

Viji Z. Thomas

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

Personal Data

CITIZENSHIP: Republic of India E-MAIL: vthomas@iisertvm.ac.in
SEX: Male viji.z.thomas@gmail.com
PHONE: +91-9744041060 WEBSITE: <http://www.iisertvm.ac.in/faculties/vthomas.php>

Education

JULY 2010 Ph.D. in MATHEMATICS, **Binghamton University**, State University of New York
Advisors: Luise-Charlotte Kappe and Fernando Guzman
Title: *On the nonabelian tensor product and some generalizations.*

MAY 2005 M.S. in MATHEMATICS, **Wichita State University**, Wichita, Kansas.

MAY 2000 B.E. in ELECTRICAL ENGINEERING, **Maharaja Sayajirao University**, Vadodara, India.

Positions

JUL 2013 – PRESENT *Assistant Professor*, School of Mathematics, IISER TVM.
OCT 2012 – JUL 2013 *Visiting Scientist*, Kerala School of Mathematics, Kozhikode.
SEP 2010 – SEP 2012 *Postdoctoral Fellow*, Tata Institute of Fundamental Research, Mumbai.

Research Interests

- Group Theory, Homological and Commutative Algebra

Teaching Experience

JUL 2013 - PRESENT *Assistant Professor*, School of Mathematics, IISER TVM
Graduate Courses: Algebra 1, Galois theory, Complex Analysis, Representation theory of finite groups, Algebraic Number theory, Commutative Algebra.
Undergraduate Courses: Number Theory and Cryptography, Multivariable Calculus.

2005 – 2009 *Teaching Assistant*, Binghamton University, SUNY
Courses taught as the instructor of record: Calculus I, Calculus II, Calculus III, Linear Algebra, Complex Analysis.
Courses taught as a teaching assistant: Calculus I, Mathematics in Action (General Education course)

2003 – 2005 *Teaching Assistant*, Wichita State University
Courses taught as the instructor of record: College Algebra, Intermediate Algebra.

Publications

5. *The second stable homotopy group of the Eilenberg-MacLane space*, with Ammu Antony, Guram Donadze and Vishnu Prasad, *Math. Z.* **287** (2017), 1327-1342.
4. *On some closure properties of the nonabelian tensor product.*, with Guram Donadze and Manuel Ladra, *J. Algebra*, **472** (2017), 399-413.
3. *Bazzoni-Glaz Conjecture*, with G. Donadze, *J. Algebra*, **420** (2014), 141-160.
2. *Two generalizations of the nonabelian tensor product*, with M. Ladra, *J. Algebra*, **369** (2012), 96-113.
1. *The nonabelian tensor product of finite groups is finite: A homology free proof*, in *Glasgow Math. J.*, **52** (2010), 473-477.

Work in Progress

2. *On the Exponent Conjecture of Schur*, in preparation.

1. *On a Conjecture of Kabbaj et. al.*, in preparation.

Awards / Grants

2017 – 2020	Member of the Indian Team for the DST-RFBR Indo-Russian Project INT/RUS/RSF/P-2	3900000 INR (\$ 58353)
2016 Dec 13 – Dec 23	<i>GIAN</i> (Global Initiative of Academic Networks) workshop on Class Field Theory International Expert: Prof. Adrian Vasiu http://www.gian.iitkgp.ac.in/ Government of India approved the <i>GIAN</i> Program aimed at the global pool of scientists and entrepreneurs to encourage their engagement with institutes of Higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence.	800000 INR (\$ 12000)
	1-Month <i>AFS</i> (Annual Foundation Schools) by the National Centre for Mathematics The Annual Foundation Schools are aimed at first and second year Ph.D. students. The basic subjects of Algebra, Analysis, and Topology are spread over <i>AFS</i> -I, II and III. A total of 9 subjects are covered.	
2016 Dec 05 – Dec 31	<i>AFS</i> -I (https://www.atmschools.org/2016/afs/afs-i/tvm/speakers-and-syllabus)	1131850 INR (\$ 16932)
Jun 20 – Jul 16	<i>AFS</i> -III (https://www.atmschools.org/2016/afs/afsiiii/tvm/speakers-and-syllabus)	1126450 INR (\$ 16851)
2015 May 10 – Jun 06	<i>AFS</i> -II (https://www.atmschools.org/2015/afs/afs-ii/iiser/speakers-and-syllabus)	1031100 INR (\$ 15425)
2015 May 22 – May 24	SERB Travel Grant ITS/0628/2015-16	130000 INR (\$ 1945)

Advising

Ph.D. Students

2015 – PRESENT Ammu Elizabeth Antony

Master Thesis

2017 – 2018	Ajsal Shereef	<i>AKS Primality Testing and Elliptic Curve Cryptography</i>
2016 – 2017	Muhammad Rashad E. K.	<i>Nagata Idealization and Prime Ideal Principle.</i>
2015 – 2016	D. Arun Chaithanya	<i>Dirichlet's Theorem on Infinitely Many Primes in Arithmetic Progression.</i>
	Meenakshy Jyothis	<i>Multilinear Algebra and its Applications.</i>
	Sreejith M. M.	<i>The Prime Number Theorem.</i>
	Vishnu Prasad	<i>On p-groups with emphasis on Special and Extra-special p-groups.</i>
2014 – 2015	Sandeep E. M.	<i>Non-abelian tensor product and Schur multiplier.</i>

Visiting Positions

- Was offered a Visiting Assistant Professor position at Pennsylvania State University, Altoona Campus, USA for the year 2017-2018.
- Was offered a Visiting Assistant Professor position at Adelphi University, New York to take lead for their new International program for the year 2017-2018.
- Awarded the *PEIN* Grant, Government of Spain to carry out research at University of Santiago de Compostela.

Service/Membership

- Member of the National Center for Mathematics(NCM) Programme Committee for AFS.
- Member of the Research Committee for Kerala School of Mathematics(KSOM), Calicut.
- Member of the Board of Studies for Mar Ivanios College, Thiruvananthapuram.
- Reviewer for Mathematical Reviews, MathSciNet Reviewer Number: 129456
- Senate Member of IISER TVM.
- Serving as Hostel Warden for past 1.5 years.

Presentations and Seminars

Chaired Sessions

2. The **Zassenhaus Conference**, Binghamton University, USA, May 22–24, 2015.
1. *Group Theory II* Session, The **116th Annual AMS / MAA Meeting**, San Francisco, CA, January 13–16, 2010.

Invited Conference Presentations

13. *The Bazzoni-Glaz Conjecture*, CAAG, IISER Pune, India, Dec 5-8, 2017.
12. *The second stable homotopy group of the Eilenberg-Maclane Space and Schur Multiplier*, Zassenhaus Conference, Binghamton University, USA, May 26-28, 2017.
11. *Closure Properties of the Nonabelian tensor Product of Groups*, The *Zassenhaus Conference*, Adelphi University, USA, June 10–12, 2016.
10. *The second stable homotopy group of the Eilenberg-Maclane space*, International Conference on Topology and Groups, Goa University, October 16–21, 2015.
9. *The second stable homotopy group of the Eilenberg-Maclane space*, The *Zassenhaus Conference*, Binghamton University, USA, May 22–24, 2015.
8. The *Workshop on Schur Multipliers and related topics*, HRI, Allahabad, India, March 1–8, 2014. (Set of 4 Lectures)
7. *The Nonabelian Tensor Product and the Box-Tensor Product of Groups*, Groups, Actions and Computation Workshop cum Conference, HRI, Allahabad, India, September 1–12, 2010.
6. *A General Construction for the box-tensor product*, The 30th Ohio State University Mathematics Conference, Columbus, Ohio, May 21–23, 2010
5. The 116th Annual AMS / MAA meeting, San Francisco, CA, January 13–16, 2010.
4. *Free Products and the Box-Tensor Product of Groups: a Commutator Connection*, Second Annual Graduate Conference in Algebra and Topology, Binghamton University, Binghamton, NY, November 14–15, 2009.
3. *Cantor's Diagonalization Revisited: Constructing Transcendental Numbers*, Fall meeting, MAA Seaway Section, Fredonia, NY, October 23–24, 2009.
2. *The Box-Tensor Product, a Generalization of the Nonabelian Tensor Product of Groups*.
 - Groups St. Andrews Conference, University of Bath, Bath, England, August 2009.

- Zassenhaus Group Theory Conference, Franklin and Marshall College, Lancaster, Pennsylvania, May 2009.
- 1. *The nonabelian tensor product of finite groups is finite: A homology free proof.*
 - Graduate Research Conference in Algebra and Representation Theory, Kansas State University, Manhattan, Kansas, May 2009.
 - 34th Annual New York State Regional Mathematics Conference, Syracuse University, Syracuse, New York, March 2008.
 - Zassenhaus Group Theory Conference, Ohio State University, Columbus, Ohio, May 2008.

Seminar Presentations

15. Department Seminar at Lafayette College, Easton, PA, May 24, 2017.
14. Department Seminar at Penn State Altoona, April 28, 2017.
13. Colloquium talk at Indian Institute of Technology(IIT), Bombay, October 26, 2016.
12. *Bazzoni-Glaz Conjecture.*
 - Seminar at ISI Kolkata, September 12, 2013.
 - Algebra Seminar at SUNY-Binghamton, Binghamton, April 17, 2012.
11. A set of two lectures on *Gaussian rings and Prüfer domains*, Seminar at Indian Institute of Technology, Bombay, September 29 – October 3, 2011.
10. *A journey from Gauss's lemma to Prüfer domains to Gaussian rings*, Colloquium at Indian Statistical Institute, Bangalore, August 18, 2011.
9. *The nonabelian tensor product and the box-tensor product of groups*, Colloquium at TIFR, Mumbai, October 14, 2010.
8. *The Weak Dimensions of Gaussian Rings*, Algebra and Number Theory Seminar, Binghamton University, February 2010.
7. *Cantor's Diagonalization Revisited: Constructing Transcendental Numbers*, Undergraduate Seminar, Binghamton University, November 2009.
6. *Automorphisms of direct products of finite groups*, Algebra Seminar, Binghamton University, September 2009.
5. *Lecture Series in the Mathematical Sciences*, Wichita State University, Wichita, Kansas, May 2009.
4. *A universal construction for the nonabelian tensor product and some applications*, Algebra Seminar, Binghamton University, September 2008.
3. *Computing nonabelian tensor squares of polycyclic groups*, Algebra Seminar, Binghamton University, September 2008.
2. *The nonabelian tensor product of finite groups is finite: A homology free proof*, Algebra Seminar, Binghamton University, February 2008.
1. *An introduction to nonabelian tensor products*, Algebra Seminar, Binghamton University, October 2007.

Research Visits

4. University of Santiago de Compostela, Spain, November 25 – Dec 25, 2015.
3. University of Santiago de Compostela, Spain, May 7 – June 10, 2012.
2. Indian Statistical Institute, Bangalore, India, Aug 10 – Sept 10, 2011.
1. University of Santiago de Compostela, Spain, April 18 – May 18, 2011.

Languages

- English, Hindi, Malayalam and Gujarati.

Computer Skills

- \LaTeX , GAP.

References

- Prof. Luise-Charlotte Kappe
Department of Mathematical Sciences
Binghamton University
Binghamton, NY 13902-6000
menger@math.binghamton.edu
Cell Phone: 607 222 4843.
- Prof. Manuel Ladra
Department of Mathematics
University of Santiago de Compostela
Spain
manuel.ladra@usc.es
Phone: +34 881813138
- Prof. Adrian Vasiu
Department of Mathematical Sciences
Binghamton University
Binghamton, NY 13902-6000
adrian@math.binghamton.edu
Office Phone: 607-777-6036.
- Prof. Marcin Mazur
Department of Mathematical Sciences
Binghamton University
Binghamton, NY 13902-6000
mazur@math.binghamton.edu
Office Phone: 607-777-6540.