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

- **RandomRationalPoints package for Macaulay2** (with S. Bisui, T. T. Nguyễn, K. Schwede and Z. Jiang) (submitted) (arXiv)
- **On Reflexive and I-Ulrich Modules over Curve Singularities**, with H. Dao, P. Sridhar. (submitted) (arXiv)
- **Partial Trace Ideals and Berger's Conjecture** (submitted) (arXiv)

Awards and Achievements

- **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

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

Invited Talks and Poster Presentations

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 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	Reading and Reseach Project on *Fully Homomophic Encryption and Constrained Pseudorandom Functions* under Prof. David Wu, Computer Science, 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]

Skills

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