Sarasij Maitra

Curriculum Vitae

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Research Interests

My area of research is Commutative Algebra. Most of my current research effort is directed towards :

- Berger's Conjecture dealing with the torsion of the Module of Kähler Differentials
- Multiplicity of flat couples of local rings, Hilbert-Kunz Multiplicity
- Homological methods, specifically support of local cohomology
- Studying Classes of reflexive modules over a one-dimensional local ring

Education

2016–present **PhD in Mathematics**, *University of Virginia*.
Advisor: Craig Huneke

2014–2016 **M.Math**, *Indian Statistical Institute*, Kolkata.
Completed in May, 2016

2011–2014 **B.Math**, *Indian Statistical Institute*, Bangalore.
Completed in May,2014

Experience

Projects Undertaken

August,2018-current Working on my PhD Theses under the guidance of Prof. Craig Huneke at University of Virginia.

January, 2016 – May, 2016 Project on Bargaining Games with Time-Independent and Time-Dependent Preferences under Prof. Souvik Roy of Indian Statistical Institute, Kolkata. [Project Report Link]

December, 2014 Reading Project on Hopf Algebra under Prof. Jyotishman Bhowmick of Indian Statistical Institute, Kolkata.

May, 2013 – July, 2013 Indian Academy of Sciences Summer Project on Algebraic Geometry under Prof. Kapil Hari Paranjape at Indian Institute of Science Education and Research, Mohali. [Project Report Link]

Teaching

Fall 2019 **Graduate Teaching Instructor**, *University of Virginia*.
MATH 1310-001 Calculus I (Flipped Model)

Spring 2019 **Graduate Teaching Instructor**, *University of Virginia*.
MATH 1220-009 A Survey of Calculus II

Spring 2018 **Graduate Teaching Instructor**, *University of Virginia*.
MATH 1210-008 A Survey of Calculus I

Fall 2017 **Graduate Teaching Instructor**, *University of Virginia*.
MATH 1210-007 A Survey of Calculus I

Spring 2017 **Graduate Teaching Assistant**, *University of Virginia*.
MATH 1310-100 Calculus I, MATH 3250-300 Ordinary Differential Equations

Fall 2016 **Graduate Teaching Assistant**, *University of Virginia*.
MATH 1310-500, MATH 1310-700 Calculus I

Conferences Attended

June, 2019 **Conference on Commutative Algebra and its Interaction with Algebraic Geometry In Honor of Bernd Ulrich**.
University of Notre Dame, Indiana

Apr, 2019 **Morgantown Algebra Days**.
West Virginia University, Morgantown, West Virginia

Oct, 2018 **Fall Central Sectional Meeting**.
University of Michigan, Ann Arbor, Ann Arbor, MI

Mar, 2018 **Mini Workshop**.
University of Virginia

Nov, 2017 **Workshop on Topics in Algebraic Geometry**.
University of North Carolina, Chapel Hill

Invited Talks

March, 2020 **"Berger's Conjecture from the Viewpoint of an Invariant of the Module of Differentials"–An Approach to Berger's Conjecture**.
A Zoom Session on Commutative Algebra
Organizers: Eloísa Grifo, Sean Sather-Wagstaff

Awards and Achievements

- All-University Graduate Teaching Award, University of Virginia, 2019-2020
- Graduate Research Assistantship supported by Department of Mathematics, University of Virginia for Spring 2020
- Nominated by the Department of Mathematics, University of Virginia to attend MSRI Graduate Summer School and Macaulay2 Workshop, 2019 at Notre Dame
- Graduate Research Assistant supported by Prof. Craig Huneke's NSF grant in Fall 2018
- Receiving academic support from University of Virginia since 2016
- Awarded 1^{st} Division with Distinction in M. Math
- Awarded 1^{st} Division with Distinction in B. Math
- Received INSPIRE Scholarship (SHE) from Department of Science and Technology (DST), Government of India for the period 2011–2016.
- Selected by Indian Academy of Sciences to do a summer project at Indian Institute of Science

Education and Research, Mohali in 2013.

- Selected to represent school in science camp organised by Jagadish Bose National Science Talent Search
- Ranked 11^{th} in State in the Association for Improvement of Mathematics Teaching (AIMT).
- Awarded M. P. Birla Scholarship for academic and extra-curricular excellence

Skills

Language Skills	English, Bengali, Hindi
Technologies	Workable knowledge in Macaulay 2, LaTeX, Python, R, HTML

Extra-curricular Activities

- Received Sangeet Visharad Award in Tabla in 2010.