Vivek Tewary

Curriculum Vitae

Contact

Present Address
C332, Hostel 12
Indian Institute of Technology Bombay
Mumbai, Maharashtra 400076
Phone: +91 7045 008 501
Email: vivekt@iitb.ac.in,
vivektewary@gmail.com
Website:vivektewary.github.io

Address of Next of Kin
Alok Tewary
Ram Niwas
Motinagar
Lucknow 226004
Contact: +91 522 269 3960

Academic Positions

Nov. 2019-* **Research Associate**
Department of Mathematics, Indian Institute of Technology Bombay
Area of Research Homogenization of Partial Differential Equations
Mentor Prof. Sivaji Ganesh Sista

Education

2011-* **Ph.D. in Mathematics** *Thesis Submitted*
expected completion by January 2020
Broad Area of Research Homogenization of Partial Differential Equations

Since 2014 Indian Institute of Technology Bombay, CPI 9.5*
Advisor Prof. Sivaji Ganesh Sista

2011-2014 Indian Institute of Technology Kanpur
Advisors Prof. Nandini Nilakantan and Prof. Sivaji Ganesh Sista

2009-2011 **M.Sc., Mathematics**, July 2011
Indian Institute of Technology Kharagpur, CGPA 8.68
Project Title Bounds on Zeros of Polynomials
Project Advisor Prof. V.K. Jain

2006-2009 **B.Sc. Mathematics**, May 2009
St. Xavier's College, Mumbai, Affiliated to University of Mumbai
Overall Percentage 84%

2003-2005 *GCE Advanced Levels, Edexcel*, August 2005
Northolt High School, Middlesex, U.K.
Overall Percentage 92.3%

Publications & Preprints

1. Sivaji Ganesh Sista & Vivek Tewary, *Bloch wave homogenization of quasiperiodic media*, preprint, arXiv:1910.12724
2. Sivaji Ganesh Sista & Vivek Tewary, *Bloch wave approach to almost periodic homogenization and approximation of effective coefficients*, preprint, arXiv:1908.07977

3. Sivaji Ganesh Sista & Vivek Tewary, *Generic Simplicity of Spectral Edges and Applications to Homogenization*, *Asymptotic Analysis*, `https://content.iospress.com/articles/asymptotic-analysis/asy191542`, preprint at arXiv:1807.00917

4. V.K. Jain & Vivek Tewary, *A refinement of Cauchy's bound for the moduli of zeros of a polynomial.*, *Bull. Math. Soc. Sci. Math. Roumanie (N.S.)* 61(109) (2018), no. 2, 173–185.

Organizational Work

4-6 January 2019 Member, Organizing Committee,
Diamond Jubilee Symposium,
Department of Mathematics,
Indian Institute of Technology Bombay.

Contributed Talks

6 September 2019 Presented a talk titled *"Simplicity of Spectral Edges and Applications to Homogenization"* at *Discussion Meeting on Multi-scale Analysis and Theory of Homogenization.*
International Centre for Theoretical Sciences, TIFR, Bengaluru.
Organizers Patrizia Donato, Editha Jose, Akambadath Nandakumaran and Daniel Onofrei.

5 January 2019 Presented a talk titled *"Simplicity of Spectral Edges and Applications to Homogenization"* at the Diamond Jubilee Symposium, Department of Mathematics, Indian Institute of Technology Bombay.

8 July 2018 Presented a talk titled *"Perturbation Theory of Bloch Eigenvalues and Applications to Homogenization"* at the 12^{th} AIMS Conference on Dynamical Systems, Differential Equations and Applications in Taipei, Taiwan, organized by the National Center for Theoretical Sciences (NCTS), Taiwan and the American Institute of Mathematical Sciences (AIMS).

Workshops/Conferences Attended

9 Dec- 28 Dec '19 Tutor, *Advanced Instructional School on Geometric Analysis.* Indian Institute of Technology Bombay, Mumbai, India. *Conveners* Profs. Bata Krishna Das, Mayukh Mukherjee.

26 Aug- 6 Sep '19 Participant, *Discussion Meeting on Multi-scale Analysis and Theory of Homogenization.* International Centre for Theoretical Sciences, TIFR, Bengaluru. *Organizers* Profs. Patrizia Donato, Editha Jose, Akambadath Nandakumaran and Daniel Onofrei.

8 July 2018 Chaired a session titled *"PDEs and Applications"* at the 12^{th} AIMS Conference on Dynamical Systems, Differential Equations and Applications in Taipei, Taiwan, organized by the National Center for Theoretical Sciences (NCTS), Taiwan and the American Institute of Mathematical Sciences (AIMS).

Feb-March 2016 Participant, *Advanced Workshop on Homogenization and Control: Theory & Application, National Programme on Differential Equations (NPDE-TCA).* Indian Institute of Technology Kanpur. *Convener* Prof. T. Muthukumar.

November 2015 Participant, *Advanced Level Workshop on Controllability Of Heat And Wave Equations, National Programme on Differential Equations (NPDE-TCA).* Indian Institute of Technology Mandi. *Convener* Prof. M. Malik.

June-July 2015 Participant, *Advanced School and Workshop on Control and Numerics for Fluid-Structure Interaction Problems.* TIFR Centre for Applicable Mathematics, Bengaluru.

December 2013	Participant, *Advanced Workshop on Homogenization, National Programme on Differential Equations (NPDE-TCA)*. Indian Institute of Space Science and Technology, Thiruvananthapuram. *Convener* Prof. N. Sabu.
June-July 2013	Participant, *Advanced Level Training Programme, National Programme on Differential Equations (NPDE-TCA)*, Department of Mathematics, Indian Institute of Science Bangalore.
May-June 2013	*Summer Internship, National Programme on Differential Equations (NPDE-TCA)*, Indian Institute of Technology Bombay. *Advisor* Prof. Sivaji Ganesh Sista.
December 2012	Participant, *Winternship, National Programme on Differential Equations (NPDE-TCA)*. Indian Institute of Technology Bombay. *Advisor* Prof. Sivaji Ganesh Sista.
July 2012	Participant, *Advanced Training in Mathematics Workshop in Riemannian Geometry.* Tata Institute of Fundamental Research Centre for Applicable Mathematics, Bengaluru. *Convener* Prof. C.S. Aravinda, Prof. H. Sheshadri.
January 2012	Participant, *Advanced Training in Mathematics Workshop in Harmonic Analysis*. Indian Institute of Technology Kanpur. *Convener* Prof. Shobha Madan, Prof. P. Mohanty.
May - June 2008	Participant, *Mathematics Training and Talent Scheme* - Level O - Mysore. Organized by National Board of Higher Mathematics.
April - May 2008	Summer Student, *Summer Student Programme in Physics.* Institute of Mathematical Sciences, Chennai. Nonlinear Dynamics: Coupled Map Lattices under Prof. Sudeshna Sinha.

Teaching Assistantship

Autumn 2015	*MA 205* Complex Analysis (IIT Bombay).
Spring 2017	*MA 108* Differential Equations (IIT Goa).
Spring 2018	*MA 106* Linear Algebra (IIT Dharwad).
Spring 2018	*MA 108* Differential Equations (IIT Dharwad).

Departmental Activities

2016-*present*	*System Administrator*: Responsible for maintaining the Departmental Website and the M.Sc. Laboratory, Department of Mathematics, IIT Bombay.
2016-*present*	*Member* Webpage Committee & Computer Lab Committee, Department of Mathematics, IIT Bombay.

References

Prof. Sivaji Ganesh Sista
Department of Mathematics
IIT Bombay
siva@math.iitb.ac.in
Phone +91 22 2576 7476

Prof. Muthusamy Vanninathan
Department of Mathematics
IIT Bombay
muthu.vanni@gmail.com
Phone +91 22 2576 9468

Prof. Harsha Hutridurga
Department of Mathematics
IIT Bombay
hutri@math.iitb.ac.in
Phone +91 22 2576 9474

Prof. Nandini Nilakantan
Department of Math. & Stat.
IIT Kanpur
nandini@iitk.ac.in
Phone +91 512 259 7066

Programming Skills

Proficient in
- C and C++ programming, LaTeX

Familiar with
- Matlab, Mathematica, Java, HTML, PHP

December 9, 2019