

CURRICULUM VITAE

KANEENIKA SINHA

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Research Modular Forms, Eichler-Selberg Trace Formula, Arithmetic of Modular Curves,
Uniform Distribution, Extremal Functions in Fourier Analysis,
Multiple Zeta Functions , Mahler measures

Education **Queen's University**, Kingston, ON, Canada
2002 - 2006
Ph.D. in Mathematics (June 2006)
Thesis Advisor: Professor M. Ram Murty

Queen's University, Kingston, ON, Canada
2001-2002
M.Sc in Mathematics
Thesis Advisor: Professor M. Ram Murty

Lady Shriram College, Delhi University, New Delhi, India
1997 - 2000
B.A. Honours in Mathematics

Employment Assistant Professor, IISER Kolkata,
Mohanpur, Nadia, West Bengal, India
July, 2010 - present.

Postdoctoral Fellow, Mathematical Sciences Research Institute,
Berkeley, CA, USA
January-May, 2011

Postdoctoral Fellow, Pacific Institute of Mathematical Sciences
and University of Alberta,
Edmonton, AB, Canada
July, 2008 - June, 2010.

Postdoctoral Fellow, University of Toronto,
Toronto, ON, Canada
July, 2006 - June, 2008.

Fellowships PIMS Postdoctoral Fellowship, 2008-2010, held at University of Alberta

NSERC Industrial Research Fellowship, Pre-approved candidate, 2008-2010

Arts'49 Principal Wallace Fellowship, 2004-2005, Queen's University

Graduate Student Award, 2001-2003, 2005-2006, Queen's University

Publications *Higher Mahler measure for cyclotomic polynomials and Lehmer's question*
(with Matilde Lalín)

The Ramanujan Journal, Vol. 26 No. 2 (2011), 257-294.

Factoring newparts of Jacobians of certain modular curves
(with M. Ram Murty)

Proceedings of the American Mathematical Society, Vol. 138, No. 10 (2010), 3481-3494.

Effective equidistribution of eigenvalues of Hecke operators
(with M. Ram Murty)

Journal of Number Theory, Vol. 129, No. 3 (2009), 681-714.

Multiple Hurwitz zeta functions,
(with M. Ram Murty),

Multiple Dirichlet Series, Automorphic Forms, and Analytic Number Theory,
Proceedings of Symposia in Pure Mathematics, Vol. 75 (2006), 135-156.

Average orders of certain arithmetical functions,

Journal of the Ramanujan Mathematical Society, Vol. 21, No. 3 (2006), 267-277.

Submitted *Distribution of zeta zeroes of Artin-Schreier covers*

(with Alina Bucur, Chantal David, Brooke Feigon, Matilde Lalín)

21 pages, submitted.

Theses *Effective equidistribution of eigenvalues of Hecke operators*, Ph.D Thesis
June 2006

Thesis Advisor: Professor M. Ram Murty
Queen's University, Kingston, ON, Canada

Generalized Hurwitz zeta functions M.Sc Thesis,
June 2002

Thesis Advisor: Professor M. Ram Murty
Queen's University, Kingston, ON, Canada

Supervision of students Sudhir Pujahari, PhD student, July 2011 - present.

Antareep Mandal, MS final year project student, August 2011 - May 2012.

Project title: The distribution of squarefree numbers and the Riemann hypothesis.

Amit Kumar, MS 4th Year project student, January - May 2012.

Project title: The Wiener-Ikehara theorem and applications in number theory.

Manami Roy, PBIP 1st Year project student, January - May 2012.

Project title: Application of sieve theory to the twin prime problem.

Teaching	Spring 2012, IISER Kolkata Integration and Measure, Analytic Number Theory
	Autumn 2011, IISER Kolkata Elementary Number Theory
	Autumn 2010, IISER Kolkata Elementary Number Theory
	Fall 2009, Instructor, University of Alberta Introduction to Linear Algebra and Applications
	Spring 2009, Instructor, University of Alberta Linear Algebra for Engineers
	Spring 2008, Instructor, University of Toronto Mississauga Finite Fields and Applications,
	Fall 2007, Instructor, University of Toronto Mississauga Linear Algebra
	Spring 2007, Instructor, University of Toronto Mississauga Introduction to Mathematical Proofs, Calculus,
	Fall 2006, Instructor, University of Toronto Mississauga Calculus
	Spring 2004 and Spring 2006: Instructor, Queen's University Introduction to Linear Algebra,
	Spring 2005: Instructor, Queen's University Complex Analysis for Engineers
	Fall, 2001 - Fall, 2003: Teaching Assistant, Queen's University Elementary Number Theory, Linear Algebra, Linear Algebra for Engineers, Introduction to Calculus
	Grants
Academic Service	Chairperson, Department of Mathematics and Statistics, IISER Kolkata July 2012 - present
	Coordinator of KVPY Summer Workshop at IISER Kolkata, May 22 - 26, 2012
	Coordinator of IISER Kolkata Summer Student Research Programme, 2012

May 14 - July 14, 2012

Organizer of IISER Kolkata Winter School in Mathematics (Ramanujan and the circle method)
(Sponsored by National Board of Higher Mathematics, India)
December 20 - 24, 2011

Organizer of IISER Kolkata Winter School on Number Theory,
December 13-17, 2010

Organizer of the Mathematics Seminar at IISER Kolkata, July 2010 - present.

Committee Member (June 2011 - present): Research Committee, Library Committee

Member of Senate of IISER Kolkata, November 2010-present

Reviewer for Mathematical Reviews

Referee for International Journal of Number Theory

Referee for Journal of the Ramanujan Mathematical Society

**Other
Service**

Warden of Women's Hostel, IISER Kolkata
August - September 2010 and June 2011 - present

Committee Member (August 2010 - present), Medical Committee, Canteen Committee,
Disciplinary Committee, Transport Committee at IISER Kolkata

Committee Member (April 2012 - present), Central Space Committee at IISER Kolkata.

**Invited
Conference
Talks**

December 2011, International Meeting in Number Theory,
Harish-Chandra Research Institute, Allahabad
Higher Mahler measure and a question of Lehmer

4th March 2011, MSRI Berkeley Academic Sponsors Day,
Berkeley, CA, USA
Equidistribution: A fundamental theme in number theory

January 2010, AMS 2010 Joint Mathematics Meetings,
Special Session on L-Functions and Analytic Number Theory,
San Francisco, CA, USA
Ranks of Jacobians of modular curves

December 2009, CMS Winter Meeting,
Number Theory Session,
University of Windsor
Windsor, ON, Canada
Ranks of Jacobians of modular curves

July 2009, IAS/Park City Mathematics Institute,
Research Program, Summer School on Arithmetic of L-Functions,
Park City, UT, USA

Factoring Jacobians of Certain Modular Curves

April 2009, Alberta Number Theory Day,
University of Calgary, Calgary, AB, Canada
Fourier Coefficients of Certain Cusp Forms

October 2008, Fall Western Section AMS Meeting,
West End Number Theory Session,
University of British Columbia,
Vancouver, BC, Canada
Vertical Sato-Tate Conjecture

June 2008, Second Canada-France Congress,
Analytic Number Theory Session,
Université du Québec à Montréal,
Montréal, QC, Canada
Effective Equidistribution

**Other
Invited
Talks**

January 2010, Mathematics Seminar
Indian Institute of Science, Bangalore, Bangalore, Karnataka, India
Fourier Coefficients of Modular Cusp Forms

January 2010, Institute Seminar
Indian Institute of Science Education and Research Kolkata,
Mohanpur, Nadia, West Bengal, India
Equidistribution in Number Theory

January 2010, Stat-Math Seminar
Indian Statistical Institute, Delhi, India
Effective Equidistribution and Arithmetic of Modular Curves

June, 2009, Ganita Seminar,
University of Toronto, Toronto, ON, Canada
Newparts of Jacobians of Modular Curves

March 2009, Number Theory and Combinatorics Seminar,
University of Lethbridge, Lethbridge, AB, Canada
A Trace Formula for Hecke Operators on Spaces of Newforms

February 2009, Graduate Colloquium,
University of Alberta, Edmonton, AB, Canada
Equidistribution in Number Theory

December 2008, Departmental Colloquium,
Institute of Mathematical Sciences, Chennai, Tamil Nadu, India
Distribution of Fourier Coefficients of Certain Cusp Forms

December 2008, Mathematics Seminar,
Indian Statistical Institute, Kolkata, West Bengal, India
Vertical Sato-Tate Conjecture and Applications

January 2008, Graduate Students Seminar,
University of Western Ontario, London, ON, Canada
Effective Equidistribution

August 2007, Departmental Colloquium,
University of Windsor, Windsor, ON, Canada
Effective Equidistribution

August 2007, Number Theory Seminar,
Queen's University, ON, Canada
Equidistribution and Regular Graphs

April 2007, Arithmetic Geometry Seminar,
McMaster University, Hamilton, ON, Canada
Effective Equidistribution

November 2006, Number Theory Seminar,
University of Waterloo, Waterloo, ON, Canada
Vertical Sato-Tate Conjecture

October 2006, Number Theory Seminar,
University of Toronto, Toronto, ON, Canada
Effective Equidistribution of Eigenvalues of Hecke Operators

**Contributed
Conference
Talks**

June 2003, Connecting Women in Mathematics across Canada,
Canadian Mathematical Society Summer 2003 meeting,
University of Alberta, Edmonton, AB, Canada
Generalized Hurwitz Zeta Functions

May 2002, Canadian Number Theory Association 7-th meeting,
Université de Montréal, Montréal, QC, Canada
Generalized Hurwitz Zeta Functions

May 2002, ISM 2002 Québec-Wide Graduate Student Conference,
Concordia University, Montréal, QC, Canada
Generalized Hurwitz Zeta Functions

February 2000, World Mathematical Year-2000 Inter-University Paper Presentation Contest,
Indian Institute of Technology, New Delhi, India
Won the second prize for a presentation on "*Category Theory*"

January 1999, Anupama Dua Undergraduate Mathematics Conference,
LSR College, Delhi University, New Delhi, India
Analysis in Military Decision-Making

February 1998, St. Stephen's Mathematics Festival,
St. Stephen's College, Delhi University, New Delhi, India
Fermat's Last Theorem

Personal

Date of Birth- 11 August 1980