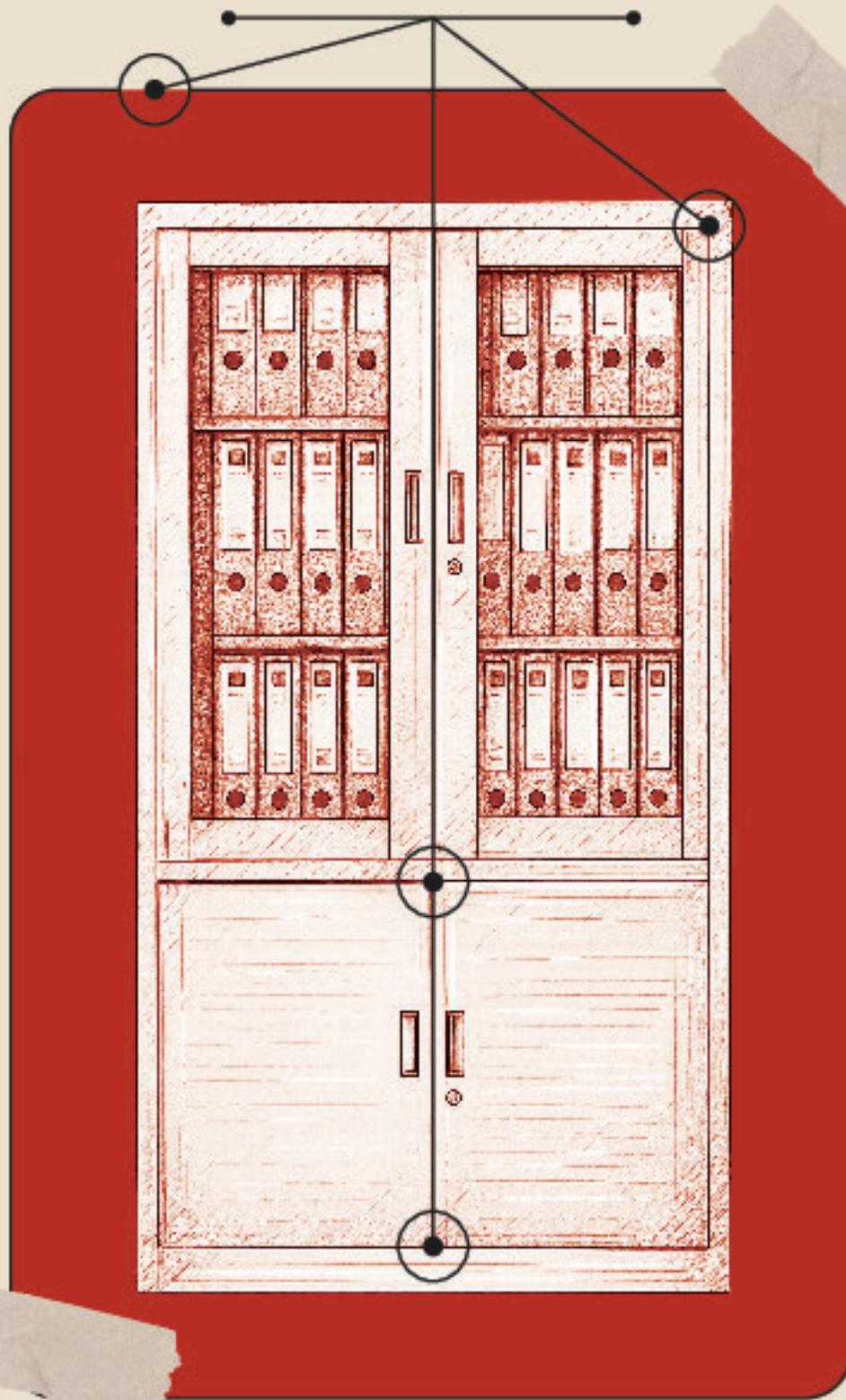
NPS Accounts

Sub Schedules

07

Annual Accounts

01 - Balance Sheet



INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM

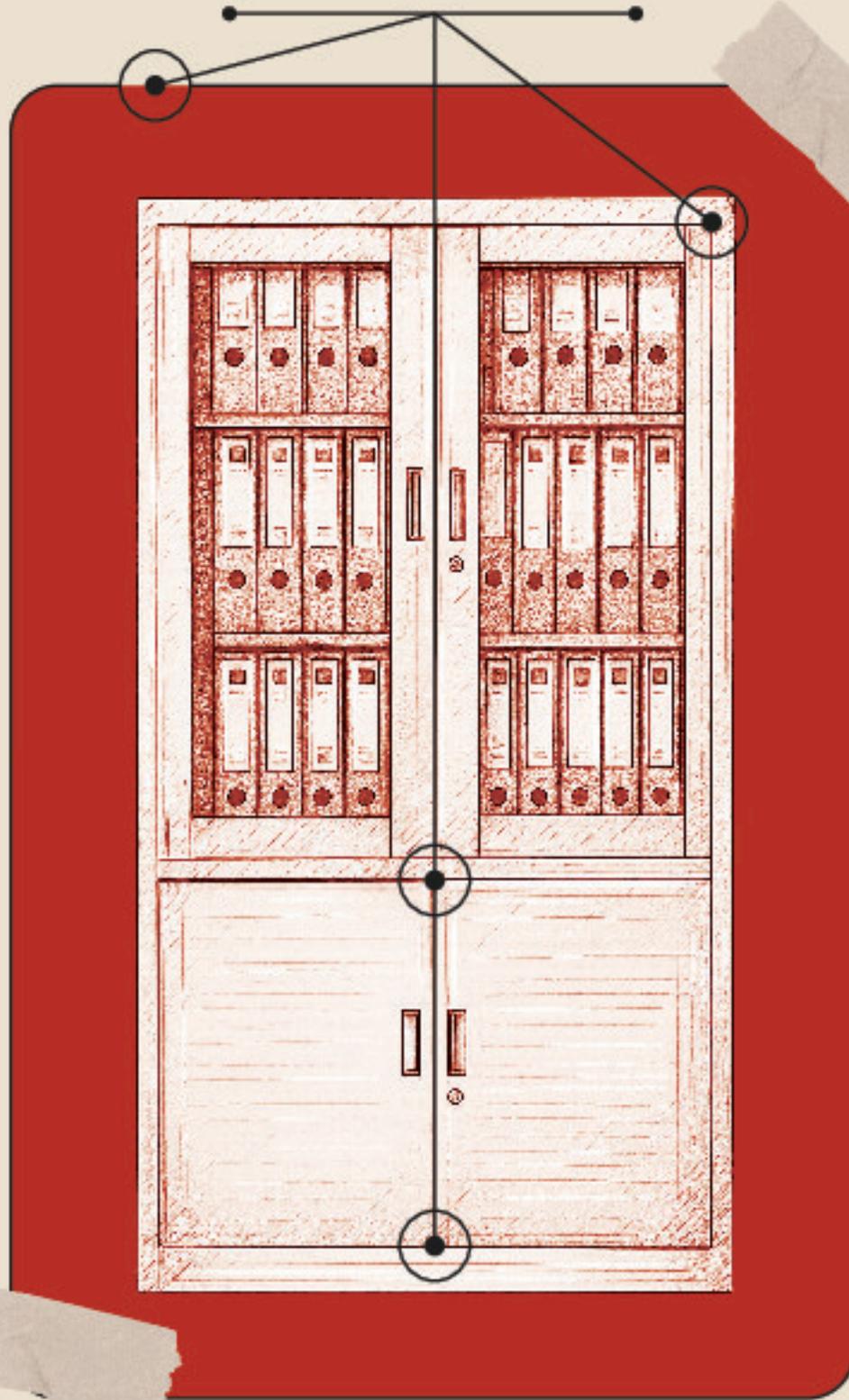
BALANCE SHEET AS OF 31ST MARCH 2025

Amount in ₹

SOURCES OF FUNDS	Schedule No	2024-25	2023-24
UNRESTRICTED FUND			
CORPUS/ CAPITAL FUND	1	9,70,53,82,743	9,68,83,08,615
DESIGNATED/ EARMARKED FUNDS	2	15,05,832	14,98,777
CURRENT LIABILITIES AND PROVISIONS	3	52,40,39,272	78,85,25,703
UNSPENT BALANCE OF EXTERNAL PROJECTS	3A	12,48,15,014	16,20,35,479
SPONSORED FELLOWSHIPS & SCHOLARSHIPS	3B	1,14,50,334	47,85,788
UNSPENT BALANCE OF GRANT - MHRD	3C	37,80,43,482	33,58,80,692
TOTAL		10,74,52,36,677	10,98,10,35,054
APPLICATION OF FUNDS			
FIXED ASSETS	4		
TANGIBLE ASSETS		8,18,16,45,032	8,31,84,36,146
INTANGIBLE ASSETS		3,58,56,051	3,86,06,264
CAPITAL WORK-IN-PROGRESS		9,10,26,737	2,28,85,679
INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS	5		
LONG TERM INVESTMENT			
SHORT TERM INVESTMENT			
INVESTMENT - OTHERS	6		
CURRENT ASSETS	7	1,95,58,66,033	2,17,12,20,134
LOANS, ADVANCES & DEPOSITS	8	48,08,42,824	42,98,86,831
TOTAL		10,74,52,36,677	10,98,10,35,054
SIGNIFICANT ACCOUNTING POLICIES	23		
CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS	24		

Annual Accounts

02 - Income and Expenditure Account



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED
31ST MARCH 2025**

Amount in ₹

PARTICULARS	Schedule No	2024-25	2023-24
INCOME			
Academic Receipts	9	13,06,29,726	11,50,65,386
Grants & Subsidies	10	1,05,95,94,793	95,79,29,600
Income from Investments	11	-	-
Interest Earned	12	-	-
Other Income	13	16,85,35,808	11,41,91,051
Prior Period Income	14	-	-
TOTAL (A)		1,35,87,60,327	1,18,71,86,037
EXPENDITURE			
Staff Payments & Benefits	15	47,81,85,680	40,78,15,209
Employees Retirement and Terminal Benefits	15A	8,56,61,659	1,91,52,397
Academic Expenses	16	22,04,42,699	21,65,42,730
Administrative & General Expenses	17	25,12,71,819	25,46,15,060
Transportation Expenses	18	1,06,19,124	93,49,883
Repairs & Maintenance	19	9,89,68,353	6,81,08,370
Finance cost	20	1,07,118	14,98,348
Other Expenses	21	-	-
Depreciation	4	45,98,78,411	43,01,29,526
Prior Period Expenses	22	12,09,32,799	-
TOTAL (B)		1,72,60,67,662	1,40,72,11,523
Balance being excess of Income over Expenditure (A-B)		(36,73,07,335)	(22,00,25,486)

PARTICULARS	Schedule No	2024-25	2023-24
Transfer to/ from Designated Fund			
Building Fund			
Others (Specify)			
BALANCE BEING SURPLUS/(DEFICIT) CARRIED TO CAPITAL FUND		(36,73,07,335)	(22,00,25,486)
Significant Accounting Policies	23		
Contingent Liabilities & Notes on Accounts	24		



Photo: Shyam M, Alumnus Batch '19, IISERTVM

Annual Accounts

03 - Schedules of Balance Sheet



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 1- CORPUS/CAPITAL FUND:

Amount in ₹

	2024-25		2023-24	
Balance as at the beginning of the year		9,68,83,08,615		9,42,90,70,392
Add: Contributions towards Corpus/Capital Fund				
"Add: Grant from UGC, Government of India and State Government to the extent utilised for capital expenditure"	32,49,42,417		33,58,06,213	
Add: Assets purchased out of Earmarked funds	3,50,876			
"Add: Assets purchased out of sponsored projects, where ownership vests in the institution"	6,31,84,848		14,27,29,421	
Add: Assets donated/ gifts received				
Add: Other additions	(40,96,678)		728,075	
"Add: Excess of income over expenditure transferred from income and expenditure account"	(36,73,07,335)		(22,00,25,486)	
Total		9,70,53,82,743		9,68,83,08,615
Less: Deficit transferred from the income and expenditure account				
BALANCE AT THE YEAR-END		9,70,53,82,743		9,68,83,08,615

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 2-DESIGNATED/EARMARKED FUNDS

Amount in ₹

	FUND-WISE BREAK UP				TOTAL	
	Fund AAA	Fund BBB	Fund CC	Endowment Funds	2024-25	2023-24
A						
a) <u>Opening balance of the funds</u>						
b) <u>Additions to the Funds:</u>						
c) Income from investments made on account of funds						
d) Accrued interest on investments of the funds						
e) Interest on savings Bank Account						
f) Other additions (specify nature)						
TOTAL (A)	NIL	NIL	NIL	NIL	NIL	NIL
B						
Utilisation/Expenditure towards objectives of funds						
i. Capital Expenditure						
ii. Revenue Expenditure						
TOTAL (B)						
CLOSING BALANCE AS AT THE YEAR-END (A-B)	NIL	NIL	NIL	NIL	NIL	NIL
Re presented by						
Cash and bank balances						
Investment						
Interest accrued but not due						
Total						

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 2 (A)-ENDOWMENT FUNDS

Amount in ₹

(1) Sl. No	(2) Name of the Endowment	(3) Opening Balance		(5) Additions during the year		(7) Total		(9) Expenditure on the object during the year	(10) Closing Balance		(12) Total
		Endow-ment	Accu. Interest	Endow-ment	Interest	Endow-ment	Accu. Interest		Endow-ment	Accu. Interest	
						(3)+(5)	(4)+(6)				(10)+(11)
1	Prof.MV George Memorial Lecture Fund	13,50,000	1,48,777		82,055	13,50,000	2,30,832	75,000	13,50,000	1,55,832	15,05,832
	Total	13,50,000	1,48,777	-	82,055	13,50,000	2,30,832	75,000	13,50,000	1,55,832	15,05,832

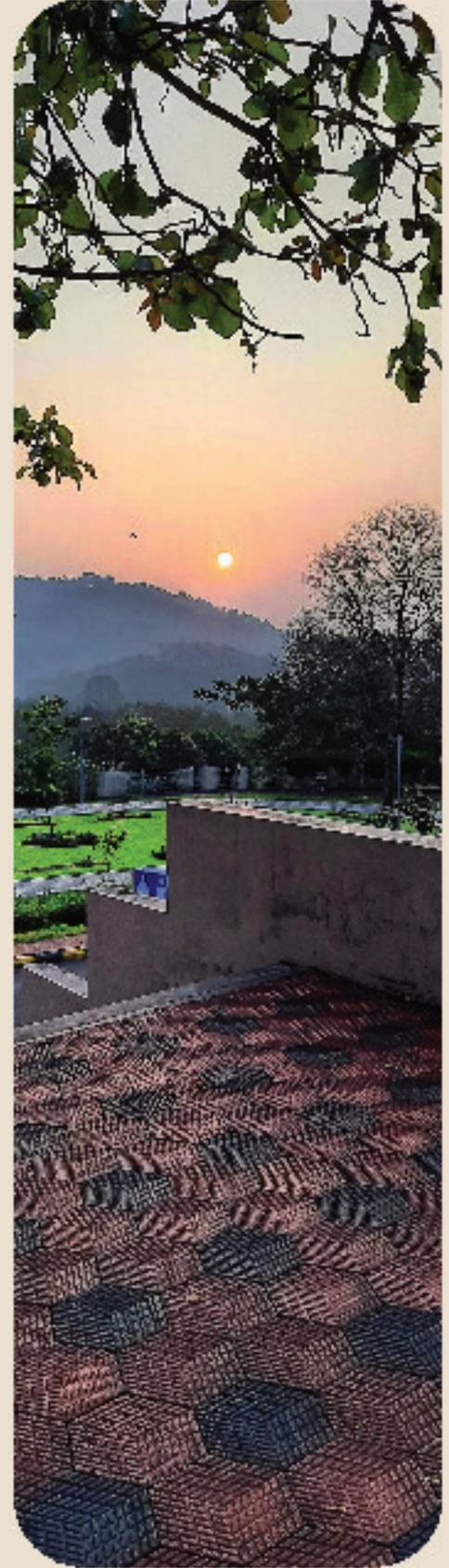


Photo: Vimal VM, Electrical section, IISERTVM

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT
31ST MARCH 2025**

SCHEDULE 3- CURRENT LIABILITIES AND PROVISIONS

Amount in ₹

Particulars	Sub Sch No.	2024-25	2023-24
A. CURRENT LIABILITIES			
1. Deposits from staff			
2. Deposits from students			
3. Sundry Creditors:			
a) For Goods & Services	1	83,974	10,60,111
b) Others	2	11,34,08,689	10,39,10,419
4. Deposits Others (including EMD, Security Deposits)	3	3,50,25,238	4,61,77,324
5. Statutory Liabilities(GPF,TDS,WC TAX, CPF, GIS,NPS) :			
a) Overdue			
b) Others	4	84,38,191	93,48,740
6. Other current Liabilities	5	13,60,48,532	48,32,12,950
a) Salaries			
b) Receipts against sponsored projects			
"c) Receipts against sponsored fellowships and scholarships"			
d) Unutilised Grants			
e) Grants in advance			
f) Other Funds			
g) Other liabilities			
Total (A)		29,30,04,624	64,37,09,544
B. PROVISIONS			
1. For Taxation			
2. Gratuity	6	7,40,49,177	-
3. Superannuation/Pension			
4. Accumulated Leave Encashment	6	15,69,85,471	14,48,16,159
5. Trade Warranties/Claims			
6. Others (Specify)			
Total (B)		23,10,34,648	14,48,16,159
Total (A+B)		52,40,39,272	78,85,25,703

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 3 (a)-ENDOWMENT FUNDS (Sponsored Projects)

Amount in ₹

(1) Sl No	(2) Name of the Project	(3) Opening Balance 2023-24		(5) Receipts / Re- covers during the year	(6) Total	(7) Expenditure during the year		(8) Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
1	ACRON-AMR-DR SANDHYA GANE- SHAN-ACCORN-AMR/2023/003	63,544	-	2,205	65,749	-	-	65,749	-
2	ANRF-DR ADITHYA LAKSHMANNA YAP- AMANU-ANRF/IRG/2024/001397/C/S	-	-	23,46,955	23,46,955	-	-	23,46,955	-
3	BHARAT PETROLEUM CORPORATION LIMITED (BPCL)-DR M M SHALUOMON	7,44,578	-	5,82,898	13,27,476	5,15,312	-	8,12,164	-
4	CEFIPRA-DR K GEORGE THOMAS-6908-2	23,93,716	-	50,014	24,43,730	15,65,671	-	8,78,059	-
5	CMNPDF-DR ASWATHI K-KSHEC- A1/144(C)/CMNPF.Contingency Fund/195	25	-	-	25	-	-	25	-
6	CMNPDF-DR HIJAS K M-KSHEC- A1/144(C)/CMNPF.Contingency Fund/195	1,784	-	54	1,838	-	-	1,838	-
7	CMNPDF-DR NEEMA P-KSHEC-A1/144(C)/ CMNPF.Contingency Fund/195	2,217	-	2,00,751	2,02,968	1,99,470	-	3,498	-
8	CSIR- DR TAPAS K MANNNA- 37 (1688)/17- EMR-II	-	80,412	1,291	(79,121)	-	-	-	79,121
9	CSIR-OCMB-DR RAVI MARUTHACHA- LAM-31-2(281)/2018-19/Budget	7,33,724	-	21,824	7,55,548	63,056	-	6,92,492	-
10	CSIR-DR ALAGIRI KALIYAMUR- THY-02/0487/23/JEMR-II	9,697	-	346	10,043	8,918	-	1,125	-

Sl No	Name of the Project	Opening Balance 2023-24		Receipts / Re-coveries during the year	Total	Expenditure during the year		Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
11	CSIR-DR BASUDEV SAHOO-02/0480/23/EMR-II	2,26,511	-	7,725	2,34,236	-	2,93,447	-	59,211
12	CSIR-DR RAMESH RASAPAN-02/0409/21/EMR-II	34,612	-	1,683	36,295	14,539	-	21,756	-
13	CSIR-DR SOUMEN DE-01/3137/23/EMR-II	339	-	38	377	-	-	377	-
14	CSIR-DR SUBRATA KUNDU-01/3025/21/EMR-II	88,417	-	1,519	89,936	67,479	-	22,457	-
15	CSIR-DR SUKHENDU MANDAL-01/3024/21/EMR-II	-	40,779	549	(40,230)	29,013	-	-	69,243
16	CSIR-DR VEERA REDDY YATHAM-02/0466/23/EMR-II	-	4,23,652	8,017	(4,15,635)	75,000	(4,99,411)	8,776	-
17	CSIR-DR VENNAPUSA SIVARANJANA REDDY-01/3109/23/EMR-II	5,93,429	-	(3,21,193)	2,72,236	-	2,60,000	12,236	-
18	CURE PARKINSON'S TRUST-DR POONAM THAKUR	4,09,145	-	74,63,513	78,72,658	38,73,904	20,98,040	19,00,714	-
19	DBT -IISC-MOHAMMED AIYAZ	42,400	-	(42,400)	-	-	-	-	-
20	DBT-DR AMRUTHA SWAMINATHAN-BT/PR52416/BMS/85/208/2024	-	-	11,64,733	11,64,733	6,43,559	5,21,174	-	-
21	DBT-DR ANAND RAMAJAN SANTHASEELA-DBTRA/2023-24/N/NIPGR/31	3,05,503	-	38,166	3,43,669	3,42,306	-	1,363	-
22	DBT-DR ANIRBAN GUHA-BT/RLF/Re-entry/08/2021	18,80,482	-	(3,262)	18,77,220	18,76,055	-	1,165	-
23	DBT-DR HEMA SOMANATHAN-BT/PR36693/FCB/125/96/2020	-	50,000	2,29,750	1,79,750	1,79,750	-	-	-
24	DBT-DR N SADANANDA SINGH-BT/PR4667/AAQ/1/960/2022	-	-	4,92,780	4,92,780	718,564	-	-	2,25,784
25	DBT-DR N SADANANDA SINGH-BT/RLF-RE-ENTRY/17/2015	20,955	-	286	21,241	15,340	-	5,901	-
26	DBT-DR NISHANT K T-BT/PR41371/BRB/10/1958/2020	6,195	-	5,72,164	5,78,359	10,14,459	-	-	4,36,100

Sl No	Name of the Project	Opening Balance 2023-24		Receipts / Re-coveries during the year	Total	Expenditure during the year		Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
27	DBT-DR RAJENDRA KURAPATHI-BT/ PR48/01/BCE/8/1808/2023	-	1,28,475	2,47,556	1,19,081	4,36,590	-	-	3,17,509
28	DBT-DR RAJENDRA KURAPATHI-BT/RLF/ Re-entry/24/2020	15,320	-	8,01,911	8,17,231	5,59,611	-	2,57,620	-
29	DBT-DR SATISH KHURANA-BT/P R30459/ MED/31/449/2021	12,025	-	1,16,787	1,28,812	6,98,218	(11,58,472)	5,89,066	-
30	DBT-DR SRINIVASA MURTY-BT/PR21325/ BRB/10/1554/2016	35,978	-	3,919	39,897	-	-	39,897	-
31	DBT-DR STALIN RAJ-EU-INF/15/RV/19-20	-	4,27,586	19,10,972	14,83,386	19,08,578	-	-	4,25,192
32	DBT-DR SUHESH KUMAR SINGH-BT/ PR30005/MED/32/657/2018	-	-	-	-	-	-	-	-
33	DBT-DR SUHESH KUMAR SINGH-BT/ PR50627/MED/32/993/2023	-	-	30,67,654	30,67,654	4,17,634	26,96,886	-	46,866
34	DBT-DR SWATHY DEVIREDDY-BT/RLF/ Re-entry/54/2022	10,46,849	-	27,71,201	38,18,050	21,34,159	-	16,83,891	-
35	DBT-DR TAPAS K MANNA-BT/P R30271/ BRB/10/1740/2018	2,09,237	-	6,570	2,15,807	44,613	-	1,71,194	-
36	DBT-DR TAPAS KUMAR MANNA-BT/ PR53720/BMS/85/235/2024	-	-	23,18,003	23,18,003	23,18,003	-	-	-
37	DBT-DR TAPAS KUMAR MANNA-IC-12025 (22)/2/2023-ICD-DBT	-	3,00,376	16,30,490	13,30,114	13,21,272	-	8,842	-
38	DBT-DR ULLASA K-BT/PR27535/ NDB/39/600/2018	-	2,53,062	11,272	(2,41,790)	-	-	-	2,41,790
39	DBT-DR ULLASA K-BT/PR7713/ NDB/39/261/2013	1,20,477	-	-	1,20,477	-	-	1,20,477	-
40	DBT-DR VIJAY JAYARAMAN-BT/RLF/ Re-entry/44/2022	12,68,907	-	1,001	12,69,908	12,68,907	-	1,001	-
41	DBT-DR YUGANDER ARRA-RLF/ HRD/35/02/2006	2,77,200	-	(3,03,437)	24,68,563	24,62,496	-	6,067	-
42	DBT-DR KARTHIK CHANDIRAN-BT/RLF/ Re-entry/19/2022	-	-	28,16,845	28,16,845	25,42,333	-	2,74,512	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
43	DRDO-DR RAMESH CHANDRA NATH-DLJ/TC/1025/1/73	41,757	-	(13,593)	28,164	-	-	28,164	-
44	DST-DR MADHU THALAKULAM / DR ANIL SHAJI-DST/QC/NQM/OC/2024	-	-	5,00,000	5,00,000	1,12,552	-	3,87,448	-
45	DST-DR RAVI PANT-DST/QTC/NQM/QC/2024	-	-	3,00,000	3,00,000	-	-	3,00,000	-
46	DST-DR ANIL SHAJI-DST/ICPS/QuST/Theme-4/2019/SUMMER	13,48,559	-	(13,02,847)	45,712	-	-	45,712	-
47	DST-DR ANIL SHAJI-QUEST/ THEME-4/2019/GENERAL	72,95,554	-	(42,014)	72,53,540	1,36,528	70,25,000	92,012	-
48	DST-DR DEEP SHIKA JAISWAL NAGAR-DST/TMD/HFC/2K18/37	17,056	-	519	17,575	-	-	17,575	-
49	DST-DR DEEP SHIKHA JAISWAL NAGAR-DST/TMD/IC-MAP/2K20/02	69,00,832	-	13,85,588	82,86,420	9,05,432	71,73,220	2,077,68	-
50	DST-DR K GEORGE THOMAS-DST/NM/TUE/EE-01/2019	9,10,182	-	62,88,427	71,98,609	20,99,308	71,296	50,28,005	-
51	DST-DR M M SHALUJON-DST/TMD/IC-MAP/2K20/01	4,18,770	-	6,29,037	10,47,807	17,09,138	(2,63,223)	-	3,98,108
52	DST-DR MADHU THALAKULAM-DST/ICPS/QuST/Theme-4/2019/General	1,58,03,596	-	3,17,917	1,61,21,513	1,41,474	85,29,392	74,50,647	-
53	DST-DR MANOJ A G NAMBOOTHIRY-DST/TMD/IC-MAP/2K20/03	11,90,149	-	1,77,186	13,67,335	15,23,443	22,898	-	1,79,006
54	DST-DR NAGAI AH CHAMAKURI-NS-M/R&D-HPC-2021	10,45,166	-	(1,28,543)	9,16,623	8,76,609	-	40,014	-
55	DST-DR P RAMITHA M-IN-SPIRE/04/2020/001105	1,826	-	62	1,888	-	-	1,888	-
56	DST-DR T SHYAMALA-DST/WOS-B/A/FE-20/2021	9,530	-	13,58,418	13,67,948	13,57,444	-	10,504	-
57	DST-DR TAMIL SELVI-SR/WOS-A/CS-105/2016(G)	8,251	-	228	8,479	-	-	8,479	-
58	DST-INSPIRE FACULTY AWARD-DR CHAN-DRAKALA MEENA	-	4,81,186	7,30,531	2,49,345	2,46,165	-	3,180	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
59	DST-INSPIRE FACULTY AWARD-DR SRI-LAKSHMI K-2013/MA-23	24,934	-	706	25,640	-	-	25,640	-
60	DST-INSPIRE FACULTY -DR ANAND NARAYANA SARMA	-	98,232	9,42,221	8,43,989	3,71,937	4,57,544	14,508	-
61	DST-INSPIRE FACULTY-DR GOKULNATH SAPABATHI	-	1,07,172	-	(1,07,172)	-	-	-	1,07,172
62	DST-INSPIRE FACULTY-DR MATHEW ARUN THOMAS	-	10,741	8,95,818	8,85,077	6,95,679	1,79,100	10,298	-
63	DST-INSPIRE FACULTY-DR NITIN YADAV	-	-	2,11,428	2,11,428	81,746	1,29,682	-	-
64	DST-INSPIRE FACULTY-DR PRASANATH VALAYAMKUNNATH	-	-	35,000	35,000	35,000	-	-	-
65	DST-INSPIRE FACULTY-DR SHABNAM IYANI	3,544	-	1,57,248	1,60,792	1,57,129	2,39,540	-	2,35,877
66	DST-INT/FRG/IRTG/01/2024-DR MAHESH HARIHARAN	-	-	11,10,488	11,10,488	11,09,579	-	909	-
67	DST-SCHOOL OF BIOLOGY-FIST PROGRAM-SR/FST/LS-II/2018/217	4,89,419	-	(56,891)	4,32,528	-	3,81,140	51,388	-
68	DST-SCHOOL OF MATHEMATICS-FIST PROGRAM-SR/FST/MS-II/2021/102	-	-	4,59,397	4,59,397	-	4,56,448	2,949	-
69	DST-SCHOOL OF PHYSICS-FIST PROGRAM-SR/FST/PS-II/2018/54	17,138	-	15,193	32,331	-	590	31,741	-
70	DUPONT YOUNG PROFESSOR PROGRAM-DR RAVI MARUTHACHALAM	9,35,442	-	23,974	9,59,416	1,54,540	-	8,04,876	-
71	EICL-DR M M SHAUJUMON	95,785	-	1,966	97,751	50,133	-	47,618	-
72	FORSCHUNGSZENTRUM JÜLICH GER-MANY-DR PRAMITHA M	-	-	2,65,451	2,65,451	26,361	-	2,39,090	-
73	GE INDIA INDUSTRIAL PVT LTD PROJECT-DR RAJEEV N KINI	3,69,320	-	5,878	3,75,198	12,425	-	3,62,773	-
74	IBRO-DR AMRUTHA SWAMIINATHAN	10,31,028	-	33,266	10,64,294	-	-	10,64,294	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
75	ICAR-NASF-DR RAVI MARUTHACHALAM-NASF/BGAM-9021/22-23	4,645	-	5,87,004	5,91,649	5,75,684	-	15,965	-
76	ICMR-DR KAMALAKANNAN VIJAYAN-R12015/04/2023-HR/ E-Office: 8225172	3,29,013	-	10,440	3,39,453	2,74,846	-	64,607	-
77	ICMR-DR KARTHIK CHANDIRAN-12015/02/2023-HR	10,15,467	-	31,073	10,46,540	10,47,859	-	-	1,319
78	ICMR-DR NISHANT K T-Mycro/Ad-hoc/I/2022-ECD-II	84,667	-	11,63,086	12,47,753	5,72,497	-	6,75,256	-
79	ICMR-DR RAMANATHAN NATESH-Discovey/IIRP/SG-0865/2023	3,81,577	-	8,598	3,90,175	3,73,042	-	17,133	-
80	ICMR-DR SATISH KHURANA-EMDR/SG/9/2023-4618	30,93,737	-	7,3211	31,66,948	13,14,829	9,29,798	9,22,321	-
81	ICMR-DR STALIN RAJ-EM/DEV/IG/3/1280/2023	1,50,74,408	-	79,66,294	2,30,40,702	76,17,952	8,49,464	1,45,73,286	-
82	IGSTC-DR DEE PSHIKA JAISWAL NAGAR-IGSTC/WISER/2024/DJN-2120/45/2024-25/89	-	-	13,17,682	13,17,682	6,81,761	-	6,35,921	-
83	IHUB-MR GYANESHWAR BHOI	6,40,080	-	13,456	6,53,536	4,96,794	-	1,56,742	-
84	IHUB-MS AYISHA FERHANA	390	-	12	402	-	-	402	-
85	IHUB-CHANAKYA FELLOWSHIP-MRA V N S MEGHANATH	62,061	-	206	62,267	62,000	-	267	-
86	IHUB-CHANAKYA FELLOWSHIP-MR SUBHAM DAS	99,298	-	1,089	1,00,387	99,200	-	1,187	-
87	IITB-HSBC COLLABORATIVE PROJECT-DR M M SHAUUMON	-	-	28,06,934	28,06,934	11,71,903	6,76,848	9,58,183	-
88	ISRO-DR K M SURESHAN-ISRO/RES/3/861/20-21	-	2,71,617	488	(2,71,129)	-	-	-	2,71,129
89	KLDB COLLABORATIVE PROJECT-DR N SADANANDA SINGH	5,03,097	-	17,053	5,20,150	-	-	5,20,150	-
90	KSCSTE-DR ARUN KUMAR G-75/202/KSCSTE	7,679	-	231	7,910	-	-	7,910	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
91	KSCSTE-DR SANDREA MOUREEN FRAN-CIS-159/2021/KSCSTE	16,719	-	6,39,103	6,55,822	6,38,600	-	17,222	-
92	KSHEC-DR SANDREA MOUREEN FRAN-CIS-KSHEC-A1/144/C/MNPF(2nd Batch)-Mode II /Contingency Fund/256/2022-23	-	-	1,53,447	1,53,447	16,859	-	1,36,588	-
93	KSHEC-SANGEEETHA VARMA V M-KSHEC-A1/144/C/MNPF 2nd Batch -Mode II/Contingency Fund/206/2022-23	40,000	-	1,10,960	1,50,960	1,50,367	-	593	-
94	MoE - DR RAMANATHAN NATESH-STARS/APR2019/BS/729/FS	19,821	-	10,24,000	10,43,821	10,00,000	-	43,821	-
95	MoE-DR A MUTHUKRISHNAN-MoE-STARS/STARS-2/2023-0368	-	-	8,77,564	8,77,564	8,77,564	-	-	-
96	MoE-DR A THIRUMURUGAN-MoE-STARS/STARS-2/2023-0522	-	-	12,17,942	12,17,942	7,58,011	4,59,931	-	-
97	MoE-DR AJAY VENUGOPAL-STARS/APR2019/CS/250/FS	4,904	-	(596)	4,308	4,308	-	-	-
98	MoE-DR ALAGIRI KALIYAMOORTHY-MoE-STARS/STARS-2/2023-0828	-	-	8,24,000	8,24,000	8,24,000	-	-	-
99	MoE-DR BASUDEV SAHOO-MoE-STARS/STARS-2/2023-0147	-	-	6,10,000	6,10,000	6,10,000	-	-	-
100	MoE-DR DEBASHIS SAHA-MoE-STARS/STARS-2/2023-0809	-	23,612	11,53,765	11,30,153	11,28,375	1,21,967	-	1,20,189
101	MoE-DR JERRY A FERREIRO-MOE-STARS/STARS/1/2023-0635	-	-	6,60,726	6,60,726	6,60,726	-	-	-
102	MoE-DR JISHY VARGHESE-MoE-STARS/STARS-2/2023-0108	17,954	-	13,20,177	13,38,131	13,29,751	-	8,380	-
103	MoE-DR JOY MITRA-MoE-STARS/STARS-2/2023-1012	-	-	13,01,660	13,01,660	13,01,660	-	-	-
104	MoE-DR K M SURESHAN-MoE-STARS/STARS-2/2023-0222	-	-	7,64,781	7,64,781	7,63,000	-	1,781	-
105	MoE-DR M M SHAJUMON-MoE-STARS/STARS-2/2023-0834	-	-	13,09,617	13,09,617	4,02,153	9,07,464	-	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
106	MoE-DR MADHU THALAKULAM-STARS/APR2019/PS/363/FS	3,866	-	(3,866)	-	-	-	-	-
107	MoE-DR MAHESH HARIHARAN-MoE-STARS/STAR-2/2023-0770	-	-	5,75,682	5,75,682	5,75,682	-	-	-
108	MoE-DR MANOJ A G NAM-BOOTHIRY-STARS/APR2019/PS/308/FS	12,685	-	(12,685)	0	-	-	0	-
109	MoE-DR PRASANTH VALAYAMKUN-NATH-MoE-STARS/STAR-2/2023-0614	-	-	2,98,389	2,98,389	2,98,389	-	-	-
110	MoE-DR RAVI MARUTHACHALAM-STARS/APR2019/BS/818/FS	4,087	-	(4,087)	-	-	-	-	-
111	MoE-DR RAVI PANT-MoE-STARS/STAR-2/2023-0415	-	-	21,35,601	21,35,601	8,84,749	12,54,104	-	3,252
112	MoE-DR ULLASA KODANDARAMAH-MoE-STARS/STAR-2/2023-0811	-	-	12,45,103	12,45,103	12,11,703	33,400	-	-
113	MoE-DR VEERA REDDY YATHAM-MoE-STARS/STAR-2/2023-0092	-	-	5,19,000	5,19,000	5,19,000	-	-	-
114	MoE-DR VINESH VIJAYAN-STARS/APR2019/BS/708/FS	44,860	-	(973)	43,887	43,887	-	(0)	-
115	MOMENTIVE PERFORMANCE MATERIALS (INDIA) PVT LTD-DR M M SHAJUMON	8,73,820	-	14,534	8,88,354	3,45,371	-	5,42,983	-
116	NBHM-DR ARATI SHASHI-PD-F/0204/16(6)/2020/R&D-II	2,35,578	-	1,807	2,37,385	2,27,230	-	10,155	-
117	OTHERS	47,91,176	-	5,93,557	53,84,733	16,259	75,579	52,92,896	-
118	OTHERS-CONFERENCE	59,98,156	-	53,70,039	1,13,68,195	-	-	1,13,68,195	-
119	RAENG-DR JOY MITRA	12,59,953	-	37,237	12,97,190	1,85,628	5,58,395	5,53,167	-
120	PARS-RAJENDRA GORETTI	2,99,900	-	2,58,429	5,58,329	1,07,436	-	4,50,893	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
121	RELIANCE INDUSTRIES PVT LTD-DR M M SHALUJMON	5,91,553	-	3,47,633	9,39,186	2,21,538	-	7,17,648	-
122	ROYAL SOCIETY OF CHEMISTRY-DR RAMESH RASAPPAN	-	-	5,32,860	5,32,860	2,32,067	88,000	2,12,793	-
123	SERB-DR ADITHYA LAKSHMANA-CRG/2020/000321	10,35,505	-	99,208	11,34,713	28,389	6,52,768	4,53,556	-
124	SERB-DR AJAY VENUGOPAL-CRG/2019/005040	28,959	-	981	29,940	-	-	29,940	-
125	SERB-DR AJAY VENUGOPAL-CRG/2023/004024	7,03,762	-	8,12,024	15,15,786	11,16,515	-	3,99,271	-
126	SERB-DR ALAGIRI KALIYAMOORTHY-CRG/2022/00256	9,45,056	-	16,886	9,61,942	8,49,472	-	1,12,470	-
127	SERB-DR ALOK KUMAR-PDF-2023-PDF/2023/002916	6,70,097	-	13,51,687	20,21,784	12,74,846	-	7,46,938	-
128	SERB-DR AMAL MEDHI-CRG/2021/00572	3,47,034	-	6,09,939	9,56,973	5,09,009	-	4,47,964	-
129	SERB-DR ANIRBAN GUHA-CRG/2023/003961	-	-	25,88,199	25,88,199	3,22,919	17,65,517	4,99,763	-
130	SERB-DR ASHA KISAN DOND-MTR/2022/000265	3,015	-	2,22,096	2,25,111	2,20,000	-	5,111	-
131	SERB-DR ASHUTOSH PANDIY-SRG/2023/000218	-	-	13,06,206	13,06,206	5,50,000	4,20,617	3,35,589	-
132	SERB-DR BASUDEV SAHOO-SRG/2021/000572	62,288	-	(60,097)	2,191	-	-	2,191	-
133	SERB-DR BIKAS C DAS-CRG/2021/000567	6,41,562	-	3,21,646	9,63,208	6,25,859	37,548	2,99,801	-
134	SERB-DR BIKAS C DAS-EEQ/2021/000810	2,94,160	-	3,39,766	6,33,926	4,56,785	-	1,77,141	-
135	SERB-DR CHANDRAKALA MEEANA-EEQ/2023/001080	15,71,760	-	47,058	16,18,818	4,01,319	-	12,17,499	-
136	SERB-DR CHANDRAKALA MEEANA-SRG/2023/001846	19,59,403	-	53,997	20,13,400	3,96,407	-	16,16,993	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
137	SERB-DR DEEPSHIKA JAISWAL NAGAR-CRG/2021/001262	3,72,236	-	11,947	3,84,183	2,60,000	-	1,24,183	-
138	SERB-DR DEVARAJ P-CRG/2023/004903	-	-	9,07,120	9,07,120	2,68,578	1,56,000	4,82,542	-
139	SERB-DR DHANYA RAJENDRAN-MTR/2022/000780	1,26,384	-	3,702	1,30,086	1,20,814	-	9,272	-
140	SERB-DR GEETHA T-SPG/2021/004200	4,52,707	-	13,219	4,65,926	18,845	-	4,47,081	-
141	SERB-DR GOKULNATH SAPA-BATHI-CRG/2019/006303	1,05,879	-	3,588	1,09,467	-	-	1,09,467	-
142	SERB-DR GOKULNATH SAPA-BATHI-EEQ/2023/000756	34,68,195	-	1,02,327	35,70,522	1,16,661	-	34,53,861	-
143	SERB-DR HEMA SOMANA-THAN-CRG/2023/004410	-	-	7,61,444	7,61,444	1,28,701	-	6,32,743	-
144	SERB-DR HEMA SOMANA-THAN-SPR/2021/000510	4,33,946	-	20,21,438	24,55,384	13,88,584	7,08,573	3,58,228	-
145	SERB-DR INDRANIL MONDAL-RJF/2022/000101	1,49,489	-	24,08,136	25,57,625	23,79,834	-	1,77,791	-
146	SERB-DR JERRY D FERREIRO-CRG/2022/000584	2,58,876	-	6,14,837	8,73,713	6,89,210	-	1,84,503	-
147	SERB-DR JISHY VAR-GHESE-CRG/2023/002329	21,71,000	-	52,132	22,23,132	18,01,198	1,61,760	2,60,174	-
148	SERB-DR JOY MITRA-CRG/2019/004965	2,23,224	-	7,565	2,30,789	-	-	2,30,789	-
149	SERB-DR JOY MITRA-CRG/2023/00678	33,50,000	-	92,246	34,42,246	3,33,357	15,31,631	15,77,258	-
150	SERB-DR K GEORGE THOMAS-SB/S2/JCB-64/2013	12,09,875	-	27,895	12,37,770	7,31,674	11,40,383	-	6,34,287
151	SERB-DR K M SURESHAN-CRG/2022/000568	1,07,672	-	12,19,072	13,26,744	11,38,568	-	1,88,176	-
152	SERB-DR K M SURESHAN-JCB/2023/000039	46,476	-	17,05,044	17,51,520	16,21,476	-	1,30,044	-

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		Credit	Debit			Recurring	Capital	Credit	Debit
153	SERB-DR K R ARUN-CRG/2021/004078	1,47,802	-	8,05,175	9,52,977	775,634	-	1,77,343	-
154	SERB-DR K AMALAKANNAN VI-JAYAN-SRG/2023/001874	18,31,405	-	21,456	18,52,861	9,83,946	7,44,851	1,24,064	-
155	SERB-DR K RISHNADAS K R-SERB/RJF/2022/000022	1,45,329	-	24,11,425	25,56,754	25,52,276	-	4,478	-
156	SERB-DR K UMARAGURUBARAIN S-CRG/2021/000935	26,68,437	-	90,451	27,58,888	-	-	27,58,888	-
157	SERB-DR M M SHALU-MON-CRG/2021/006246	-	58,945	8,18,397	7,59,452	5,40,328	-	2,19,124	-
158	SERB-DR M M SHALU-MON-SERB/STR/2022/00022	81,365	-	13,05,426	13,86,791	2,82,454	-	11,04,337	-
159	SERB-DR MADHU THALAKU-LAM-CRG/2018/004213	1,57,959	-	4,495	1,62,454	-	-	1,62,454	-
160	SERB-DR MAHESH HARIHARAN-CRG/2019/002119	15,123	-	420	15,543	-	-	15,543	-
161	SERB-DR MAHESH HARIHARAN-CRG/2023/005859	68,13,086	-	2,11,106	70,24,192	4,54,673	-	65,69,519	-
162	SERB-DR MAJINAK ADHIKARI-SRG/2022/000071	-	-	10,57,464	10,57,464	6,64,745	1,11,150	2,81,569	-
163	SERB-DR MANOJ A G NAM-BOOTHIRY-CRG/2021/003874	2,31,082	-	7,98,528	10,29,610	7,41,942	62,894	2,24,774	-
164	SERB-DR NAGAI AH CHAMAKURI-CRG/2022/006421	2,71,069	-	9,801	2,80,870	3,46,071	-	-	65,201
165	SERB-DR NAGAI AH CHAMAKURI-MTR/2017/000598	1,055	-	37	1,092	-	-	1,092	-
166	SERB-DR NISHA N KAN-NAN-EEQ/2022/001034	3,13,504	-	5,11,029	8,24,533	8,37,605	49,560	-	62,632
167	SERB-DR NISHANA M-SRG/2023/001820	16,72,184	-	39,640	17,11,824	9,44,643	6,49,998	1,17,183	-
168	SERB-DR NISHANT K T-CRG/2022/003817	3,28,241	-	6,11,475	9,39,716	7,77,833	-	1,61,883	-

Sl No	Name of the Project	Opening Balance 2023-24		Receipts / Re-coveries during the year	Total	Expenditure during the year		Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
169	SERB-DR NISHANT K T-SPR/2020/000427	-	2,05,390	1,757	(2,03,633)	17,486	-	-	2,21,119
170	SERB-DR NITIN YADAV-MTR/2023/001332	2,00,651	-	3,437	2,04,088	2,00,000	-	4,088	-
171	SERB-DR POONAM THAKUR-SRG/2021/000981	-	1,04,707	1,04,707	-	-	-	-	-
172	SERB-DR PRIYANKA MAJUMDER-SRG/2023/002749	6,73,541	-	15,848	6,89,389	3,08,023	-	3,81,366	-
173	SERB-DR PUSHPIITA GHOSH-SRG/2022/000043	2,68,622	-	3,899	2,72,521	1,00,440	1,22,357	49,724	-
174	SERB-DR R S SWATHI-CRG/2022/006873	49,741	-	6,10,862	6,60,603	5,62,702	-	97,901	-
175	SERB-DR RAJEEV N KINI-CRG/2019/004865	93,326	-	(93,326)	-	-	-	-	-
176	SERB-DR RAJEEV N KINI-IPA/2020/000021	-	2,48,546	8,61,513	6,12,967	2,27,792	-	3,85,175	-
177	SERB-DR RAJENDAR GORE-TI-CRG/2020/003737	47,830	-	(47,830)	-	-	-	-	-
178	SERB-DR RAJENDRA KURAPATI-EEQ/2022/000684	1,19,541	-	3,515	1,23,056	(1,092)	-	1,24,148	-
179	SERB-DR RAJENDRA KURAPATI-SRG/2022/000291	1,07,046	-	5,739	1,12,785	92,845	-	19,940	-
180	SERB-DR RAMANATHAN NATESH-CRG/2023/001211	23,39,222	-	52,167	23,91,389	14,01,929	7,40,000	2,49,460	-
181	SERB-DR RAMARAJ AYAPPAN-CRG/2023/001701	15,37,846	-	20,571	15,58,417	6,86,512	9,54,857	-	82,952
182	SERB-DR RAMARAJ AYAPPAN-SERB/EEQ/2023/000702	34,19,691	-	5,73,482	39,93,173	12,11,623	15,22,913	12,58,637	-
183	SERB-DR RAMESH CHANDRA NATH-CRG/2019/000960	2,048	-	69	2,117	-	-	2,117	-
184	SERB-DR RAMESH CHANDRA NATH-CRG/2022/000997	19,97,396	-	59,018	20,56,414	72,849	-	19,83,565	-

Sl No	Name of the Project	Opening Balance 2023-24		Receipts / Re-coveries during the year	Total	Expenditure during the year		Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
185	SERB-DR RAMESH RASAP-PAN-CRG/2023/005485	11,30,882	-	27,916	11,58,798	10,39,986	-	1,18,812	-
186	SERB-DR RANI ALPHONSA JOSE-TAR/2021/000384	9,173	-	3,35,369	3,44,542	3,34,221	-	10,321	-
187	SERB-DR RAVI MARUTHACHALAM-CRG/2022/007631	9,40,826	-	17,395	9,58,221	1,00,779	772,000	85,442	-
188	SERB-DR RAVI PANT-CRG/2023/001165	-	-	50,13,755	50,13,755	3,38,214	-	46,82,541	-
189	SERB-DR RAVI PANT-EMIR/2015/000363	-	-	65,876	65,876	-	-	65,876	-
190	SERB-DR REJI VAR-GHESE-CRG/2022/002612	1,04,112	-	4,90,793	5,94,905	4,75,298	-	1,19,607	-
191	SERB-DR RESHMA BASAK-PDF/2020/000943	1,073	-	32	1,105	-	-	1,105	-
192	SERB-DR SAM JOHN-TAR/2022/000226	68,253	-	1,147	69,400	60,000	-	9,400	-
193	SERB-DR SANDHYA GAME-SAN-SRG/2022/002157	2,36,093	-	2,04,573	4,42,666	3,68,757	-	73,909	-
194	SERB-DR SATISH KHURANA-CRG/2022/000834	4,83,896	-	11,985	4,95,881	4,04,421	-	91,460	-
195	SERB-DR SENTHILKUMAR DV-CRG/2021/000816	3,47,204	-	4,65,113	8,12,317	5,10,512	-	3,01,805	-
196	SERB-DR SHABNAM IYANISRG/2022/000211	5,55,530	-	1,17,432	6,72,962	75,305	-	5,97,657	-
197	SERB-DR SHEETAL DHARMATI-CRG/2021/008278	85,354	-	3,591	88,945	3,38,092	-	-	2,49,147
198	SERB-DR SHRUTI SURIYAKUMAR-PDF/2020/000209	2,648	-	79	2,727	-	-	2,727	-
199	SERB-DR SIDDHARTH KULKARNI-RJF/2023/000045	-	-	19,35,233	19,35,233	18,75,873	-	59,360	-
200	SERB-DR SONIA MOLJO-SEPH-TAR/2022/000048	2,15,536	-	3,818	2,19,354	2,10,604	-	8,750	-

Sl No	Name of the Project	Opening Balance 2023-24		Receipts / Re-coveries during the year	Total	Expenditure during the year		Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
201	SERB-DR SOURAV BISWAS-PDF/2020/001085	613	-	19	632	-	-	632	-
202	SERB-DR SRILAKSHMI K-CRG/2023/009035	10,67,031	-	26,694	10,93,725	4,82,830	-	4,10,895	-
203	SERB-DR SRINIVASA MURTY-EMR/2016/008048	77,135	-	2,141	79,276	-	-	79,276	-
204	SERB-DR STALIN RAJ-CRG/2023/008001	-	-	29,56,274	29,56,274	23,46,159	3,15,886	2,94,229	-
205	SERB-DR STALIN RAJ-IPA/2020/000070	4,87,022	-	13,551	5,00,573	1,53,670	-	3,46,903	-
206	SERB-DR SUBOJ BABYKUT-TY-TAR/2021/000147	356	-	12	368	-	-	368	-
207	SERB-DR SUBRATA KUNDU-CRG/2021/001174	11,26,76	-	89,985	2,02,661	2,01,484	-	1,177	-
208	SERB-DR SUK HENDHU MANDAL-E MR/2016/007501	22,289	-	631	22,920	-	-	22,920	-
209	SERB-DR SUK HENDHU MANDAL-CRG/2022/000984	1,71,275	-	8,14,633	9,85,908	7,48,352	-	2,37,556	-
210	SERB-DR SUMIT MOHANTY-MTR/2017/000458	-	11,825	23,310	11,485	10,000	-	1,485	-
211	SERB-DR SWATHY DEVIREDDY-CRG/2023/007275	-	-	21,53,273	21,53,273	10,46,918	-	11,06,355	-
212	SERB-DR TANUIMOY MANDAL-CRG/2023/007031	-	-	12,11,133	12,11,133	2,96,973	5,00,000	4,14,160	-
213	SERB-DR TAPAS KUMAR MANNA-EMR/2016/001562	-	-	94,882	94,882	95,522	-	-	640
214	SERB-DR TAPAS KUMAR MANDAL-CRG/2020/002452	2,55,181	-	1,054	2,56,235	10,786	-	2,45,449	-
215	SERB-DR TUHIN MAITY-SRG/2021/000423	2,465	-	(2,465)	-	-	-	-	-
216	SERB-DR ULLASA KONDANDARAMAIAH-CRG/2023/005559	-	-	16,61,863	16,61,863	3,05,091	-	13,56,772	-

Sl No	Name of the Project	Opening Balance 2023-24		Receipts / Re-coveries during the year	Total	Expenditure during the year		Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
217	SERB-DR VEERA REDDY YATHAM-SRG/2021/000834	53,924	-	(53,924)	-	-	-	-	-
218	SERB-DR VIJI Z THOM-AS-MTR/2020/000483	30,000	-	837	30,837	-	-	30,837	-
219	SERB-DR VINAYAK KAM-BLE-CRG/2022/006973	8,47,697	-	11,79,941	20,27,638	6,27,821	1,82,900	12,16,917	-
220	SERB-DR VINAYAK KAM-BLE-EEQ/2022/001016	2,87,186	-	3,64,582	6,51,768	1,80,427	-	4,71,341	-
221	SPARC-DR NISHANT K T-2018/19/58/SL(IN)	2,938	-	100	3,038	-	-	3,038	-
222	SPARC-UKIER/2024-2025/P3086 / IIT KGP/SPARC/2024/50-DR JOY MITRA	-	-	10,58,500	10,58,500	10,58,500	-	-	-
223	TREEMERA GMBH-CONS.-DR A MUTHUKRISHNAN	1,40,763	-	2,961	1,43,724	81,335	-	62,389	-
224	TTFDF/6G/-DR MAINAK ADHIKARI	-	-	7,47,200	7,47,200	-	-	7,47,200	-
225	TTFDF/6G/-DR MAINAK ADHIKARI	-	-	9,97,200	9,97,200	-	-	9,97,200	-
226	UNIVERSITY POZNAN-2021/43/B/NZ8/00966-UJLLASA KODANDARAMI-AH	-	-	11,18,089	11,18,089	2,90,322	-	8,27,767	-
227	UNNATH BHARAT ABHIYAN (UBA)-DR M P RAJAN	5,987	-	170	6,157	-	-	6,157	-
228	WT-DBT-DR KAMALAKANNAN VI-JAYAN-IA/1/23/2/506998	65,93,838	-	1,11,60,274	1,77,54,112	47,75,119	63,18,912	66,60,081	-
229	WT-DBT-DR NISHA N KAN-NAN-IA/1/15/2/502329	4,37,378	-	2,29,695	6,67,073	3,83,161	-	2,83,912	-
230	WT-DBT-DR POO NAM THAKUR-IA/IE/17/1/503664	60,86,114	-	20,14,294	81,00,408	30,92,286	42,01,000	8,07,122	-

Sl No	Name of the Project	Opening Balance 2023-24		Receipts / Recoveries during the year	Total	Expenditure during the year		Closing Balance 2024-25	
		Credit	Debit			Recurring	Capital	Credit	Debit
231	WT-DBT-DR SABARI SANKAR THIRUPATHY-1A/1/18/2/504037	18,92,611	-	39,31,016	58,23,627	46,22,652	11,51,784	49,191	-
232	WT-DBT-DR SATISH KHURANA-1A/1/15/2/502061	36,988	-	14,224	51,212	-	-	51,212	-
233	WT-DBT-SANDHYA GANESAN-1A/1/23/2/507001	64,63,680	-	1,10,79,911	1,75,43,591	73,51,988	36,39,748	65,51,855	-
		16,20,35,479	33,26,315	16,05,16,700	31,92,25,864	13,57,58,849	6,31,84,848	12,48,15,014	45,32,847

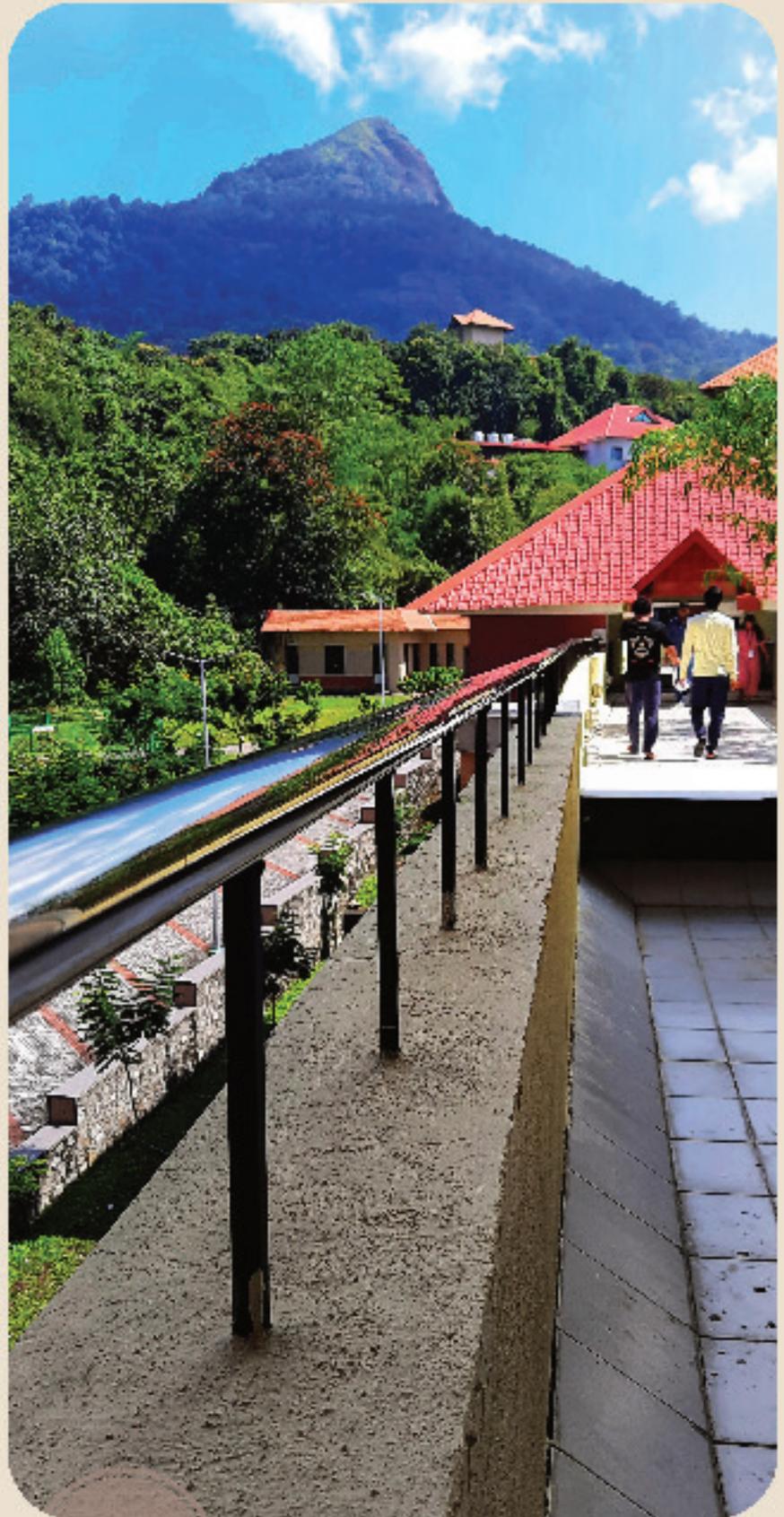


Photo: Vimal VM, Electrical section, IISERTVM

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 3 (B)-SPONSORED FELLOWSHIPS AND SCHOLARSHIPS

Amount in ₹

(1) Sl. No	(2) Name of the Sponsor	(3) Opening Balance as on 01-04-2024		(5) Transactions during the year		(7) Closing Balance as on 31-03-2025	
		Credit	Debit	Credit	Debit	Credit	Debit
1	DST - INSPIRE - BS-MS/ PHD	1,03,438		42,86,912	72,14,176		28,23,826
2	CSIR (Ph D Research Scholars)	16,61,918				16,61,918	
3	UGC (Ph D Research Scholars)	7,38,303				7,38,303	
4	DBT (Ph D Research Scholar)	14,91,260		77,46,865	68,56,296	23,81,829	
5	PMRF (Ph D Research Scholars)	-		4,41,06,299	3,88,87,508	52,18,791	
6	ICMR FELLOWSHIP (Ph D Research Scholars)	3,64,286		13,34,726	14,49,942	2,49,070	
7	E-GRANTS	2,79,583		3,32,350		6,11,933	
8	NATIONAL FELLOWSHIP FOR ST STUDENTS	3,000		1,01,490		1,04,490	
9	NBHM MASTERS SCHOLARSHIP-3758	1,44,000		9,28,000	5,88,000	4,84,000	
	Total	47,85,788	-	5,88,36,642	5,49,95,922	1,14,50,334	28,23,826

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT
31ST MARCH 2025**

SCHEDULE 3(C)-UNUTILIZED GRANTS FROM UGC, GOVERNMENT OF INDIA
AND STATE GOVERNMENTS

Amount in ₹

Particulars	2024-25	2023-24
A. Plan grants: Government of India (MoE)		
Balance B/F	33,58,80,692	2,58,16,505
Add: Receipts during the year	1,42,67,00,000	1,60,38,00,000
Total (a)	1,76,25,80,692	1,62,96,16,505
Less Refunds		
Less: Utilized for Revenue Expenditure	1,05,95,94,793	95,79,29,600
Less: Utilized for Capital Expenditure	32,49,42,417	33,58,06,213
Total (b)	1,38,45,37,210	1,29,37,35,813
Unutilized carried forward (a-b)	37,80,43,482	33,58,80,692
B. UGC Grants: Plan		
Balance B/F		
Add: Receipts during the year		
Total (c)	NIL	NIL
Less Refunds		
Less: Utilized for Revenue Expenditure		
Less: Utilized for Capital Expenditure		
Total (d)	NIL	NIL
Unutilized carried forward (c-d)		
C. UGC Grants Non-Plan		
Balance B/F		
Add: Receipts during the year		
Total (e)	NIL	NIL
Less Refunds		
Less: Utilized for Revenue Expenditure		
Less: Utilized for Capital Expenditure		
Total (f)	NIL	NIL
Unutilized carried forward (e-f)		

Particulars	2024-25	2023-24
D. Grants from State Govt.		
Balance B/F		
Add: Receipts during the year		
Total (g)	NIL	NIL
E. Less Refunds		
Less: Utilized for Revenue Expenditure		
Less: Utilized for Capital Expenditure		
Total (h)	NIL	NIL
Unutilized carried forward (g-h)		
Grand Total (A+B+C+D)	37,80,43,482	33,58,80,692



Photo: Vimal VM, Electrical section, IISERTVM

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025

SCHEDULE 4 - FIXED ASSETS

Amount in ₹

S.No.	DESCRIPTION	GROSS BLOCK			DEPRECIATION				NET BLOCK			
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustments	Total Depreciation	31-03-2025	31-03-2024
1	TANGIBLE ASSETS LAND											
	a) Freehold											
	Land obtained from Govt	1			1	0.00%	-	-	-	-	1	1
	Vithua	9,54,506			9,54,506	0.00%	-	-	-	-	9,54,506	9,54,506
2	Site Development	3,26,20,674	22,95,405		3,49,16,079	0.00%	-	-	-	-	3,49,16,079	3,26,20,674
3	BUILDINGS	7,20,35,73,360	41,29,152		7,20,77,02,512	2.00%	62,02,00,630	14,41,63,256	-	76,43,63,886	6,44,33,38,626	6,58,33,72,730
4	Roads & Bridges	10,14,26,494			10,14,26,494	2.00%	140,33,340	20,28,530	-	1,60,61,870	8,53,64,624	8,73,93,154
5	Tubes & Water Supply	11,28,215			11,28,215	2.00%	135,385	22,564	-	1,57,949	9,70,266	9,92,830
6	Sewage & Drainage					2.00%						
7	Electrical installation and equipment	7,197,659	21,20,347		7,33,18,006	5.00%	2,19,84,265	36,27,308	-	2,56,11,973	4,77,06,033	4,92,13,394
8	Plant and Machinery	5,39,03,468			5,39,03,468	5.00%	2,79,61,071	26,95,173	-	3,06,56,244	2,32,47,224	2,59,42,396
9	Scientific & Laboratory Equipment	2,56,77,50,231	15,82,25,673		2,72,59,75,904	8.00%	156,43,74,186	18,53,79,179	-	1,74,97,53,365	97,62,22,539	1,00,33,76,045
10	Office Equipment	1,37,03,858	8,15,990		1,45,19,848	7.50%	43,38,982	10,88,989	-	54,27,971	90,91,877	93,64,876
11	Audio Visual Equipment	3,74,56,314	64,52,974		4,39,09,288	7.50%	35,85,781	32,93,197	-	68,78,978	3,70,30,310	3,38,70,533
12	Computers & Peripherals	20,71,07,172	1,29,19,857	63,508	21,99,63,521	20.00%	18,61,63,391	90,16,307	25,403	19,51,54,295	2,48,09,226	2,09,43,781
13	Furniture, Fixtures and Fittings	31,74,44,293	2,64,67,262		34,39,11,555	7.50%	14,55,17,667	2,46,51,683	-	1,70,169,350	17,37,42,205	17,19,26,626
14	VEHICLES	38,87,817			38,87,817	10.00%	27,87,884	3,17,649	-	31,05,533	782,284	10,99,933

S.No.	DESCRIPTION	GROSS BLOCK				DEPRECIATION				NET BLOCK		
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions/Adjustment	Total Depreciation	31-03-2025	31-03-2024
15	Library Books & Scientific Journals	2,69,83,738	4,59,475	-	2,74,43,213	10.00%	2,39,69,408	6,08,669	-	2,45,78,077	28,65,136	30,14,330
16	Small Value Assets											-
	TOTAL (A)	10,63,91,37,99	21,38,86,135	63,508	10,85,29,60,427		2,61,50,51,990	37,68,92,904	25,403	2,99,19,19,491	7,86,10,40,936	8,02,40,85,809
17	CAPITAL WORK-IN-PROGRESS - Construction	48,19,922	90,67,142	-	1,38,87,064						1,38,87,064	48,19,922
18	CAPITAL WORK-IN-PROGRESS - Lab Equipment	1,80,65,757	14,09,83,822	8,19,09,906	7,71,39,673						77,139,673	1,80,65,757
	CAPITAL WORK IN PROGRESS (B)	2,28,85,679	15,00,50,964	8,19,09,906	9,10,26,737						9,10,26,737	2,28,85,679
	TOTAL A+B										7,95,20,67,673	8,04,69,71,488
S.No.	INTANGIBLE ASSETS	GROSS BLOCK				DEPRECIATION				NET BLOCK		
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions/Adjustment	Total Depreciation	31-03-2025	31-03-2024
19	Computer Software	2,33,18,403	-	-	2,33,18,403	40%	2,27,69,092	4,56,328	-	2,32,25,420	92,983	5,49,311
20	E-Journals	57,09,10,600	4,29,78,733	-	61,38,89,333	40%	53,29,94,343	4,52,36,634	-	57,82,30,977	3,56,58,356	3,79,16,258
	Patents	3,23,850	-	-	3,23,850	9 Years	1,83,155	35,983	-	2,19,138	10,472	1,40,695
	TOTAL -(C)	59,45,52,853	4,29,78,733	-	63,75,31,586		55,59,46,890	4,57,28,945	-	60,16,75,835	3,58,56,091	3,86,06,264
	GRAND TOTAL (A+B+C)	11,25,65,76,332	40,69,15,832	8,19,79,414	11,58,15,18,750		3,17,09,98,880	42,26,21,849	25,403	3,59,35,95,026	7,98,79,23,724	8,08,55,77,752



Photo: Vimal VM, Electricals department, IISERTVM

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025

SCHEDULE 4 A - FIXED ASSETS (PLAN)

Amount in ₹

S.No.	DESCRIPTION	GROSS BLOCK			DEPRECIATION				NET BLOCK			
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
1	TANGIBLE ASSETS											
	LAND											
	a) Freehold	1			1	0.00%	-				1	1
	Land obtained from Govt											
	Vithua	9,54,506			9,54,506	0.00%	-				9,54,506	9,54,506
2	Site Development	3,26,20,674	22,95,405		3,49,16,079	0.00%	-				3,49,16,079	3,26,20,674
3	BUILDINGS	7,20,35,73,360	41,29,152		7,20,77,02,512	2.00%	62,02,00,630				6,44,33,38,626	6,58,33,72,730
4	Roads & Bridges	10,14,26,494			10,14,26,494	2.00%	1,40,33,340				8,53,64,624	8,73,93,754
5	Tubes & Water Supply	11,28,215			11,28,215	2.00%	1,35,385				9,70,266	9,92,830
6	Sewage & Drainage					2.00%						
7	Electrical installation and equipment	71,97,659	21,20,347		733,18,006	5.00%	2,19,84,265				4,77,06,033	4,92,13,394
8	Plant and Machinery	5,39,03,468			5,39,03,468	5.00%	2,79,61,071				2,32,47,224	2,59,42,396
9	Scientific & Laboratory Equipment	2,56,77,50,231	15,82,25,673		2,72,59,75,904	8.00%	1,56,43,74,186				97,62,22,539	1,00,33,76,045
10	Office Equipment	1,37,03,858	8,15,990		1,45,19,848	7.50%	43,38,982				90,91,877	93,64,876
11	Audio Visual Equipment	3,74,56,314	64,52,974		4,39,09,288	7.50%	36,85,781				3,70,30,310	3,38,70,533
12	Computers & Peripherals	20,71,07,172	1,29,19,857	63,508	21,99,63,521	20.00%	18,61,63,391		25,403		2,48,09,226	2,09,43,781
13	Furniture, Fixtures and Fittings	31,74,44,293	2,64,67,262		34,39,11,555	7.50%	14,55,17,667				17,37,42,205	17,19,26,626
14	VEHICLES	38,87,817			38,87,817	10.00%	27,87,884				7,82,284	10,99,933

S.No.	DESCRIPTION	GROSS BLOCK				DEPRECIATION				NET BLOCK		
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
15	Library Books & Scientific Journals	2,69,83,738	4,59,475	-	27,44,323	10.00%	2,39,69,408	6,08,669	-	2,45,78,077	28,65,136	30,14,530
16	Small Value Assets	10,63,91,37,799	21,38,86,135	63,508	10,85,29,60,427		2,61,50,91,990	37,68,92,904	25,403	2,99,19,19,491	7,86,10,40,936	8,02,40,85,809
T7	CAPITAL WORK-IN PROGRESS - Construction	48,19,922	90,67,142	-	1,38,87,064						1,38,87,064	48,19,922
T7	CAPITAL WORK-IN PROGRESS - Lab Equipment	1,80,65,757	14,09,83,822	8,19,09,906	771,39,673						771,39,673	1,80,65,757
	CAPITAL WORK IN PROGRESS (B)										9,10,26,737	2,28,85,679
	TOTAL A+B										7,95,20,87,674	8,04,69,71,488
S.No.	INTANGIBLE ASSETS	GROSS BLOCK				DEPRECIATION				NET BLOCK		
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
18	Computer Software	2,33,18,403	-	-	2,33,18,403	40%	2,27,69,092	4,56,328	-	2,32,25,420	92,983	5,49,311
19	E-Journals	57,09,10,600	4,29,78,733	-	61,38,89,333	40%	53,29,94,343	4,52,36,634	-	57,82,30,977	3,56,58,356	3,79,16,258
20	Patents	3,23,850	-	-	3,23,850	9 Years	1,83,155	35,983	-	2,19,138	1,04,712	1,40,695
	TOTAL - (C)	59,45,52,853	4,29,78,733	-	63,75,31,586		58,99,46,590	4,97,28,945	-	60,16,75,535	3,58,56,051	3,86,06,264
	GRAND TOTAL (A+B+C)	11,25,68,76,332	40,69,15,832	8,19,73,414	11,86,15,18,750		3,17,09,98,580	42,26,21,849	25,403	3,59,35,95,026	7,98,79,23,724	8,08,55,777,52



Photo: Vimal VM, Electricals department, IISERTVM

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 4 B - FIXED ASSETS (NONPLAN)

Amount in ₹

S.No.	DESCRIPTION	GROSS BLOCK					DEPRECIATION				NET BLOCK	
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
	TANGIBLE ASSETS											
1	<u>LAND:</u>											
	a) Freehold											
	Land obtained from Govt											
	Vithua											
2	Site Development											
3	BUILDINGS:											
4	Roads & Bridges											
5	Tubes & Water Supply											
6	Sewage & Drainage											
7	Electrical installation and equipment											
8	Plant and Machinery											
9	Scientific & Laboratory Equipment											
10	Office Equipment											
11	Audio Visual Equipment											
12	Computers & Peripherals											
13	Furniture, Fixtures and Fittings											
14	VEHICLES											
15	Library Books & Scientific Journals											
16	Small Value Assets											
	TOTAL (A)											
17	CAPITAL WORK-IN-PROGRESS (B)											

S.No.	INTANGIBLE ASSETS	GROSS BLOCK				DEPRECIATION					NET BLOCK	
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustments	Total Depreciation	31-03-2025	31-03-2024
18	Computer Software											
19	E-Journals											
20	Patents											
	TOTAL (C)	-	-	-	-	-	-	-	-	-	-	-
	GRAND TOTAL (A+B+C)	-	-	-	-	-	-	-	-	-	-	-

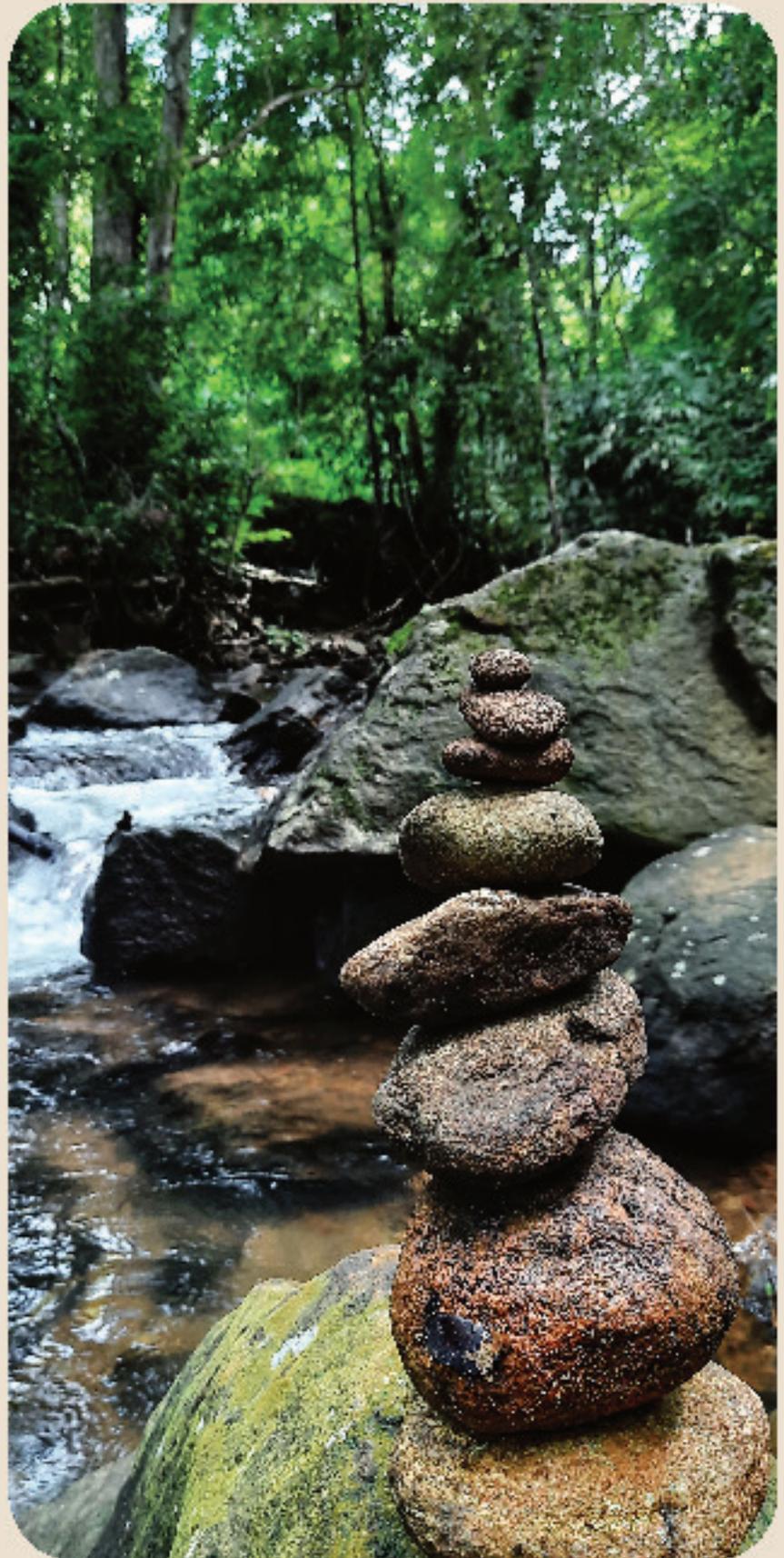


Photo: Vimal VM, Electrical section, IISERTVM

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 4 C – INTANGIBLE ASSETS

Amount in ₹

S.No.	DESCRIPTION	GROSS BLOCK				DEPRECIATION					NET BLOCK	
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
1	Computer Software											
2	E-Journals											
3	Patents											
	TOTAL – (C)	-	-	-	-	NIL	-	-	-	-	-	-
	GRAND TOTAL (A+B+C)	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

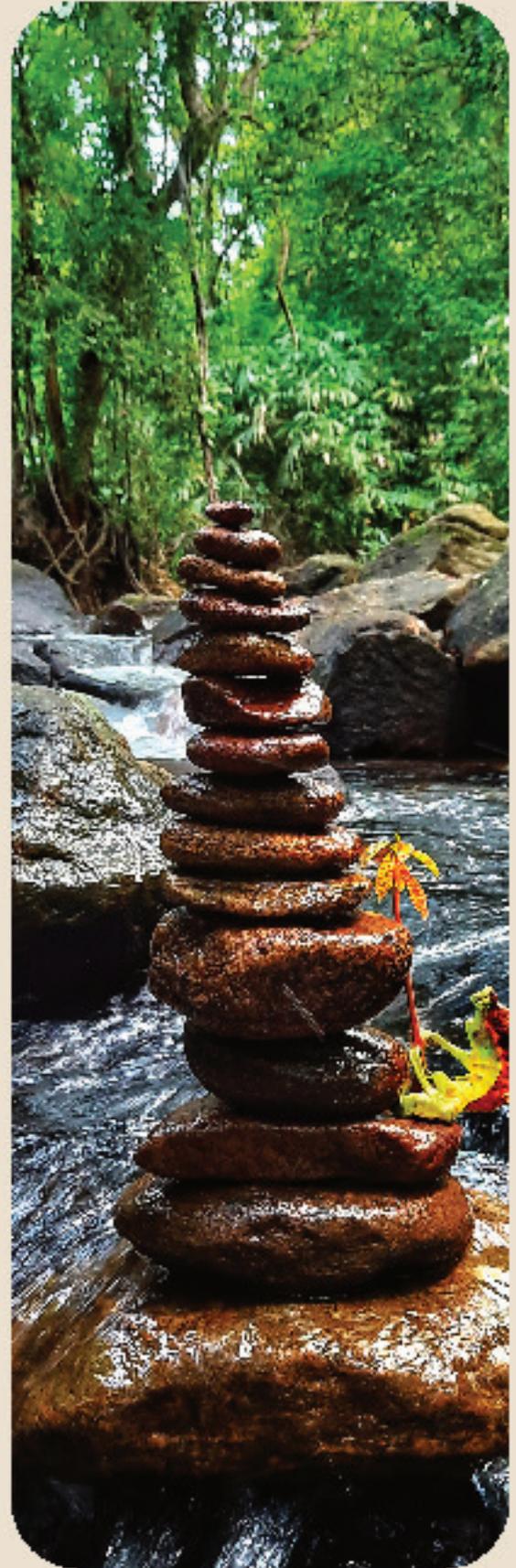


Photo: Vimal VM, Electrical section, IISERTVM

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 4C (I)- PATENTS AND COPYRIGHTS

Amount in ₹

DESCRIPTION	Opening Balance	Addition	Gross	Amortization	Net Block 2024-25	Net Block 2023-24
A. Patents Granted						
1. Balance as on 31-03-2024 of patents obtained in (Original value- Rs.-/-						
2. Balance as on 31-03-2024 of patents obtained in (Original value- Rs.-/-						
3. Balance as on 31-03-2024 of patents obtained in (Original value- Rs.-/-						
4. Patents granted during the Current Year						
TOTAL-						
B. Patents Pending in respect of Patent applied for						
TOTAL						
C. Grand Total (A+B)						

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 4 D-I - FIXED ASSETS (Others-IRG)

Amount in ₹

Sl No.	DESCRIPTION	GROSS BLOCK			DEPRECIATION				NET BLOCK			
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
	TANGIBLE ASSETS											
1	LAND:											
	a) Freehold											
	Land obtained from Govt	-	-	-	-	0.00%	-	-	-	-	-	-
	Vithura	-	-	-	-	0.00%	-	-	-	-	-	-
2	Site Development	-	-	-	-	-	-	-	-	-	-	-
3	BUILDINGS:											
4	Roads & Bridges	-	-	-	-	2.00%	-	-	-	-	-	-
5	Tubes & Water Supply	-	-	-	-	2.00%	-	-	-	-	-	-
6	Sewage & Drainage	-	-	-	-	2.00%	-	-	-	-	-	-
7	Electrical Installation and equipment	-	-	-	-	5.00%	-	-	-	-	-	-
8	Plant and Machinery	-	-	-	-	5.00%	-	-	-	-	-	-
9	Scientific & Laboratory Equipment	-	-	-	-	8.00%	-	-	-	-	-	-
10	Office Equipment	-	-	-	-	7.50%	-	-	-	-	-	-
11	Audio Visual Equipment	-	-	-	-	7.50%	-	-	-	-	-	-
12	Computers & Peripherals	-	-	-	-	20.00%	-	-	-	-	-	-
13	Furniture, Fixtures and Fittings	-	-	-	-	7.50%	-	-	-	-	-	-
14	VEHICLES	16,88,339	-	-	16,88,339	10.00%	3,03,583	1,68,834	-	4,72,417	12,15,922	13,84,756

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025

SCHEDULE 4 D - FIXED ASSETS (Others)

Amount in ₹

Sl No.	DESCRIPTION	GROSS BLOCK			DEPRECIATION			NET BLOCK				
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
TANGIBLE ASSETS												
1	LAND											
	a) Freehold											
	Land obtained from Govt	-	-	-	-	0.00%	-	-	-	-	-	-
	Vithura	-	-	-	-	0.00%	-	-	-	-	-	-
2	Site Development	-	-	-	-	2.00%	-	-	-	-	-	-
3	BUILDINGS:	-	-	-	-	2.00%	-	-	-	-	-	-
4	Roads & Bridges	-	-	-	-	2.00%	-	-	-	-	-	-
5	Tubes & Water Supply	-	-	-	-	2.00%	-	-	-	-	-	-
6	Sewage & Drainage	-	-	-	-	2.00%	-	-	-	-	-	-
7	Electrical Installation and equipment	-	-	-	-	5.00%	-	-	-	-	-	-
8	Plant and Machinery	-	-	-	-	5.00%	-	-	-	-	-	-
9	Scientific & Laboratory Equipment	34,31,14,689	5,50,77,516	17,70,396	39,64,21,809	8.00%	6,35,45,851	3,17,13,745	2,14,701	9,50,44,895	30,13,76,914	27,95,68,838
10	Office Equipment	-	-	-	-	7.50%	-	-	-	-	-	-
11	Audio Visual Equipment	10,09,883	-	-	10,09,883	7.50%	2,19,631	75,741	-	2,95,372	7,14,511	790,252
12	Computers & Peripherals	2,04,18,019	1,00,23,574	2,45,110	3,01,96,483	20.00%	82,42,427	55,15,075	49,022	1,37,08,480	1,64,88,003	1,21,75,592

Sl. No.	DESCRIPTION	GROSS BLOCK			DEPRECIATION				NET BLOCK			
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustments	Total Depreciation	31-03-2025	31-03-2024
13	Furniture, Fixtures and Fittings	4,92,966	99,264	-	5,92,230	7.50%	62,067	44,417	-	1,06,484	4,85,746	4,30,899
14	VEHICLES	-	-	-	-	10.00%	-	-	-	-	-	-
15	Library Books & Scientific Journals	-	-	-	-	10.00%	-	-	-	-	-	-
16	Small Value Assets	-	-	-	-	-	-	-	-	-	-	-
TOTAL (A)		34,50,35,557	6,52,00,354	20,15,506	42,82,20,405		7,20,69,976	3,73,48,978	2,63,723	10,91,55,231	31,90,65,174	29,29,65,581
17	CAPITAL WORK-IN-PROGRESS (B)											
Sl. No.	INTANGIBLE ASSETS	GROSS BLOCK			DEPRECIATION				NET BLOCK			
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Amortization for the year	Deductions / Adjustments	Total Amortization / Adjustments	31-03-2025	31-03-2024
18	Computer Software	-	-	-	-	-	-	-	-	-	-	-
19	E-Journals	-	-	-	-	-	-	-	-	-	-	-
20	Patents	-	-	-	-	-	-	-	-	-	-	-
TOTAL (C)		-	-	-	-		-	-	-	-	-	-
GRAND TOTAL (A+B+C)		34,50,35,557	6,52,00,354	20,15,506	42,82,20,405		7,20,69,976	3,73,48,978	2,63,723	10,91,55,231	31,90,65,174	29,29,65,581



Photo: Vimal VM, Electrical section, IISERTVM

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2025**

SCHEDULE 4D (iii) - FIXED ASSETS (OTHERS-GPF-SPF-PPF)

Amount in ₹

Sl No.	DESCRIPTION	GROSS BLOCK			DEPRECIATION				NET BLOCK			
		Opening Balance as on 01-04-2024	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31-03-2025	31-03-2024
TANGIBLE ASSETS												
1	LAND:											
	a) Freehold											
	Land obtained from Govt	-	-	-	-	0.00%	-	-	-	-	-	-
	Vithura	-	-	-	-	0.00%	-	-	-	-	-	-
2	Site Development	-	-	-	-	-	-	-	-	-	-	-
3	BUILDINGS											
4	Roads & Bridges	-	-	-	-	2.00%	-	-	-	-	-	-
5	Tubes & Water Supply	-	-	-	-	2.00%	-	-	-	-	-	-
6	Sewage & Drainage	-	-	-	-	2.00%	-	-	-	-	-	-
7	Electrical Installation and equipment	-	-	-	-	5.00%	-	-	-	-	-	-
8	Plant and Machinery	-	-	-	-	5.00%	-	-	-	-	-	-
9	Scientific & Laboratory Equipment	-	3,12,073	-	3,12,073	8.00%	-	24,966	-	24,966	-	2,87,107
10	Office Equipment	-	-	-	-	7.50%	-	-	-	-	-	-
11	Audio Visual Equipment	-	-	-	-	7.50%	-	-	-	-	-	-
12	Computers & Peripherals	-	-	-	-	20.00%	-	-	-	-	-	-

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT
31ST MARCH 2025**

SCHEDULE 5- INVESTMENTS

Amount in ₹

INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS		2024-25	2023-24
1. In Central Government Securities			
2. In State Government Securities			
3. Other approved Securities			
4. Shares			
5. Debentures and Bonds			
6. Term Deposits with bank			
7. Others (to be specified)			
TOTAL		NIL	NIL

SCHEDULE 5(A)- INVESTMENTS FROM EARMARKED/ ENDOWMENT FUNDS (FUND WISE)

Amount in ₹

Particulars		2024-25	2023-24
1. Endowment Fund Investment			
TOTAL		NIL	NIL

SCHEDULE 6- INVESTMENTS OTHERS (FUND WISE)

Amount in ₹

Particulars		2024-25	2023-24
1. In Central Government Securities			
2. In State Government Securities			
3. Other approved Securities			
4. Shares			
5. Debentures and Bonds			
6. Others (to be specified)			
TOTAL		NIL	NIL

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT
31ST MARCH 2025**

SCHEDULE 7- CURRENT ASSETS

Amount in ₹

Particulars	Sub Sch. No.	2024-25	2023-24
1. Stock			
a) Stores and Spares			
b) Loose Tools			
c) Publications			
d) Laboratory Chemicals, consumables and glass wares			
e) Building materials			
f) Electrical materials			
g) Stationery	3	2,32,986	3,26,060
h) Water supply material			
2. Sundry Debtors:			
a) Debts Outstanding for a period exceeding six months			
b) Others			
3. Cash balances in hand (including cheques/drafts and imprest)	1		
4. Bank Balances:			
<u>Institute balance</u>			
a) With Scheduled Banks:			
-On Current Accounts	2	1,62,91,294	87,98,093
-On Term Deposit Accounts (includes margin money)	2	1,57,81,66,590	1,76,61,45,886
-On Savings Accounts	2	15,06,73,432	12,76,27,416
b) With non-Scheduled Banks:			
-On Current Accounts			
-On Term Deposit Accounts			
-On Savings Accounts			
Project Balance			
a) With Scheduled Banks:			
-On Current Accounts			

Particulars	Sub Sch. No.	2024-25	2023-24
-On Term Deposit Accounts (includes margin money)	2	5,23,38,432	7,96,62,212
-On Savings Accounts	2	15,81,63,299	18,86,60,467
b) With non-Scheduled Banks:			
-On Current Accounts			
-On Term Deposit Accounts			
-On Savings Accounts			
5. Post Office- Savings Accounts			
		1,95,58,66,033	2,17,12,20,134



Photo: Vimal VM, Electrical section, IISERTVM

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT
31ST MARCH 2025**

SCHEDULE 8- LOANS, ADVANCES & DEPOSITS

Amount in ₹

Particulars	Sub Sch. No.	2024-25	2023-24
1. Advances to employees: (Non interest bearing)			
a) Salary			
b) Festival			
c) Medical Advance			
d) Other (to be specified)			
2. Long Term Advances to employees: (Interest bearing)			
a) Vehicle Loan			
b) Home Loan			
c) Others (to be specified)			
3. Advances and other amounts recoverable in cash or in kind or for value to be received			
a) On Capital Account			
b) To suppliers			
c) Others	5	37,21,87,181	25,10,87,510
4. Prepaid Expenses			
a) Insurance			
b) Other Expenses	4	1,78,57,557	4,13,18,837
5. Deposits			
a) Telephone			
b) Lease Rent			
c) Electricity			
d) AICTE, if applicable			
e) Others (to be specified)			
6. Income Accrued:			
a) On Investments from Earmarked/Endowment Funds			
b) On Investments- Others			
c) On Loans and Advances			
d) Others (includes income due unrealized-Rs.)	6	6,07,16,140	6,08,80,858

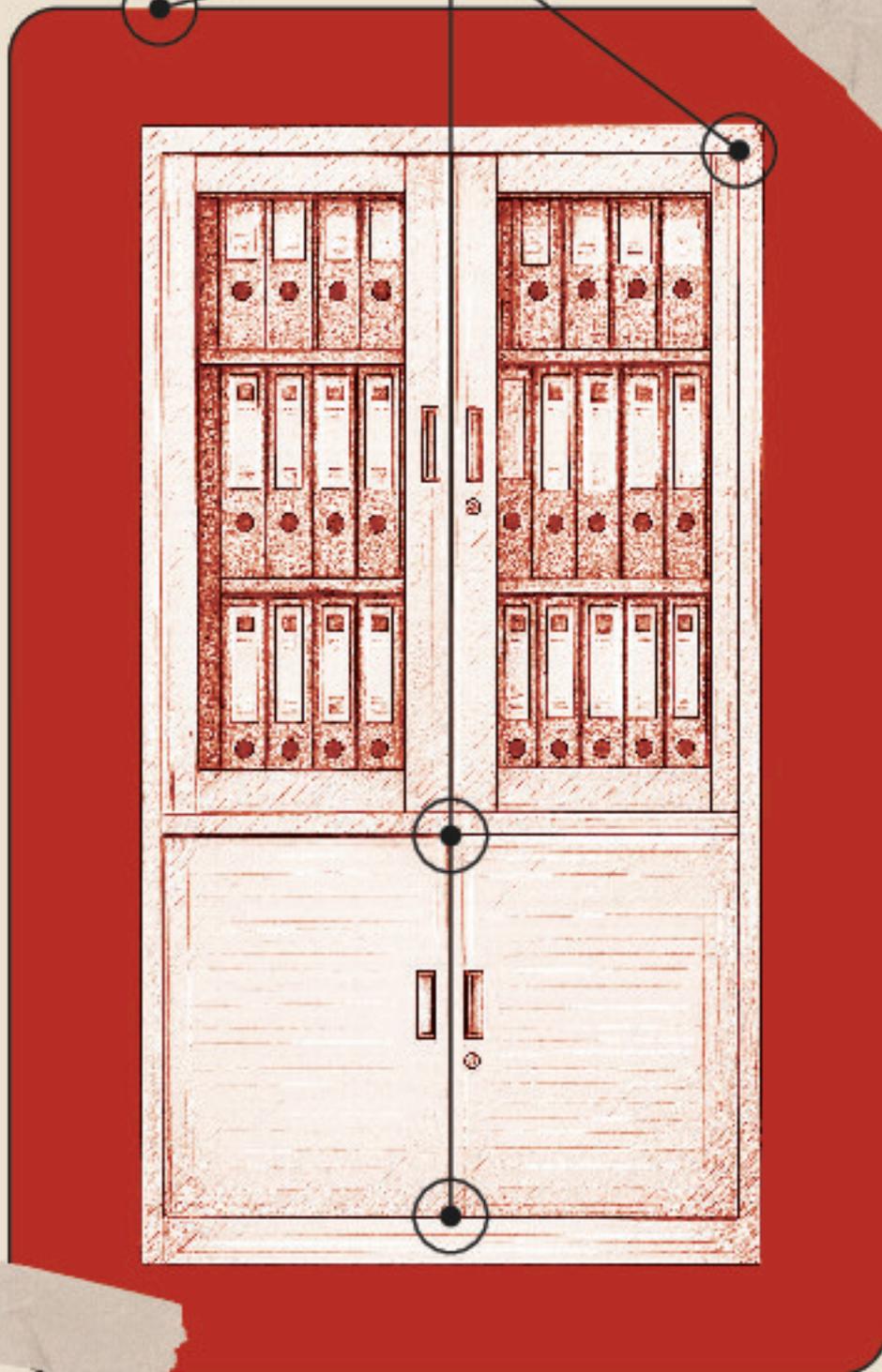
Particulars	Sub Sch. No.	2024-25	2023-24
7. Other Current Assets Recievables			
a) Debit balances in sponsored projects	9	45,32,847	33,26,315
b) Debit balances in fellowship & scholarships	10	28,23,826	-
c) Grants recoverable			
d) Other recievables			
e) TDS	8	56,04,259	34,26,002
8. Claims Receivable	7	1,71,21,014	6,98,47,309
TOTAL		48,08,42,824	42,98,86,831



Photo: Vimal VM, Electrical section, IISERTVM

Annual Accounts

04 - Schedules of Income and Expenditure Account



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF INCOME AND EXPENDITURE
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SCHEDULE 9- ACADEMIC RECEIPTS

Amount in ₹

Particulars	2024-25	2023-24
FEE FROM STUDENTS		
Academic		
a) Tuition fee	11,46,59,086	10,25,18,588
b) Admission fee		
c) Enrolment fee		
d) Library fee	27,40,725	18,16,645
e) Laboratory fee		
f) Art & Craft fee		
g) Registration fee	25,66,925	16,30,550
h) Syllabus fee		
i) Other Receipts	45,03,350	35,64,310
j) Alumini Fee	4,89,500	7,95,200
TOTAL (A)	12,49,59,586	11,03,25,293
Examinations		
a) Admission test fee		
b) Annual examination fee	14,46,025	14,19,845
c) Mark sheet, Certificate fee		
d) Entrance Examination fee		
TOTAL (B)	14,46,025	14,19,845
Other Fee		
a) Identity Card fee		
b) Fine/ Miscellaneous fee		
c) Medical fee		
d) Transportation fee		
e) Hostel Fee	42,24,115	33,20,248
f) Mess Establishment		
TOTAL (C)	42,24,115	33,20,248

Particulars	2024-25	2023-24
Sale of publications		
a) Sale of admission forms		
b) Sale of syllabus and question paper		
c) Sale of prospectus including admission forms		
TOTAL (D)	-	-
Other Academic Receipts		
a) Registration fee for workshops programmes		
b) Registration fees (Academic Staff College)		
GRAND TOTAL (A+B+C+D)	13,06,29,726	11,50,65,386



Photo: Shyam M, Alumnus Batch '19, IISERTVM

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SCHEDULE 10- GRANTS/ SUBSIDIES

Amount in ₹

Particulars	2024-25	2023-24
GRANTS/ SUBSIDIES		
(Irrevocable Grants & Subsidies Received)		
Balance B/F	33,58,80,692	2,58,16,505
ADD: Receipts During the Year		
Capital Grant		65,00,00,000
General	37,01,11,000	
SC	3,54,89,000	
ST	1,44,00,000	
Revenue Grant		95,38,00,000
General	89,54,00,000	
SC	7,79,00,000	
ST	3,34,00,000	
	1,76,25,80,692	1,62,96,16,505
Less: Capital Expenses Incurred during the year	32,49,42,417	33,58,06,213
Less: Utilized for Revenue Expenditure	1,05,95,94,793	95,79,29,600
	37,80,43,482	33,58,80,692
TOTAL	37,80,43,482	33,58,80,692



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SCHEDULE 11- INCOME FROM INVESTMENTS

Amount in ₹

Particulars	Earmarked or Endowment funds		Other investments	
	2024-25	2023-24	2024-25	2023-24
1) Interest				
a) On Govt. Securities				
b) Other Bonds/Debentures				
2) Interest on term deposits				
3) Income Accrued but not due on term deposits or interest bearing advances to employees				
4) Interest on Savings Bank Accounts				
5) Others (Specify)				
TOTAL	NIL	NIL	NIL	NIL
TRANSFERRED TO EARMARKED/ENDOWMENT FUNDS	NIL	NIL	NIL	NIL
Balance				

SCHEDULE 12- INTEREST EARNED

Particulars	2024-25	2023-24
1) On Savings Accounts with scheduled banks		
2) On Loans		
a. Employees/ Staff		
b. Others		
3) On debtors and others receivables		
TOTAL	NIL	NIL

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SCHEDULE 13- OTHER INCOME

Amount in ₹

Particulars	2024-25	2023-24
A. Income from Land & Building		
a) Hostel room rent	1,43,82,020	1,32,65,640
b) License fee	15,46,492	14,23,524
c) Hire charges of Auditorium/ Play ground/ Convention Centre, Etc	19,470	64,700
d) Electricity Charges recovered	50,24,415	28,95,380
e) Water Charges recovered		
Total	2,09,72,397	1,76,49,244
B. Sale of Institutes Publications		
Total	-	-
C. Income from Holding Events		
a) Gross receipts from annual function/ sports carnival "Less: Direct expenditure incurred on the annual function/ sports carnival"		
b) Gross receipts from fetes Less: Direct expenditure incurred on fetes		
c) Gross receipts on educational tours Less: Direct expenditure incurred on tours		
d) Others (to be specify and separately disclosed)		
Total	-	-
D. Interest On Term Deposits:		
a) With Scheduled Banks	11,76,83,330	8,03,01,925
b) With Non-Scheduled Banks		
c) With Institutions		
d) Others		
Total	11,76,83,330	8,03,01,925
E. Interest On Savings Accounts:		
a) With Scheduled Banks	19,02,820	12,86,166
b) With Non-Scheduled Banks		
c) With Institutions		
d) Others		
Total	19,02,820	12,86,166

Particulars	2024-25	2023-24
F. On Loans:		
a) Employees/Staff		2
b) Others		
Total	-	-
G. Interest on Debtors and Other Receivables		
Total	-	-
H. Others		
a) Income from consultancy		
b) RTI Fees	60	
c) Income from royalty		
d) Sale of application form	32,59,005	24,90,505
e) Misc. receipts (Sale of tender form, waste paper, etc.)	2,47,18,196	1,24,63,211
f) Profit on sale/ disposal of Assets		
1 Owned asset		
2 Assets aquired out of grants, or received free of cost		
g) Other Incomes		
Total	2,79,77,261	1,49,53,716
GRAND TOTAL (A+B+C+D+E+F+G+H)	16,85,35,808	11,41,91,051



Photo: Shyam M, Alumnus Batch '19, IISERTVM

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SCHEDULE 14 : PRIOR PERIOD INCOME

Amount in ₹

Particulars	2024-25	2023-24
1. Academic Receipts		
2. Income from investments		
3. Interest earned		
4. Other Income		
Total	-	-

SCHEDULE 15- STAFF PAYMENT & BENEFITS

Amount in ₹

Particulars	2024-25	2023-24
a) Salaries and Wages		
Faculty	31,60,71,819	26,48,27,385
Non Faculty	8,49,32,928	6,93,30,229
b) Allowances and Bonus	12,90,430	10,73,252
c) Contribution to Provident Fund		
* d) Contribution to Other Fund (Leave Salary & NPS Employer Share)*	5,18,82,459	4,59,80,224
e) Staff Welfare Expenses		
f) Retirement and Terminal Benefits	37,39,904	
g) LTC facility	35,61,578	41,65,973
h) Medical facility	60,37,058	41,37,217
i) Children Education Allowance	12,77,800	37,26,000
j) Honorarium	1,80,000	
k) Others	92,11,704	1,45,74,929
TOTAL	47,81,85,680	40,78,15,209

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SCHEDULE 15 A- EMPLOYEES RETIREMENT AND TERMINAL BENEFITS

Amount in ₹

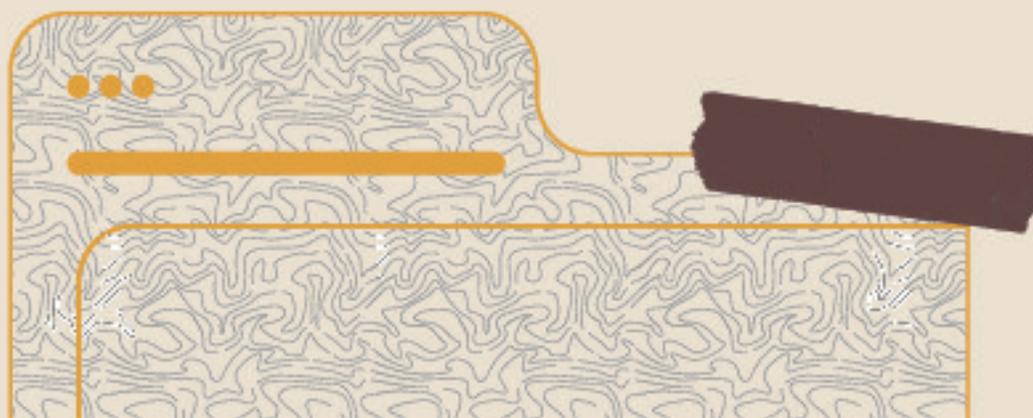
Particulars	Pen- sion	Gratuity	Leave Encashment	Total
Opening balance as on 01.04.2024		-	14,48,16,159	14,48,16,159
Additions: Capitalized value of contributions Received from other Organizations		1,61,400	3,95,430	5,56,830
Total (a)		1,61,400	14,52,11,589	14,53,72,989
Less: Actual Payment during the Year (b)				-
Balance available as on 31-03-2025 C (a-b)		1,61,400	14,52,11,589	14,53,72,989
Provision required on 31-03-2025 - As per Actuarial Valuation (d)		7,40,49,177	15,69,85,471	23,10,34,648
A. Provision to be made in the current year (d-c)		7,38,87,777	1,17,73,882	8,56,61,659
B. Contribution to New Pension Scheme				
C. Medical Reimbursement to Retired Employees				
D. Travel to Home town on Retirement				
E. Deposit Linked Insurance Payment				
TOTAL (A+B+C+D+E)	NIL	7,38,87,777	1,17,73,882	8,56,61,659

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SCHEDULE 16- ACADEMIC EXPENSES

Amount in ₹

Particulars	2024-25	2023-24
a) Laboratory Expenses	10,53,70,801	10,90,89,680
b) Field Work/ Participation		
c) Expenses on Seminar/ Workshop		
d) Payment to visiting faculty		
e) Examination		
f) Student welfare expense		
g) Admission expenses		
h) Convocation expense	25,85,388	19,93,668
i) Publication		
j) Stipend/ means-cum-merit scholarship	11,24,86,510	10,54,59,382
k) Subscription Expense		
l) Others (Specify)		
TOTAL	22,04,42,699	21,65,42,730



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SCHEDULE 17- ADMINISTRATIVE AND GENERAL EXPENSES

Amount in ₹

Particulars	2024-25	2023-24
A. Infrastructure		
a) Electricity and power	8,17,67,004	7,79,30,232
b) Water charges		
c) Insurance	6,83,017	
d) Rent, Rates and Taxes	43,370	1,83,507
B. Communication		
e) Postage & Telegram	14,782	4,540
f) Telephone and Internet Charges	43,11,142	45,12,630
C. Others		
g) Printing and Stationary	9,78,416	12,87,318
h) Travelling and Conveyance Expenses	68,95,363	1,03,91,424
i) Expenses on Seminar/Workshops	5,36,820	15,37,878
j) Hospitality		
k) Auditors Remuneration		2,54,740
l) Professional Charges		
m) Advertisement and Publicity	5,13,588	18,81,177
n) Magazine & Journals		
o) Others (specify)		
Sports / Cultural Festival / Celebration expense	70,70,612	57,85,645
Consumables		11,68,579
Cable TV Charges		
Newspaper & Periodicals	70,705	54,120
Software License fees	6,67,135	4,71,760
Publication charges		
Manpower charges	12,83,30,110	12,38,55,162
Guest house and other expenses	10,13,703	11,09,840
Other Administrative / Miscellaneous Expenses	1,22,02,741	94,75,027
Legal and consultancy charges	5,92,382	17,28,000
Expenses related to COVID 19	22,977	47,448
Hostel Running Expenses	17,30,515	70,56,426
Medical Centre - Consumables&Medicines	6,82,962	5,20,926
Running of Generator Set	11,63,475	11,86,934
IT recurring expenses for service	19,81,000	41,71,748
TOTAL	25,12,71,819	25,46,15,060

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SCHEDULE 18- TRANSPORTATION EXPENSES

Amount in ₹

Particulars	2024-25	2023-24
1. Vehicles (owned by educational institution)		
a) Running expense	8,64,732	11,07,277
b) Repairs & Maintenance	6,60,059	5,54,886
c) Insurance Expenses	49,434	48,352
2. Vehicles taken on rent		
a) Rent/ Lease expenses	90,44,899	76,39,368
3. Vehicle (Taxi) Hiring expenses		
TOTAL	1,06,19,124	93,49,883

SCHEDULE 19- REPAIRS & MAINTANENCE

Amount in ₹

Particulars	2024-25	2023-24
a) Building	3,77,72,445	3,27,44,565
b) Furniture & Fixtures	1,33,40,479	75,45,983
c) Plant & Machinery	2,81,35,015	1,78,18,623
d) Office Equipments	85,60,169	22,63,067
e) Computers		
f) Laboratory & Scientific equipment	44,44,903	24,36,729
g) Audio Visual equipment		
h) Cleaning Material & Services	14,60,045	
i) Book binding charges		
j) Gardening	52,55,297	52,99,403
k) Estate Maintenance		
l) Others (Specify)		
TOTAL	9,89,68,353	6,81,08,370

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SCHEDULE 20- FINANCE COSTS

Amount in ₹

Particulars	2023-24	2022-23
a) Bank Charges	1,07,118	14,98,348
b) Others (specify)		
TOTAL	1,07,118	14,98,348

SCHEDULE 21- OTHER EXPENSES

Amount in ₹

Particulars	2024-25	2023-24
a) Provision for Bad and Doubtful debts/ Advances		
b) Irrecoverable Balances Written off		
c) Grants/ Subsidies to other institutions/ Organisations		
d) Others (Specify)		
TOTAL	NIL	NIL

SCHEDULE 22- PRIOR PERIOD EXPENSES

Amount in ₹

Particulars	2024-25	2023-24
1. Establishment Expenses		
2. Academic Expenses		
3. Administration Expenses	28,01,231	
4. Transportation Expenses		
5. Repair & Maintenance		
6. Other Expenses	11,81,31,568	
TOTAL	12,09,32,799	-

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM

SCHEDULES FORMING PART OF INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDING 31ST MARCH 2025

Schedule 23- Significant Accounting Policies

Amount in ₹

1. Basis for preparation of Accounts:

The Annual Accounts of the institute are prepared on the basis of revised format and guidelines issued by the Ministry of Education, Government of India and approved by the C&AG of India for all Central Educational Institutes with effect from financial year 2014-15 (Communicated vide Lr.No.29-4/2012-IFD dated 17.04.2015 of MHRD, GOI).

2. Accounting Convention:

The financial statements are prepared on the basis of Historical Cost Convention and ongoing concern concept unless otherwise stated.

The institute follows accrual method of accounting.

3. Revenue Recognition:

- 3.1 The institute is significantly funded by the Ministry of Education (MOE), Government of India. The Government release the Grants-in-Aid under two major heads i.e., Capital and Revenue. Grants-in-Aid from GOI is accounted for in the same financial year for which it is sanctioned by the MOE.
- 3.2 Government Grants to the extent utilized for meeting revenue expenditure on accrual basis are treated as revenue income of the year and depicted in the Income and Expenditure Account.
- 3.3 Fees from students (except Tuition fees), Sale of admission Forms, Interest on savings Bank account are accounted in cash basis. Tuition fees collected separately for each semester is accounted on accrual basis.
- 3.4 Interest on Fixed Deposits has been credited in the accounts on accrual basis.
- 3.5 No interest bearing advances for House Building, Purchase of Vehicles etc., has been sanctioned to staff to the said period.

4. Fixed Assets and Depreciation:

- 4.1 The fixed assets are valued at cost of acquisition including inward freight, duties, taxes, incidental and direct expenses related to acquisition, installation and commissioning. No fixed asset has been received directly by way of non-monetary grant during the year under consideration.
- 4.2 No fixed asset has been received directly by way of non-monetary grant during the year under consideration.
- 4.3 The land at Jersey Farm, Vithura Nedumangad Taluk, Thiruvananthapuram District has been given by the Government of Kerala at no cost, hence the same has been shown at nominal value of Rs.1/- in Annual Account.
- 4.4 No gifted / donated assets and Books have been received during the year under consideration.
- 4.5 Fixed Assets are valued at cost less accumulated depreciation.
- 4.6 No change has been made in the method of depreciation. Depreciation has been provided on fixed assets as per MoE Uniform Accounting Standards for Central Educational Institutions (CEIs) on Straight Line Method at the following rates:

Tangible Assets:

1	Land	0%
2	Site Development	0%
3	Buildings	2%
4	Roads and Bridges	2%
5	Tube wells and water supply	2%
6	Sewerage and Drainage	2%
7	Electrical installation and equipment	5%
8	Plant and Machinery	5%
9	Scientific and Laboratory Equipment	8%
10	Office Equipment	7.5%
11	Audio Visual Equipment	7.5%
12	Computer and Peripherals	20%
13	Furniture, Fixtures and Fittings	7.5%
14	Vehicles	10%
15	Library Books and Scientific Journals	10%

Intangible Assets (Amortization)

1.	E-Journals	40%
2.	Computer Software	40%
3.	Patents and Copyrights	9 Years

- 4.7 Depreciation is provided for the whole year on additions during the year.
- 4.8 Where an asset is fully depreciated, it will be shown at a residual value of Rs.1/- in the Balance Sheet and will not be further depreciated.
- 4.9 Assets created out of Earmarked Funds and Funds of Sponsored Projects where the ownership of such assets vests in the Institution will be setup by credit in Capital Fund and merged with the Fixed Assets of the institution. Depreciation charged at the rates applicable to the respective assets. Accordingly, assets of Externally Funded Projects shown in Schedule 4-D Fixed Assets (Others).
- 4.10 Assets acquired out of IRG is shown separately under the schedule 4D-(i) (Others-IRG).
- 4.11 Assets acquired out of Growth Fund is shown separately under the schedule 4D (iii) - FIXED ASSETS (OTHERS-GPF-SPF-PPF)
- 4.12 Patents, copyrights and E Journals are grouped under intangible assets.
- 4.13 Electronic Journals (E-Journals) are separated from Library Books in view of the limited benefit that could be derived from the on-line access provided. E-Journals are not in a tangible form, but temporarily capitalized in view of the magnitude of expenditure and the benefit derived in terms of perpetual knowledge acquired by the Academic and Research Staff. Depreciation is provided in respect of E-Journals at a higher rate of 40% as against depreciation of 10% provided in respect of Library Books.
- 4.14 Software and Computer Peripherals are being shown under the Fixed Assets.

5. Stocks:

- 5.1 Expenditure on purchase of Chemicals, Labware, Office Consumables, Publications and other consumable items are accounted as revenue expenditure. Such items issued to Labs are treated as consumed and hence closing stock is taken as NIL.

5.2 Value of closing stocks (Stationary) as on 31st March 2025 is set up as inventories by reducing the corresponding Revenue Expenditure on the basis of information from the nodal departments and valued at cost.

6. Retirement Benefits:

6.1 All employees of the Institute are covered under the New Pension Scheme. As such no provision has been made for pension, however suitable provision on the basis of actuarial valuation has been made for the Earned Leave Encashment and Gratuity and depicted under Schedule No.15 A.

6.2 No long term or Short Term Investments are made by the institute in Government Securities, Bonds, Debentures and Shares.

7. Corpus / Earmarked / Designated Endowment Funds:

Corpus / Capital Fund: It refers to fund contributed by Government for establishment and activities of the institute. Corpus / Capital fund is the main fund of the institute and it denotes a permanent fund kept for the existence of the institute. The additions to this fund are Grants from Government to the extent utilised for Capital Expenditure. Assets purchased out of earmarked funds and sponsored project funds and excess of income over expenditure transferred from Income and Expenditure account.

8. Government Grants:

8.1 Plan grants received from Government are accounted on accrual basis.

8.2 To the extent utilised towards capital expenditure, Government Grants are transferred to the Capital Fund.

8.3 Unutilised Government Grants are carried forwarded and depicted under Current Liability in the Balance Sheet.

9. Capital Work-In-Progress:

Running Bills of Contractors and uninstalled equipment procured during the period are accounted under Capital work-in-progress till completion/ installation. No depreciation is charged on Capital work in progress.

10. Sponsored Projects:

10.1 The amount received under Sponsored Projects has been separately shown in Schedule 3 A.

10.2 The fellowships and scholarships funded by the UGC, CSIR, DBT, DST INSPIRE, PMRF etc., are shown separately in Schedule 3B

10.3 The Fellowships and Scholarships provided by the institute itself are accounted as Academic expenses.

11. Income Tax:

The income of the institute is exempt from Income Tax u/s 10 (23) (C) (iiiab) of the Income Tax Act 1961. No provision for tax is therefore made in the accounts.

12. Foreign Currency transactions:

Foreign Currency transactions are accounted for at the rate of exchange prevailing on the dates of such transactions.

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Schedule 24 – Contingent Liabilities and Notes on Accounts

Amount in ₹

1. Financial Statement and Notes on Accounts:

The financial statement of the institute is prepared in three parts:

- i) Receipt and Payment Account
- ii) Income and Expenditure Account
- iii) The Balance Sheet.

1.1 The Receipts and Payments Account consists of the figures of actual receipts and payments of the institute during the financial year 2024-25 as per Cash Book. The total receipts from the different sources as shown in Receipt and Payment Account includes grant of Rs. 142.67 Cr. received from Ministry of Education (MOE).

1.2 The Income and Expenditure Account is prepared on accrual basis.

1.3 In Balance Sheet the acquired fixed assets, current assets are taken as assets while the Corpus Fund, Designated Fund, Endowment Funds, balance of Sponsored Projects and Grants received from Government and Current Liabilities etc., are shown in respective Schedules under Sources of Funds / Liabilities.

1.4 Figures in Final Accounts have been rounded off to the nearest rupee.

2. Schedules and Notes on Accounts:

2.1 Schedule 1 to 22 are annexed and they form an integral part of Annual Accounts.

2.2 Institute have received following Grant from MoE for the year 2024-25;

Capital Grant:	Rs. 42,00,00,000
Revenue Grant:	Rs. 1,00,67,00,000
Total:	Rs. 1,42,67,00,000

2.3 Unspent Balance of Rs.8.63 Cr. on Institute Promotion Fund (GPF), School Promotion Fund (SPF) and Personal Promotion Fund (PPF) are shown under Schedule 3-Current Liabilities

2.4 Unspent Balance of Rs. 3.43 Cr. on JAC 2020 are shown under Schedule 3-Current Liabilities.

2.5 Expenditure related to hostel running expenses is Rs. 17.30 Lakh.

2.6 GST- Input tax credit available in the Electronic Credit ledger for the year 2024-25 to the tune of Rs. 52.57 Lakh depicted under Schedule 8 of the Balance Sheet.

- 2.7 Depreciation has been provided on all assets applying rates specified by MOE using straight line method.
- 2.8 During the FY 2024-25, the accounts related to Unnath Bharat Abhiyan (UBA) has been included in the Annual accounts under Schedule 3 A which reflects transactions related to UBA.
- 2.9 The Endowment fund shown under Schedule 2A relates to Prof. M V George Memorial Lecture Fund and Interest earned out of this fund is being utilized for Memorial Lecture.
- 2.10 The details of balances in Saving Bank, Current Accounts and in Fixed Deposit Accounts are given in Schedule 7 of the Balance Sheet. The following accounts under the CIF Code of the institute are not incorporated in the books of accounts, since these accounts are not involved as part of the institute activities.

BANK	ACCOUNT NUMBER	TYPE OF ACCOUNT
CANARA BANK	110048844820	SAVINGS BANK
CANARA BANK	110048845118	SAVINGS BANK
IDBI	0745102000003766	CURRENT ACCOUNT
IDBI	0745104000086125	CURRENT ACCOUNT
STATE BANK OF INDIA	67393409552	CURRENT ACCOUNT
STATE BANK OF INDIA	38202365676	CURRENT ACCOUNT
STATE BANK OF INDIA	39753417258	CURRENT ACCOUNT
STATE BANK OF INDIA	40218920183	CURRENT ACCOUNT
STATE BANK OF INDIA	67369851762	CURRENT ACCOUNT
STATE BANK OF INDIA	67299294637	CURRENT ACCOUNT

- 2.11 During the FY 2024-25, as per the GFR guidelines, unclaimed EMD for more than 3 years amounting to Rs. 2.98 Lakh treated as IGF receipts.
- 2.12 Secured advances and Mobilization advances and Deposit work with CPWD are disclosed separately under the heads Loans and Advances. During the FY 2024-25 an amount of Rs. 16 Cr. has been released to CPWD from IRG.
- 2.13 The unutilized grant shown under Schedule 3(C) Plan Grants from MOE is Rs. 37.80 Cr. is considering the deposits to the tune of Rs. 29.86 Cr. earmarked for letter of credit, advance payment made to CPWD as Deposit work for construction of IISER Permanent Campus and excluding Pre-paid expenses shown under Sub-Schedule 4 & 5 of Schedules forming part of Balance Sheet (Schedule 8 – Loans, Advances and Deposits).
- 2.14 Provision has been made for the interest earned on deposits earmarked for letter of credit to the tune of Rs. 47.50 Lakh which is refundable to MOE and it is shown under Schedule 3.
- 2.15 During the financial year 2024-25, the dispute with M/s Consolidated Construction Consortium Limited (CCCL) was resolved through the Vivad se Vishwas II Scheme (Contractual Disputes), launched by the Government of India for one-time settlement of pending contractual disputes. The settlement was executed via the Government e-Marketplace (GeM) Portal. As per the settlement terms, 65% of the net amount awarded in the arbitration proceedings, along with interest at the applicable rate of 9% per an-

num w.e.f. 09.11.2018 was settled, as per scheme guidelines and withdrawal of case filed by M/s CCCL.

The financial impact of the settlement was accounted for by adjusting the amount receivable from / payable to M/s CCCL and recording the net expenditure under Prior Period Expenses (Schedule 22), as the matter pertains to earlier financial years.

- 2.16 During the financial year 2024-25, the Institute had opted for Multi Option Deposit Scheme to optimize the management of funds and such Deposits are depicted under Schedule 7.

3. Sponsored Project Accounts:

The institute has received grants from DST, DBT, Wellcome Trust DBT Alliance Fellowships, DAE, ISRO, CSIR, UGC etc., in Research and Development (R&D) Projects. A separate bank account is maintained for Sponsored R & D Projects. The transactions of Sponsored Projects and Project wise closing balances are being shown in Schedule 3(A) of the Balance Sheet. As per the funding agencies guidelines, project wise bank account(s) are being maintained with IDBI Bank and Canara Bank separately.

The treatment of Project Grant and its Utilization is on Cash Basis.

New annual activities of IISER Thiruvananthapuram initiated this year include: Students Travel Support under Growth Fund (accounted in Growth Fund books); Frontier Symposia Series, Refresher and Preparatory Winter School and Students Friendship Fund Fellowships (accounted under Conference books).

4. Capital Works-in-Progress:

The construction work of institute's permanent campus situated at Jersey Farm, Vithura is under progress and expenditure related to the same is shown under Schedule 4 (Fixed Assets) of the Balance Sheet.

The expenditure on capital work-in-progress as at 31.03.2025 was of Rs. 9.10 Cr. being uninstalled equipment procured / expenditure incurred on infrastructure activities of Institute during the period.

5. Retirement Benefits:

5.1 The **NPS** subscription recovered from employees and employer's contribution are remitted to NPS Trust Account regularly. Statement of NPS Accounts are prepared and attached with the Financial Statement.

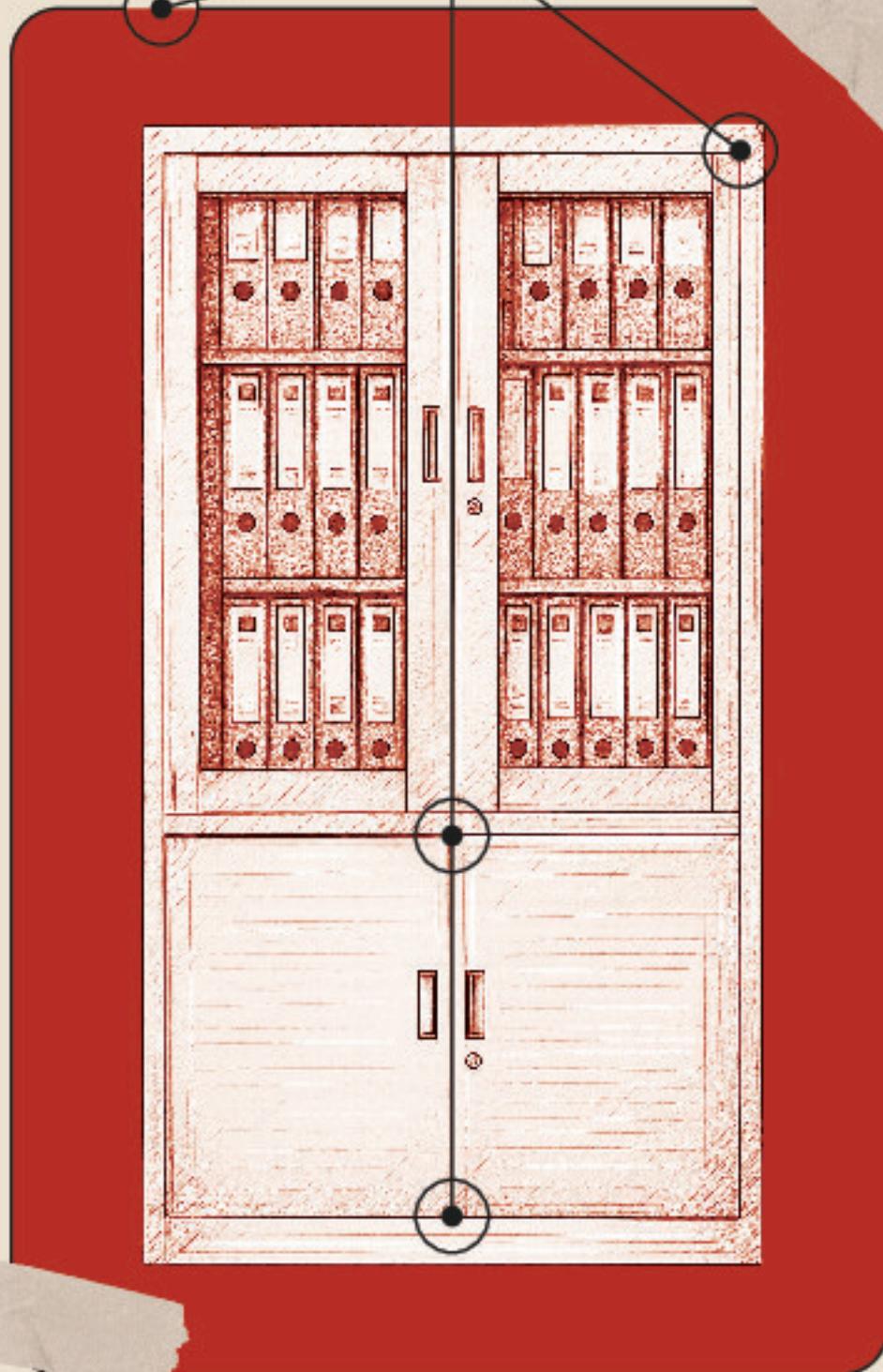
5.2 **GPF** is not applicable to the institute employees. Hence GPF accounts schedule has not been prepared.

6. Other Additions:

6.1 As per the institute's policy, the overhead generated from the Externally Funded Projects have been segregated into four parts vis-a-vis, (i) 45% - income from overheads to institute, (ii) 5% - Staff Welfare Fund, (iii) 25% - School Promotion Fund and (iv) 25% - Personal Promotion Fund. The said figures (ii) to (iv) have been depicted as other additions in Schedule 1 of Annual Accounts including the Student Friendship Fund.

Annual Accounts

05 - Receipts and Payment Account



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
RECEIPTS AND PAYMENTS FOR THE PERIOD / YEAR ENDED 31ST MARCH 2025**

Amount in ₹

RECEIPTS	2024-25	2023-24	PAYMENTS	2024-25	2023-24
I. Opening Balance			I. Expenses		
a) Cash in hand			a) Establishment Expenses	38,02,54,193	33,48,65,617
b) Bank Balances			b) Academic Expenses	22,18,90,111	20,15,63,885
i) In current accounts			c) Administrative Expenses	25,32,48,484	18,48,27,755
a) Canara Bank A/c	20,116	21,886	d) Transportation Expenses	1,05,57,117	93,49,883
b) IDBI Bank A/c	4,00,491	3,18,436	e) Repair & Maintenance Expenses	10,61,36,029	6,81,08,370
c) SBI Bank A/c	83,77,486	1,26,33,023	f) Prior period Expenses	11,81,31,568	
d) RBI TSA A/c		718			
e) PMRF-CNA A/c		12,83,303			
ii) In deposit /savings accounts			II. Payments made against earmarked endowment funds		
a) Canara Bank	74,01,96,482	62,81,21,238			
b) SBI	1,15,21,51,820	88,70,39,304	III. Payment against Sponsored Projects		
c) Canara Bank Project A/c	65,47,106	63,19,472			
d) Canara Bank Vithura A/c	18,11,85,319	22,51,95,649			
e) IDBI Bank Project A/c	4,49,37,447	3,75,94,972			
f) IDBI Bank- GPF-SPF-PPF A/c	13,34,955	-	IV. Payment against sponsored fellowships		
g) IDBI Bank	14,25,000	14,25,000	V. Investments and deposits made		
h) ICICI Bank	3,43,17,851	-	a) Out of Earmarked/Endowment funds		

RECEIPTS	2024-25	2023-24	PAYMENTS	2024-25	2023-24
II. Grants Received			b) Out of Own Funds (Investments-Others)		
a) From Government of India	1,42,67,00,000	1,60,38,00,000	VI. Term Deposits with Scheduled Banks	84,55,51,588	79,26,20,503
b) From State Government			VII. Expenditure on Fixed Assets & Capital Work in Progress, Purchase of Fixed Assets and Expenditure		
c) From other sources			VIII. Other payment including Statutory payment	18,32,92,699	14,40,45,127
III. Academic Receipts	13,71,09,063	12,28,07,062	IX. Refunds of Grants		
IV. Receipts against Earmarked/ Endowment Fund			X. Deposits & Advances	94,44,655	1,91,20,203
V. Receipts against Sponsored Projects (including interest)	16,00,02,580	24,15,57,510	XI. Other payments	4,77,79,817	3,07,90,371
VI. Receipts against Sponsored Fellowships and Scholarships	3,83,27,086	3,54,98,951	Other payments- External projects	13,93,90,546	14,71,87,250
VII. Income on Investments from			VIII. Closing Balances		
a) Earmarked/Endow. Funds			a) Cash in hand		
b) Own Funds (Jth. Investment)			b) Bank Balances		
			i) In current accounts		
			a) Canara Bank A/c	17,461	20,116
			b) IDBI Bank A/c	4,07,546	4,00,491
			c) SBI Bank A/c	74,89,015	83,77,486

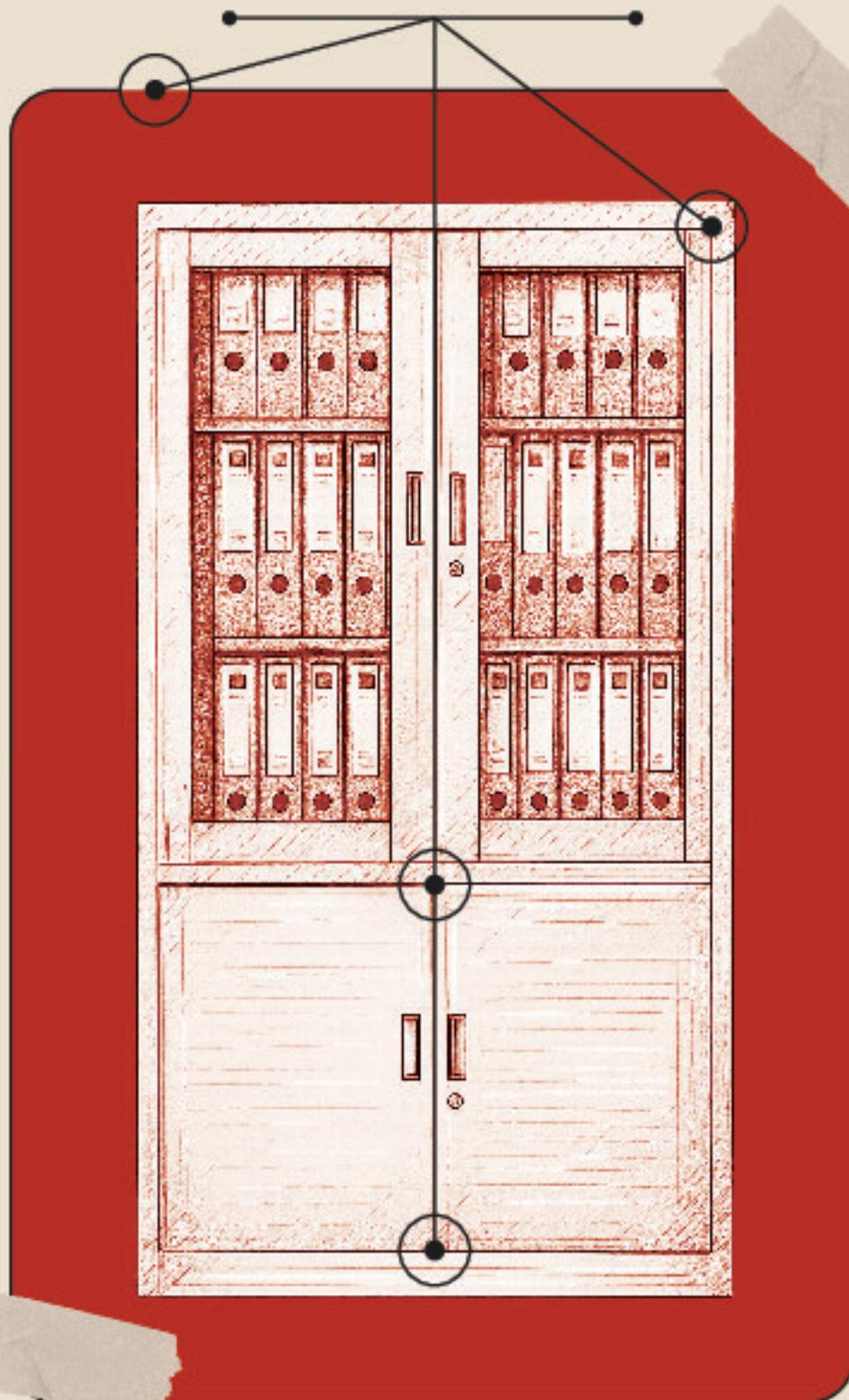
RECEIPTS	2024-25	2023-24	PAYMENTS	2024-25	2023-24
a) On Bank deposits	6,26,60,678	2,30,68,810	e) PMRF-CNA A/c	83,77,272	
b) Loans. Advances etc.			ii) In deposit /savings accounts		
c) Savings Bank Account	56,90,830	22,07,295	a) Canara Bank	52,27,17,027	74,01,96,482
			b) SBI	1,16,93,83,778	1,15,21,51,820
			c) Canara Bank Project A/c	64,54,364	65,47,106
			d) Canara Bank Vithura A/c	15,47,69,946	18,11,85,319
			e) IDBI Bank Project A/c	4,55,10,619	4,49,37,447
IX. Investment encashed					
X. Term Deposits with Scheduled bank encashed	7,38,73,368	10,00,69,523	f) IDBI Bank- GPF-SPF-PPF A/c	13,34,955	13,34,955
XI. Other Income (Including prior period income)	5,35,74,862	5,70,35,827	g) SBI-Project A/c	24,31,847	
XII. Deposits & Advances	14,08,47,624	11,54,12,650	h) IDBI Bank	14,25,000	14,25,000
XIII. Miscellaneous receipts including Statutory receipts			i) ICICI Bank	3,53,14,217	3,43,17,851
XIV. Any other receipts	16,29,690	19,62,407			
	4,27,13,09,854	4,10,33,73,037		4,27,13,09,854	4,10,33,73,037



Photo: Vimal VM, Electrical section, IISERTVM

Annual Accounts

06 - NPS Accounts



INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM NPS TIER-I ACCOUNT

Amount in ₹

BALANCE SHEET AS AT 31st MARCH 2025

Liabilities	Amount	Assets	Amount
NPS Tier-I Account		NPS Tier-I Account	
Opening Balance	70,24,023.00	Sub. and Contribution due for March 25	77,37,213.00
Less: Sub.For March 2024	70,24,023.00	Investment	
Add:Sub+U Contribution	9,34,94,305.00	Interest Accrued but not due	
Add: Interest Credited	-		
Less: Transferred to NSDL	8,57,57,092.00		
Add:Sub+UC for March 2025	77,37,213.00	Balance at Bank	-
Excess of Income over Expenditure	-		
Total	77,37,213.00	Total	77,37,213.00



Photo: Shyam M, Alumnus Batch '19,
IISERTVM

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM NPS TIER-I ACCOUNT

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 st MARCH 2025

Amount in ₹

Expenditure	Amount	Income	Amount
Interest Credited to Subscribers Account		Interest Earned on Investment	
Bank Charges		Less: Interest Accrued 31.03.2025	
Excess of Income over Expenditure		Interest Accrued but not due	
Total	-	Total	-

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM NPS TIER-I ACCOUNT

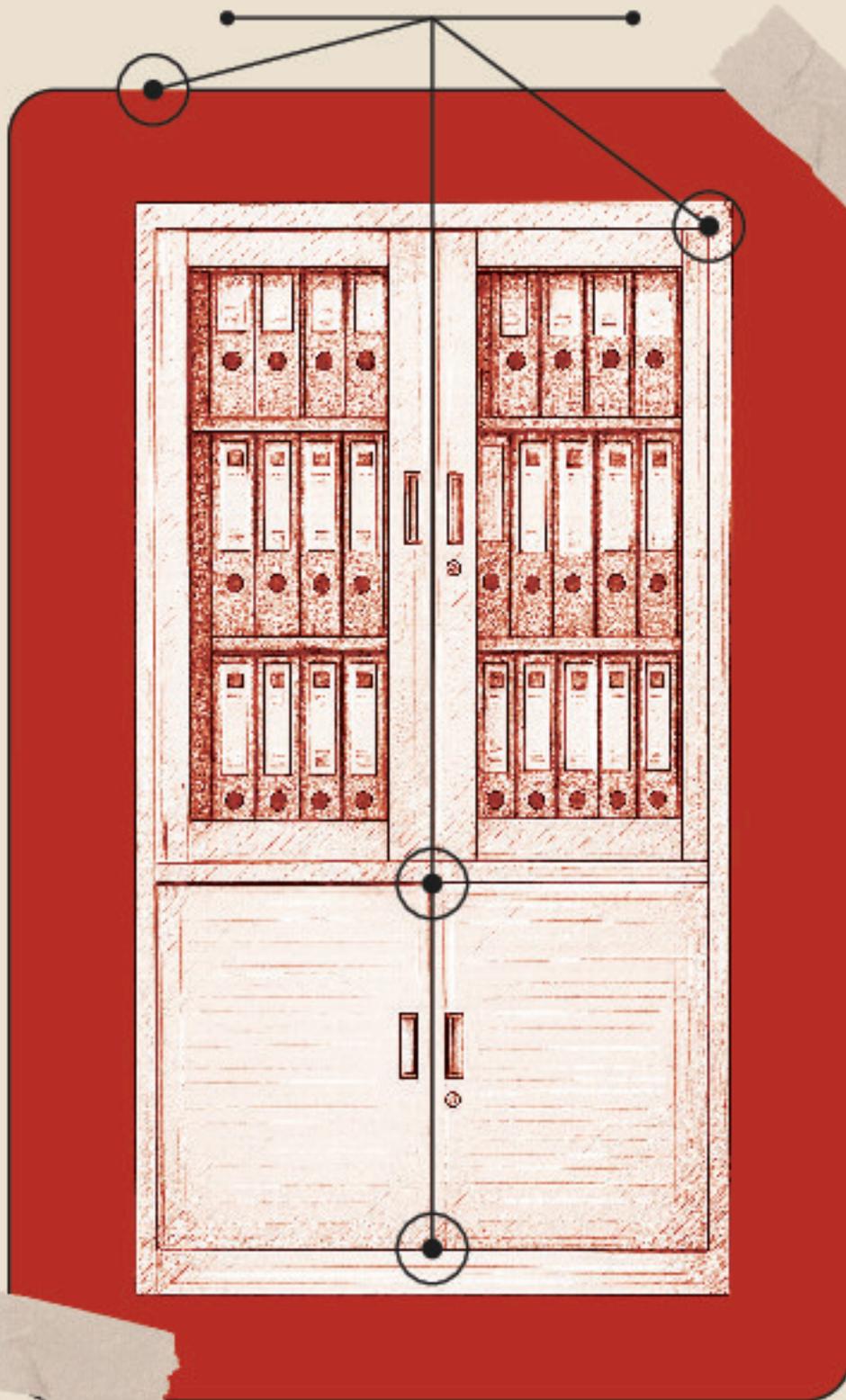
RECEIPTS AND PAYMENTS FOR THE PERIOD / YEAR ENDED 31 st MARCH 2025

Amount in ₹

RECEIPTS		PAYMENTS	
Particulars	Amount	Particulars	Amount
Opening Balance as on 01-04-2024	70,24,023.00	Investments: Deposit to NPS a/c maintained by NSDL-CRA	8,57,57,092.00
Subscription and Contribution			
Own Subscription	3,60,29,294.00		
Institute Contribution	5,04,40,988.00	Closing Balance as on -03-31 2025	77,37,213.00
	8,64,70,282.00		
Total	9,34,94,305.00	Total	9,34,94,305.00

Annual Accounts

07 - Sub Schedules



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM
SCHEDULES FORMING PART OF BALANCE SHEET AS AT
31ST MARCH 2025**

Amount in ₹

SUB SCH No.	PARTICULARS	2024-25	2023-24
	CURRENT LIABILITIES AND PROVISIONS		
1	Sundry Creditors for Goods & Services:	83,974	10,60,111
		83,974	10,60,111
2	Sundry Creditors for expenses:		
	Audit Fees Payable	2,53,000	1,27,370
	Consumables Payable	11,93,766	52,61,280
	CIF Testing Charges	99,66,634	67,98,052
	CUMS Charges	18,39,296	9,96,912
	CHPC FUND	1,55,950	
	CPF/GPF/OTHERS PAYABLE	18,450	18,450
	Computer & Peripheral Expense Payable	46,327	35,61,216
	Construction-Works Bill Payable	9,96,196	
	Electricity Charges Payable	76,68,229	73,57,097
	E Journal Subscription Charges Payable	1,95,859	
	Equipment Expense Payable	14,53,883	57,99,325
	Fellowship Payable	1,32,61,637	1,26,09,631
	Fund for ANIMALIUM	2,38,504	
	Fund for GABS	4,95,185	4,14,013
	Furniture Expense Payable	1,79,400	8,85,000
	Manpower Security Charges Payable	33,92,290	34,02,954
	Manpower Charges Payable	28,14,973	61,91,512
	IISER Student Co-Operative Mess	4,64,888	15,650
	IISER TVM Employees Co Operative Society	2,48,345	2,15,008
	Library Book Expense Payable		17,155
	Medical Reimbursement Payable	10,17,761	9,15,370
	Newspaper Payable		4,550
	NPS Employee Contribution Payable	32,23,841	29,26,674
	NPS Employer Contribution Payable	45,13,372	40,97,349
	Printing & Stationery Payable		5,038

SUB SCH No.	PARTICULARS	2024-25	2023-24
	Salaries & Allowances Payable	3,74,88,067	2,64,74,782
	Payable to Students	63,532	
	Student Activities	68,67,984	46,11,824
	Telephone / Internet Charges Payable	11,439	3,44,656
	Travel Expense Payable	9,09,036	7,99,998
	The Registrar IIT Kanpur	10,36,395	10,03,719
	The Registrar IIT Palakkad	33,37,904	
	PAO (HE) New Delhi	47,50,082	
	UGC JRF S H S S	37,800	
	Account with Project- Dr. Rajeev Kini	43,716	43,716
	Account with Project- Dr. R S Swathi	8,85,553	8,85,553
	IISER CBSM 2018	90,999	90,999
	CARRIER AIR CONDITIONING	1,49,683	
	BIO SAFE	29,82,400	
	Dr. Bikas Chandra Das		9,454
	CGST	36,870	34,603
	SGST	36,870	34,603
	IGST	3,591	3,690
	Transportation Expense Payable	78,158	8,60,158
	PMRF Contingency Expenses Payable		55,56,895
	Office/Contingency Expenses Payable	2,08,452	4,73,933
	Repairs And Maintenance Payable	7,52,372	10,62,230
		11,34,08,689	10,39,10,419
3	EMD & Caution Deposit		
	EMD	91,96,491	69,92,709
	Caution Deposit- Institute	20,73,200	18,01,200
	Caution Deposit- Hostel	41,81,483	36,41,483
	Caution Deposit- Library	20,85,500	18,19,500
	Caution Deposit-Mess	54,79,250	46,42,750
	Security Deposits	1,20,09,314	2,72,79,682
		3,50,25,238	4,61,77,324
4	Statutory Liabilities- Others		
	TDS & Cess (Cont, Sal, Prof, Rent, Adv)	61,69,739	71,69,214
	LWF	1,67,831	2,69,803
	TDS-CGST	3,62,247	5,94,002

SUB SCH No.	PARTICULARS	2024-25	2023-24
	TDS-SGST	3,62,246	5,94,001
	TDS - IGST	13,76,128	6,49,050
	GST-REVERSE CHARGE MECHANISM	-	
	NPS recovery from employees		72,670
		84,38,191	93,48,740
5	Other Current Liabilities		
	Advances from CCC Ltd		33,67,28,015
	ACCOUNT WITH GPF (RECEIVABLE FROM PFMS SBI)	1,21,967	
	Payable to Institute by IDBI A/c	1,77,851	14,43,953
	Account with IISER Growth Fund	1,00,640	10,93,682
	Account with IISER PPF	43,286	55,004
	Account with IISER SPF	50,000	55,004
	Account with IISER Institute (Payable from CB Vithu- ra)	7,71,523	10,30,321
	Account with IISER Institute (Payable from CB Vithu- ra)-GPF	25,000	25,000
	CONTINGENCY PAYABLE		24,000
	GST PAYABLE TO INSTITUTE- BPCL		77,760
	ACCOUNT WITH INSTITUTE (CB PROJECT-94002)	26,600	
	ACCOUNT WITH PROJECT (PAY FROM PPF TO SG- DR ASHUTOSH)	6,714	
	Performance Guarantee	53,44,579	50,88,771
	Withheld from CCC Ltd		2,44,78,648
	Receivables from District Tribal Welfare Dept		7,900
	Medical Insurance Premium Students	45,21,959	35,03,840
	Other charges payable		91,033
	Group Term Life Insurance	1,48,736	41,382
	Receivable From Welcome Trust		8,03,522
	Account with Project	12,21,080	
	Account with Mess	30,583	
	RECEIVABLE FROM SERB/EEQ-DR GOKULNATH SABAPATHI		25,000
	REFUND OF UNSPEND BAL PAYABLE- DST-ICMAP PROJECT	15,97,089	
	PAYABLE TO DBT FOR PR30459 PROJECT	11,58,472	
	PAYABLE TO DR RAJENDRA KURAPTI	36,462	
	INSTITUTE ICICI-JAC A/c	3,43,17,851	3,43,17,851

SUB SCH No.	PARTICULARS	2024-25	2023-24
	GPF-SPF-PPF	8,63,48,140	7,43,22,265
		13,60,48,532	48,32,12,950
6	PROVISIONS		
	Leave Salary Payable	23,10,34,648	14,48,16,159
		23,10,34,648	14,48,16,159
		52,40,39,272	78,74,65,592

SUB SCH No.	PARTICULARS	2024-25	2023-24
	CURRENT ASSETS, LOANS AND ADVANCES		
1	Cash Balance		
	Institute Balance		-
	Project Balance		-
2	Bank Balances		
	Canara Bank - Current A/c	17,461	20,116
	Canara Bank-PMRF-CNA Account	83,77,272	-
	RBI-TSA ACCOUNT		-
	SBI Current A/C - Fee Collect	1,11,110	41,13,782
	SBI Current A/c- Vithura	43,765	44,414
	SBI Current A/c	73,34,140	42,19,290
	IDBI Bank LTD (current A/C 03766)	4,07,546	4,00,491
	Deposits (MOD) with SBI-639 Vithura	20,54,000	
	Deposits (MOD) with SBI-720 Vithura	45,04,000	
	Deposits (MOD) with SBI Sreekariyam	6,53,00,000	
	Term Deposits with Canara Bank	19,34,98,580	51,07,86,281
	Term Deposits with Canara Bank - LC	29,86,48,471	22,44,20,914
	Term Deposits with SBI	42,69,48,772	40,20,49,636
	Term Deposits with SBI- Vithura SB A/c	55,04,73,550	62,74,64,055
	Term Deposit with ICICI	3,53,14,217	
	Term Deposit with IDBI	14,25,000	14,25,000
	Canara Bank - SB A/c	3,05,69,976	49,89,287
	SBI Vithura SB A/C	4,13,35,720	7,34,28,795
	SBI - SB A/c	7,87,67,736	4,92,09,334

SUB SCH No.	PARTICULARS	2024-25	2023-24
	Project Balance -Growth Fund Term Deposit	4,51,38,432	4,46,98,731
	Project Balance -Term Deposits for Frontier Symposium		3,43,17,851
	Project Balance -Conference Account	55,45,922	61,79,480
	Project Balance -Term Deposit with Canara Bank-SPF	62,00,000	
	Project Balance -Term Deposit with Canara Bank for LC	10,00,000	
	Project Balance -Canara Bank Term Deposit	-	6,45,630
	Project Balance -Canara Bank SB A/c (94002)	64,54,364	65,47,106
	Project Balance - Canara Bank SB Account Vithura	7,10,08,198	11,29,09,716
	Project Balance - Canara Bank Growth Fund	2,82,12,349	1,80,86,717
	Project Balance -SBI	24,31,847	
	Project Balance -IDBI Bank Various A/c's	4,45,10,619	4,49,37,447
		1,95,56,33,047	2,17,08,94,074
3	Stock		
	Stores and Spares		
	Stores and Spares		
	Stationery	2,32,986	3,26,060
		2,32,986	3,26,060
4	Prepayments		
	Vehicle Insurance	20,940	6,83,017
	Transit Insurance		22,473
	Office/Contingency Expense		75,417
	Telephone and Internet Charges	28,16,659	28,16,659
	E-Journal	1,50,19,958	3,77,21,271
		1,78,57,557	4,13,18,837
5	Deposits and Advances		
	Gas Connection Deposit	47,377	47,377
	KSEB Deposit	88,32,780	88,32,780
	Advance to CPWD	8,24,07,024	5,49,42,024
	Advance to CPWD-IRG	28,00,00,000	12,00,00,000
	Advance for Plant and Machinery	-	22,71,451
	Advances for Mobilisation	-	6,40,93,878
	Advance - Capital	9,00,000	9,00,000
	Advance- Recurring	-	-
		37,21,87,181	25,10,87,510
6	Interest Accrued		

SUB SCH No.	PARTICULARS	2024-25	2023-24
	Interest from Flexi /Fixed Deposit with Canara Bank	84,25,819	23,91,636
	Interest from Term Deposit with Canara Bank for LC	61,26,747	3,85,755
	Interest from Term Deposit with SBI	4,61,63,574	5,81,03,467
		6,07,16,140	6,08,80,858
7	Claims Receivable		
	Temporary Advance		
	ADITHYA J	65,000	50,000
	GAYATHRI BINU	6,50,000	
	DR. HEMA SOMANATHAN	25,000	
	ASHINRAJ D	75,000	
	SO URADIP PAUL		1,20,000
	AMAMAH FARZUN FARNAZ		1,50,000
	Dr MADHU THALAKULAM		24,000
	ANNABEL BENNY	60,000	-
	Dr POO NAM THAKUR	2,17,000	-
	DR JERRY FERERIO		2,65,000
	M/s Zeba Lab Systems Pvt Ltd		
	Cumulative Professional Development Advance		
	DR.NON GMATHEM SADANANDA SINGH		13,000
	DR.N.SADANANDA SINGH	35,000	14,000
	DR.SUDARSHAN KUMAR K	30,000	30,000
	DR.ASHUTOSH PANDEY	1,00,000	
	DR.BINDUSAR SAHOO		44,120
	DR.SUDARSHAN KUMAR K		2,40,000
	DR.MANOJ.A.G.NAMBOOTHIRI	1,46,592	1,40,000
	DR.RAMESH RASAPPAN	1,50,000	
	DR.K M SURESHAN	1,00,000	
	DR.M SUHESH KUMAR SINGH	30,000	
	DRVIJI Z THOMAS		100,000
	DR.BASUDEV SAHOO		65,000
	DR TAPAS KUMAR MANNA		30,000
	TA / LTC Advance		
	Dr THURAVIAM P	80,000	
	MRVIJESH K		11,000
	R.SUHESH KUMAR SINGH		2,00,000

SUB SCH No.	PARTICULARS	2024-25	2023-24
	PRADEEP KUMAR G T		50,000
	DR SUBRATA KUNDU	20,000	30,000
	DR.SAIKAT CHATTERJEE		100,000
	DR SUKENDU MANDAL		100,000
	DR. S GOKUL NATH		25,000
	Secured Advance		
	Secured Advances for construction	4,91,842	4,91,842
	M/s CCC Ltd		5,11,77,978
	M/s RDS PROJECT LTD	45,41,065	45,41,065
	Other Receivable		
	Receivable From CPWD	1,97,927	1,97,927
	Receivable From Durolac	1,019	1,019
	Receivable From DST INSPIRE SCHEME-1817	23,40,782	
	Receivable From JAC-IISER PUNE	20,64,606	19,95,012
	Account with Project		
	Receivable From Jaspin Jacob	15,03,840	15,03,840
	Receivable From MSc Programmes	-	
	Receivable From IDBI Project A/C By Institute	1,77,851	13,07,452
	Receivable From STUDENTS FRIENDSHIP FUND	56,654	2,03,670
	Receivable From STUDENTS	1,22,110	
	Receivable From STUDENTS AFFAIRS COUNCIL	2,27,294	
	Receivable From Cultural Club	9,444	
	Receivable From TSI	6,850	6,850
	Receivable From Arvesha Club		4,27,000
	Receivable From IGEM	4,63,449	
	Receivable From CONFERENCE-CB VITHURA	19,98,148	
	Receivable from PPF- DR Sukhendu Mandal	1,304	
	Receivable from GPF to Canara Bank Project Account	640	
	Receivable from DBT -PR39693 to SERB-CRG-DR HEMA	19,432	
	Receivable from BIBIN	13,548	
	Receivable from DST-WOS-DR SHYAMALA TO PPF	10,749	
	ACCOUNT WITH PROJECT (RECEIVABLE FROM DR DEBASH- IS)	1,21,967	
	ACCOUNT WITH PROJECT (INSPIRE- DR CHANDRAKALA)		4,66,199
	A/C WITH INSTITUTE (REC. FROM INSTITUTE TO CB VITHURA)	2,98,123	42,63,607

SUB SCH No.	PARTICULARS	2024-25	2023-24
	A/C WITH PROJECT (RECEIVABLE FROM CSIR-DR VEERA REDDY)		4,99,411
	ACCOUNT WITH INSTITUTE	72,748	93,676
	A/C WITH INSTITUTE (RECE. FROM INSTITUTE IDBI)	2,95,319	1,23,680
	A/C WITH INSTITUTE (RECE. FROM INSTITUTE CB VITHU-RA)	2,03,783	2,72,982
	A/C WITH CONFERENCE (RECEIVABLE FROM CB VITHU-RA)	12,770	
	LOAN FROM GPF TO SOC- SUKHENDU MANDAL	75,000	
	RECEIVABLE FROM ANJI BIOSCIENCES		5,546
	RECEIVABLE FROM IIT INDORE		5,064
	RECEIVABLE FROM DR GEORGE THOMAS		5,355
	Account with Project		4,53,462
	NCM Workshop		3,552
	Receivable From PSIT FUND	9,158	
		1,71,21,014	6,98,47,309
8	Other Current Asset		
	TAX COLLECTED AT SOURCE	7,984	-
	ELECTRONIC CREDIT LEDGER (GST)	52,56,622	28,46,372
	TAX DEDUCTED AT SOURCE	3,39,653	5,79,630
		56,04,259	34,26,002
9	Debit Balances of Project		
	CSIR- DR.TAPAS K MANNA-37(1688)/17-EMR-II	79,121	80,412
	ISRO-DR K M SURESHAN-ISRO/RES/3/861/20-21	2,71,129	2,71,617
	SERB-SPR/2020/000427-DR NISHANT K T	2,21,119	2,05,390
	DBT-DR.ULLASA-BT/PR27535/2018	2,41,790	2,53,062
	DST-INSPIRE FACULTY-DR.S.GO KULNATH-FA12-CH-74	1,07,172	1,07,172
	CSIR-DR SUKHENDU MANDAL-01(3024)/21/EMR-II	69,243	40,779
	DBT-DR RAJENDRA KURAPATI-BT/PR48101/BCE/8/1808/2023	3,17,509	1,28,475
	DBT-DR STALIN RAJ-EU-INF/15/RV/19-20	4,25,192	4,27,586
	MoE-DR DEBASHIS SAHA-MoE-STAR/STAR-2/2023-0809	1,20,190	23,612
	DST-INSPIRE FACULTY AWARD-DR CHANDRAKALA MEENA		4,81,186
	SERB-IPA-DR RAJEEV N KINI-2020/000021		2,48,546
	SERB-DR.SUMIT MO HANTY/MTR/2017/000458		11,825
	CSIR-DR VEERA REDDY YATHAM-02/0466/23/EMR-II		4,23,652

SUB SCH No.	PARTICULARS	2024-25	2023-24
	DBT-DR HEMAS OMANATHAN-BT/PR39693/FCB/125/96/2020		50,000
	DBT-DR TAPAS KUMAR MANNA-NEW		3,00,376
	DST-INSPIRE FACULTY -DR ANAND NARAYANA SARMA		98,232
	DST-INSPIRE FACULTY-DR MATHEW ARUN THOMAS		10,741
	SERB-DR M M SHAIJUMON-CRG/2021/006246		58,945
	SERB-DR POO NAM THAKUR-SRG/2021/000981		1,04,707
	CSIR-DR BASUDEV SAHOO-02/04-80/23/EMR-II	59,211	
	DBT-DR N SADANADA SINGH-BT/PR46677/AAQ/1/960/2022	2,25,784	
	DBT-DR NISHANT K T-BT/PR41371/BRB/10/1958/2020	4,36,100	
	DBT-DR SUHESH KUMAR SINGH-BT/PR50627/MED/32/993/2023	46,866	
	DST-DR M M SHAIJUMON-DST/TMD/IC-MAP/2K20/01	3,98,108	
	DST-DR MANOJ A G NAMBO OTHIRY-DST/TMD/IC-MAP/2K20/03	1,79,006	
	DST-INSPIRE FACULTY-DR SHABNAM IYYANI	2,35,877	
	ICMR-DR KARTHIK CHANDIRAN-12015/02/2023-HR	1,319	
	M _o E-DR RAVI PANT-M _o E-STARS /STARS-2/2023-0415	3,252	
	SERB-DR K GEORGE THOMAS-SB/S2/JCB-64/2013	6,34,287	
	SERB-DR NAGAI AH CHAMAKURI-CRG/2022/006421	65,201	
	SERB-DR NISHA N KANNAN-EEQ/2022/001034	62,632	
	SERB-DR RAMARAJ AYAPPAN-CRG/2023/001701	82,952	
	SERB-DR SHEETAL DHARMATTI-CRG/2021/008278	2,49,147	
	SERB-DR TAPAS KUMAR MANNA-EMR/2016/001562	640	
		45,32,847	33,26,315
10	Debit Balances of SPONSORED FELLOWSHIPS AND SCHOLARSHIPS		
	DST - INSPIRE - BS-MS/ PHD	28,23,826	-
		28,23,826	-
		2,43,67,08,857	2,60,11,06,965

OPINION OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA ON THE ACCOUNTS OF INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM FOR THE YEAR ENDED 31 MARCH 2025.

Opinion

We have audited the financial statements of Indian Institute of Science Education and Research (IISER), Thiruvananthapuram, which comprise the statement of financial position as at 31 March 2025 and Income & Expenditure Account for the year then ended, and notes to the financial statements, including a summary of significant accounting policies under Section 19(2) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with Section 22 of the The National Institutes of Technology, Science Education and Research Act, 2007.

This Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards, disclosure norms, etc. Audit observations on financial transactions regarding compliance with the Law, Rules and Regulations (Propriety & Regularity) and efficiency cum performance aspects, etc., if any, are reported through inspection reports/ CAG's audit reports separately.

In our opinion, the accompanying financial statements of Indian Institute of Science Education and Research, Thiruvananthapuram, read together with the accounting policies and Notes thereon and other matters mentioned in the Separate Audit Report, which follows, **give a true and fair view** of the financial position of the autonomous body as at March 31, 2025, and (of) its financial performance and its cash flows for the year then ended in accordance with uniform format of accounts/accounting standards generally accepted in India.

Basis for Opinion

We conducted our audit in accordance with CAG's auditing regulations/standards/manuals/guidelines/guidance-notes/orders/circulars etc. Our responsibilities are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the autonomous body in accordance with ethical requirements that are relevant to our audit of the financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management for the Financial Statements

The Board of Governors of IISER, Thiruvananthapuram is responsible for the preparation and fair presentation of the financial statements in accordance with Uniform Format of account/accounting standards generally accepted in India, and for internal control as management determines it necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion in accordance with CAG's auditing regulations /standards/ manuals/ guidelines/guidance-notes/ orders/ circulars etc.

For and on behalf of the CAG of India

Director General of Audit (Central), Chennai

Place: Chennai

Date: 14 November 2025

SEPARATE AUDIT REPORT ON THE ACCOUNTS OF INDIAN INSTITUTE OF SCIENCE, EDUCATION AND RESEARCH, THIRUVANANTHAPURAM

A. BALANCE SHEET

A.1 Sources of Funds

A.1.1 Unspent Grants/Subsidies (Schedule -3C) - ₹37.8 crore.

The Formats of Financial Statements for Central Higher Educational Institutions has stipulated that Government grants for meeting Revenue Expenditure are treated, to the extent utilized, as income of the year in which they are realized. When the revenue expenditure is more than the Revenue grants available, it is presumed that this excess expenditure is met out of internally generated resources.

The Revenue Grant received by the Institute during the year 2024-25 was 100.67 crore. But in the Income & Expenditure Account, Income from Grants & Subsidies is shown as 105.96 crore by diverting capital grant of ₹5.29 crore. This has resulted in overstatement of Income and corresponding understatement of Schedule-3C Unspent Grant by ₹5.29 crore. Consequently, Corpus/Capital Fund was overstated by the same amount.

B. INCOME & EXPENDITURE ACCOUNT

B.I Expenditure

B.I.I Schedule 19 Repairs & Maintenance - ₹9.9 crore.

This includes expenditure of ₹2.53 crore incurred on constructions, electrical fittings, furniture & fixtures which have been incorrectly classified as revenue expenditure. This has resulted in overstatement of Repair and Maintenance Expenses by 2.53 crore and understatement of Fixed Assets and Depreciation by ₹2.45 crore and ₹8.16 lakh.

C. GENERAL

C.1 Schedule -8-Loans, Advances & Deposits - ₹48.08 crore

The institute had shown an amount of ₹36.24 crore as Advances to CPWD under Schedule-8 Loans, Advances & Deposits. However, as per the Form-65 for the month of March 2025 issued by CPWD, the outstanding balance remaining as deposit with CPWD as on 31 March 2025 is 5.75 crore. This needs to be reconciled.

D. MANAGEMENT LETTER

Deficiencies which have not been included in this Separate Audit Report have been brought to the notice of the Management through a Management Letter issued separately for remedial/corrective action.

E. ASSESSMENT OF INTERNAL CONTROLS

I. Adequacy of Internal Control System

There is delegation of powers amongst the management. The institute has a recruitment policy and rules. Board of Governors is in place in the institution. In view of the above and also in view of the existence of a system for preparation of bank reconciliation statements and other internal control safe guards, the internal control system of the IISER, Thiruvananthapuram may be considered adequate and commensurate with the size of the institution.

II. Adequacy of Internal Audit System

A Chartered Accountant firm has been engaged to do audit of selected transactions. Apart from this an internal audit function with clear mandates and independence is not established.

III. System of Physical verification of Fixed Assets

Physical verification of fixed assets has been conducted up to the year 2024-25.

IV. System of Physical Verification of Inventory

Physical verification of inventory has been conducted up to the year 2024-25.

V. Regularity in Payment of Statutory Dues

No irregularity was noticed in paying statutory dues.

F. GRANT-IN-AID

IISER, TVPM received a grant in aid of ₹ 142.67 crore during the year. The unspent grant carried forward from the previous year was ₹ 33.59 crore. From the total available grant of ₹ 176.26 crore, IISER utilised ₹ 133.16 crore leaving a balance of ₹ 43.09 crore as unutilized grant as on 31st March 2025.

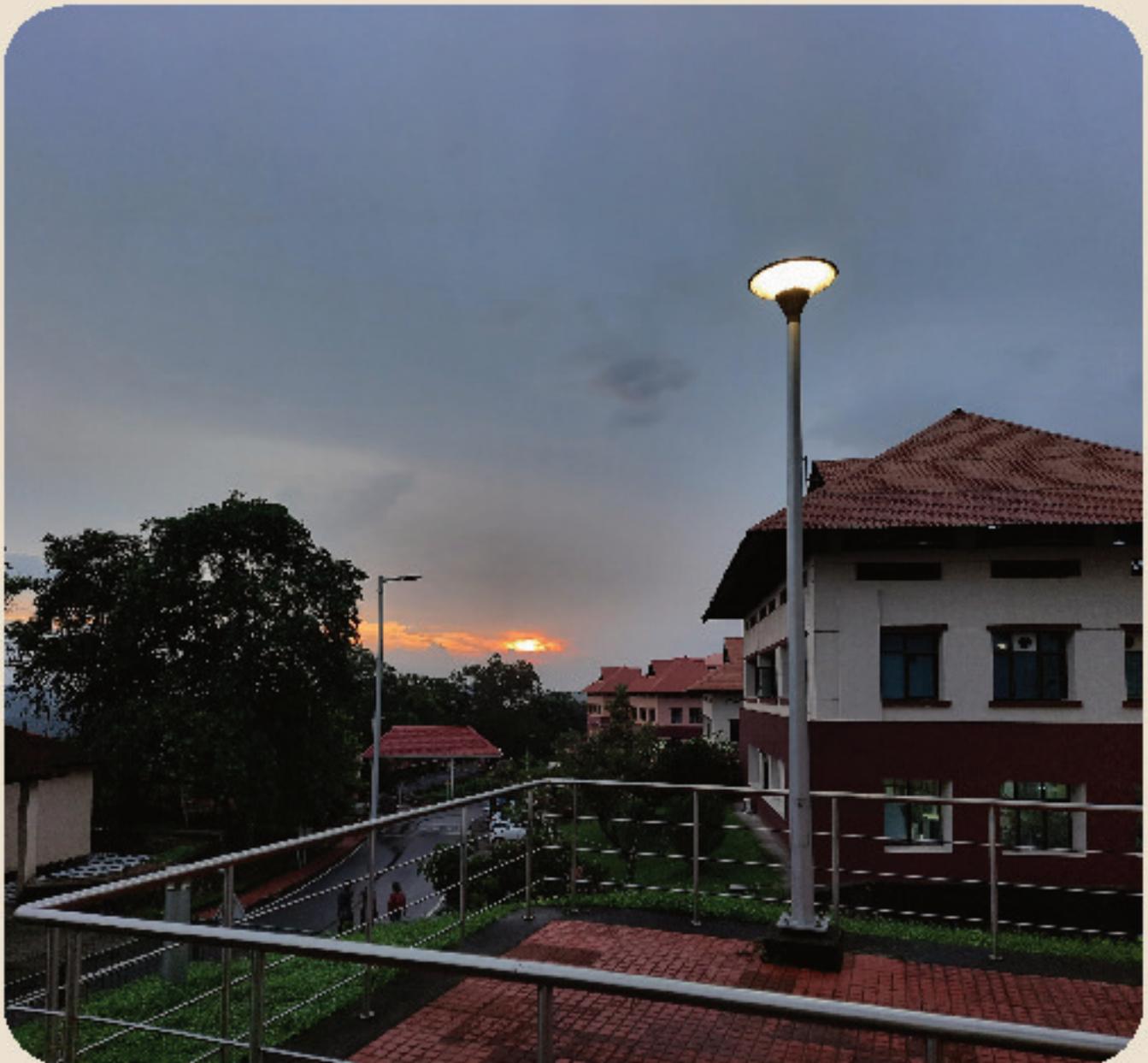


Photo: Shyam M. Alumnus Batch '19, IISERTVM

Institute map 2024-2025 | IISER Thiruvananthapuram



- 1 Campus Entrance
- 2 Visitors' Forest Retreat (VFR)
- 3 Students' Library
- 4 ATM
- 5 Restaurant
- 6 Bus Stop
- 7 Central Dining Hall
- 8 Student Lounge and Cafe
- 9 Physical Sciences Block
- 10 Chemical Sciences Block
- 11 Biological Sciences Block
- 12 School of Earth, Environmental and Sustainability Sciences (SEESS)
- 13 Mathematics Sciences Block
- 14 Shopping Center
- 15 Animal House Block
- 16 Lecture Hall Complex
- 17 Crucible (Student Activity Centre)
- 18 Students' Hostel area
- 19 Medical Center
- 20 Playground Area
- 21 Administrative complex

Map Illustration: Sliyam M
 (Batch '19, IISER Thiruvananthapuram)
 s.m.designs.business@gmail.com



**Indian Institute of Science Education and Research
Thiruvananthapuram**

Maruthamala P. O, Vithura, Thiruvananthapuram, Kerala, India - 695551

T: 0471-2778009, 8044, 8028

www.iisertvm.ac.in

