

REKHA SANTHANAM

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Research Interests

I am interested in stable homotopy theory and its connections to algebraic K-theory and theoretical physics.

Education

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| 2001 - 2008 | Ph.D. in Mathematics
University of Illinois at Urbana-Champaign
Thesis: <i>Units of Equivariant Ring Spectra</i>
Thesis Advisor: <i>Prof. Charles Rezk</i>
Developed a framework to define units of equivariant cohomology ring theories with finite group actions. |
| 2000-2001 | National Board of Higher Mathematics (N.B.H.M.) Research Scholar
Tata Institute of Fundamental Research, Mumbai, India |
| 1998-2000 | M. Sc. in Mathematics
Indian Institute of Technology, Mumbai, India
M. Sc. Home Paper: <i>Approximate Solutions to Operator Equations</i>
Home Paper Supervisor: <i>Prof. B.V. Limaye</i>
Studied the methods of refinement and acceleration that improve the accuracy of approximate solutions to operator equations. |
| 1995-1998 | B. Sc. in Mathematics
S. I. E. S. College, University of Mumbai
Mumbai, India |

Work Experience

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| 2008 - Present | Visiting Assistant Professor
Johns Hopkins University |
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Publications

Kevin Charles Jones, Youngsoo Kim, Andrea H. Mhooon, Rekha Santhanam, Barry J. Walker, and Daniel R. Grayson, *The additivity theorem in K-theory*, *K-Theory* **32** (2004), no. 2, 181–191. MR2083580 (2005f:19003)

Rekha Santhanam, *Units of Equivariant Ring Spectra*, Oberwolfach Report (2007), Homotopy Theory, Volume 4, Issue 4, 2718-2721

Rekha Santhanam, *The units of equivariant ring spectra*, preprint, Ph.D. Thesis

Awards

Spring 2006	Bourgin Fellowship Award University of Illinois at Urbana-Champaign
2000-2001	Research Scholarship N. B. H. M., India
1998-2000	Fellowship Award N. B. H. M., India
1998	Academic Prize First in College, Ranked Third in Mumbai University, India

Talks

Spring 2009	Equivariant Γ -spaces Topology Seminar, University of California at Berkeley
Spring 2009	Defining the units of Equivariant Ring Spectra Homotopy theory and Higher Categories Special Session AMS Annual Meeting , Washington DC
Fall 2008	The space QS^0 and the plus-construction on the classifying spaces of symmetric groups Topological Langlands Seminar , Johns Hopkins University
Fall 2007	A model for units of equivariant ring spectra Topology Seminar, University of Chicago
Fall 2007	Units of Equivariant Ring Spectra Conference on Homotopy theory Mathematisches Forschungsinstitut Oberwolfach, Germany
Spring 2006	Units of Equivariant Ring Spectra Graduate Student Conference in Topology, Indiana University
Spring 2006	Descent and Hopf Algebroids Juvitop, MIT
Fall 2004	Endomorphism of Height n Formal Group Laws Seminar (RAP) on $K(2)$ -local homotopy theory University of Illinois, Urbana-Champaign
Spring 2003	Lubin-Tate Deformation Theory Seminar (RAP) on Lubin-Tate-Morava cohomology theories University of Illinois, Urbana-Champaign

Teaching Experience

Stand-alone	Math 110.113: Honors Single Variable Calculus (JHU)
	Math 118: A Mathematical World (UIUC)
	Math 225: Introductory Matrix Algebra (UIUC)
Recitation	Math 231: Calculus II (UIUC)
	Math 417: Introduction to Abstract Algebra (UIUC)
	Math 415: Linear Algebra (UIUC)
	Math 134: Calculus for Business Students (UIUC)

Academic Activities

Fall 2007	Participant, Conference on Homotopy Theory Mathematisches Forschungsinstitut Oberwolfach, Germany
Summer 2006	Co-organizer, Student Reading Seminar in Topology University of Illinois, Urbana-Champaign
Fall 2005	Co-organizer, Graduate Student Seminar in Topology and Geometry University of Illinois, Urbana-Champaign
Spring 2005	Participant, Talbot Workshop Organized by MIT topology graduate students
Fall 2004	Participant, Workshop on Forms of Homotopy Theory Fields Institute, Toronto, Canada
Fall 2003	Participant, Workshop on Topological Modular Forms Muenster, Germany
Summer 2003	Research Experience for Graduates, Supervisor: Prof. Dan Grayson University of Illinois, Urbana-Champaign
Spring 2000	Co-organizer, Indian Mathematics Olympiad Indian Institute of Technology, Mumbai, India
Summer 1997	Participant, Mathematics Training and Talent Search Workshop Sponsored by National Board for Higher Mathematics, India Indian Institute of Technology, Chennai, India