Sarasij Maitra

Curriculum Vitae

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Education

2016–present	**PhD in Mathematics**, *University of Virginia*.
2014–2016	**M.Math**, *Indian Statistical Institute*, Kolkata.
2011–2014	**B.Math**, *Indian Statistical Institute*, Bangalore.

Papers and Preprints

- **Torsion in Differentials and Berger's Conjecture** with C. Huneke and V. Mukundan; in Research in the Mathematical Sciences
- **Traceable PRFs: Full Collusion Resistance and Active Security** with D. J. Wu; **PKC 2022**
- **RandomPoints package for Macaulay2** with S. Bisui, T. T. Nguyễn, Z. Jiang and K. Schwede (Submitted)
- **On Reflexive and I-Ulrich Modules over Curve Singularities**, with H. Dao and P. Sridhar; to appear in Transactions of the American Mathematical Society
- **Partial Trace Ideals and Berger's Conjecture** (Submitted)

Awards and Achievements

- **The Joint Mathematics Meetings 2022 Travel Grant**
- **Jefferson Scholars Foundation Research Prize, 2021.**
- **All-University Graduate Teaching Award, University of Virginia, 2019-2020**.
- (2019) Travel Grant for Mathematical Sciences Research Institute 883 Commutative Algebra and its Interaction with Algebraic Geometry.
- 1st Division with Distinction in M. Math.
- 1st Division with Distinction in B. Math.

Software

- *RandomPoints*, (Macaulay 2), with S. Bisui, T. T. Nguyễn, Z. Jiang, K. Schwede.
- *SwitchingFields*, (Macaulay 2), with Z. Jiang.

Invited Talks and Poster Presentations

March 2022	**TBD (Upcoming)**, *Special Session on Recent Developments in Commutative Algebra.* AMS Spring Central Sectional Meeting at Purdue University, West Lafayette, IN
January 2022	**On Reflexive and I-Ulrich Modules**, *AMS Special Session on Commutative Algebra*, Seattle, WA, Joint Mathematics Meetings.
April 2021	**Discussions on I-Ulrich Modules**. Virtual Commutative Algebra Seminar, Purdue University
April 2021	**An Introduction To Gröbner Bases**, *(Joint Talk with Stephanie Shand).* Graduate Seminar, University of Virginia
February 2021	**Discussions on I-Ulrich Modules**. Algebra Seminar, West Virginia University
January 2021	**Discussions on Berger's Conjecture**. Joint Mathematics Meetings
October 2020	**A Study of Colength in Dimension One**. Commutative and Homological Algebra Market Presentations (CHAMP)
June 2020	**Poster: An Approach to Berger's Conjecture**. Early Commutative Algebra Researchers (eCARs)
June 2020	**A Simple Study of Colength**. Graduate Student Seminar, New Mexico State University
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

Teaching

Fall 2021	**Graduate Teaching Instructor**, *University of Virginia.* MATH 1410-001 Financial Mathematics (Ongoing)
Fall 2020	**Graduate Teaching Instructor**, *University of Virginia.* MATH 1320-200 Calculus II (Online Flipped Model)
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

January, 2021	**Joint Mathematics Meetings**.
June, 2020	**eCARs**, Early Commutative Algebra Researchers.
April, 2020	**CAZoom - Virtually bringing together commutative algebra and related fields**.
March, 2020	**A Zoom Special Session On Commutative Algebra**.
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

Other Projects

Ongoing since Spring 2021	Reading and research projects on Traceable PRFs, Fingerprinting Codes, Attribute and Identity Based Encryptions under Prof. David J. Wu (Computer Science, University of Texas, Austin)
Jan - May, 2016	Project on *Bargaining Games with Time-Independent and Time-Dependent Preferences* under Prof. Souvik Roy of Indian Statistical Institute, Kolkata. [Project Report]
Dec, 2014	Reading Project on *Hopf Algebra* under Prof. Jyotishman Bhowmick of Indian Statistical Institute, Kolkata.
May - 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]

Skills

Language Skills	English, Bengali, Hindi
Technologies	Working knowledge of Macaulay 2, LaTeX, Python, R, HTML, MATLAB