

# Vivek Tewary

## Curriculum Vitae

### Contact

#### Present Address

C332, Hostel 12  
Indian Institute of Technology Bombay  
Mumbai, Maharashtra 400076  
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#### Address of Next of Kin

Alok Tewary  
Ram Niwas  
Motinagar  
Lucknow 226004  
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### Education

- 2011-\* **Ph.D. in Mathematics** *in progress*  
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

- Sivaji Ganesh Sista & Vivek Tewary, *Bloch wave approach to almost periodic homogenization and approximation of effective coefficients*, preprint, arXiv:1908.07977
- Sivaji Ganesh Sista & Vivek Tewary, *Generic Simplicity of Spectral Edges and Applications to Homogenization, Asymptotic Analysis*, in press, preprint at arXiv:1807.00917

### Academic Activities (in reverse chronological order)

- 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.
- 26 Aug- 6 Sep '19 Participant, *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 “ <i>Simplicity of Spectral Edges and Applications to Homogenization</i> ” at the Diamond Jubilee Symposium, Department of Mathematics, Indian Institute of Technology Bombay.
4-6 January 2019	Member, Organizing Committee, Diamond Jubilee Symposium, Department of Mathematics, Indian Institute of Technology Bombay.
5-9 July 2018	Presented a talk titled “ <i>Perturbation Theory of Bloch Eigenvalues and Applications to Homogenization</i> ” at the 12 <sup>th</sup> 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).
8 July 2018	Chaired a session titled “ <i>PDEs and Applications</i> ” at the 12 <sup>th</sup> 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, <i>Advanced Workshop on Homogenization and Control: Theory &amp; Application, National Programme on Differential Equations (NPDE-TCA)</i> . Indian Institute of Technology Kanpur. Convener Prof. T. Muthukumar.
November 2015	Participant, <i>Advanced Level Workshop on Controllability Of Heat And Wave Equations, National Programme on Differential Equations (NPDE-TCA)</i> . Indian Institute of Technology Mandi. Convener Prof. M. Malik.
June-July 2015	Participant, <i>Advanced School and Workshop on Control and Numerics for Fluid-Structure Interaction Problems</i> . TIFR Centre for Applicable Mathematics, Bengaluru.
December 2013	Participant, <i>Advanced Workshop on Homogenization, National Programme on Differential Equations (NPDE-TCA)</i> . Indian Institute of Space Science and Technology, Thiruvananthapuram. Convener Prof. N. Sabu.
June-July 2013	Participant, <i>Advanced Level Training Programme, National Programme on Differential Equations (NPDE-TCA)</i> , Department of Mathematics, Indian Institute of Science Bangalore.
May-June 2013	<i>Summer Internship, National Programme on Differential Equations (NPDE-TCA)</i> , Indian Institute of Technology Bombay. Advisor Prof. Sivaji Ganesh Sista.
December 2012	Participant, <i>Winternship, National Programme on Differential Equations (NPDE-TCA)</i> . Indian Institute of Technology Bombay. Advisor Prof. Sivaji Ganesh Sista.
July 2012	Participant, <i>Advanced Training in Mathematics Workshop in Riemannian Geometry</i> . Tata Institute of Fundamental Research Centre for Applicable Mathematics, Bengaluru. Convener Prof. C.S. Aravinda, Prof. H. Sheshadri.
January 2012	Participant, <i>Advanced Training in Mathematics Workshop in Harmonic Analysis</i> . Indian Institute of Technology Kanpur. Convener Prof. Shobha Madan, Prof. P. Mohanty.
May - June 2008	Participant, <i>Mathematics Training and Talent Scheme - Level O - Mysore</i> . 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  
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Prof. Harsha Hutridurga  
Department of Mathematics  
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Prof. Nandini Nilakantan  
Department of Math. & Stat.  
IIT Kanpur

*nandini@iitk.ac.in*  
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## Programming Skills

Proficient in  
- C and C++ programming,  $\text{\LaTeX}$

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

October 7, 2019