

Anirban Bhaduri

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Education

University of South carolina
Ph.D.(Advisor: Dr.Matthew Ballard)

January, 2021 – Present
Columbia, South Carolina,U.S.A.

University of Calcutta
B.Sc.(Honours) and M.Sc. in Mathematics

August, 2014 – June, 2019
Kolkata, West Bengal, India

Research Interests

My research interest lies in the intersection of:

- Derived Categories,
- Algebraic Geometry,
- Representation Theory of finite-dimensional algebra,
- Non-Commutative Algebra.

Publications and Preprints

- **Bhaduri A., Dey S., Lank P.** *Preservation for generation along the structure morphism of coherent algebras over a scheme* **Bull. London Math. Soc., 57: 1885-1896. (2025)**
- **Bhaduri A., Goldberg I., Robotis A.A.** *Dimensions Theory of Noncommutative Curves* **Submitted.**
- **Bhaduri A., Davidov Y., Faber E., Honigs K., McDonald P., Overton-Walker C.E., Spence D.** *An Explicit Derived McKay Correspondance For Some Complex Reflection Group of Rank Two* **Accepted for Publication at Advances in Mathematics (2026).**
- **Bhaduri A., De Deyn T., Hrbek M., Lank P., Manali-Rahul K..** *Nonexistence of singly compactly generated t -structures for schemes* **Submitted.**
- Ballard M., **Bhaduri A.** *Orlov Spectra for Weighted Projective Line* **In preperation.**

Invited Talks

Auburn Algebra Seminar, Spring 2026
Auburn University

Commutative Algebra and Algebraic Geometry Seminar, Fall 2025
Department of Mathematics, University of Minnesota-Twin Cities

AMS Special Session Homological and categorical methods in commutative algebra, Fall 2025
Fall 2025 Southeastern Sectional Meeting, Tulane University

Hawai'i Algebra Seminar, Fall 2025
University of Hawai'i at Manoa

Georgia Algebraic Geometry Symposium(G.A.G.S), Spring 2025
University of Georgia

Syzygies and Mirror Symmetry(S.M.S) Virtual Seminar, Spring 2025
Online Seminar

Derived Obsessed Graduate Student(D.O.G.S) seminar, Spring 2025
Online Seminar

Graz Algebra and Geometry Seminar, Fall 2024
Department of Mathematics, University of Graz

AGNES 2024, Fall 2024
Department of Mathematics, Dartmouth College

Teaching

Instructor of Record

University of South Carolina

Columbia, South Carolina, U.S.A.

- MATH 115 — Pre-Calculus Mathematics Spring 2026
- MATH 111I — Intensive Basic College Mathematics Fall 2025
- MATH 151 — Calculus Workshop Spring 2025
- MATH 152 — Calculus Workshop Fall 2024
- MATH 170 — Finite Mathematics Spring 2024
- MATH 115 — Pre-Calculus Mathematics Fall 2023
- MATH 142 — Calculus II Summer 2023
- MATH 122 — Calculus for Business Administration Spring 2023
- MATH 111 — Basic College Mathematics Fall 2022
- MATH 141 — Calculus I Summer 2022
- MATH 115 — Pre-Calculus Mathematics Spring 2022

Teaching Assistant

University of South Carolina

Columbia, South Carolina, U.S.A.

- MATH 141 — Calculus I Fall 2021
- MATH 141 — Calculus I Summer 2021
- MATH 141 — Calculus I Spring 2021

Professional Activities

AMS 2026 Spring Eastern Sectional Meeting on Derived Categories, Stability Conditions, and Homological Mirror Symmetry <i>Co-Organizer (with Uttaran Dutta)</i>	Spring 2026 <i>Boston College</i>
Toric Geometry in Mirror Symmetry Reading Seminar <i>Co-Organizer (With Pankaj Singh and Matthew Booth)</i>	Summer 2025 <i>University of South Carolina.</i>
Derived And (Non) Commutative Enthusiasts (D.A.N.C.E.) <i>Co-Organizer (with Patrick Lank, Timothy De Deyn and Kabeer Manali Rahul)</i>	Spring and Fall 2025 <i>Online Seminar.</i>
Mathematical Research Communities Sectional at Joint Mathematics Meeting <i>Co-Organizer (with Gabriel Dorfsman-Hopkins, Pat Lank and Peter McDonald)</i>	Spring 2024 <i>San Francisco, CA</i>
A.G.C.A.N.T. Graduate Student Seminar <i>Co-Organizer (with Pankaj Singh)</i>	Fall 2023 <i>University of South Carolina.</i>
Graduate Peer Mentoring Program <i>Graduate Mentor</i>	Spring 2023- Spring 2024 <i>University of South Carolina.</i>

Conferences and Workshops Attended

2025 Fall Southeastern Sectional Meeting October 3-5, 2025. Tulane University.

Commutative Algebra Market Preparation workshop 2025 August 12-14, 2025. University of Nebraska-Lincoln.

Georgia Algebraic Geometry Symposium (G.A.G.S.) 2025 March 21-23, 2025. University of Georgia.

Algebraic Geometry Northeastern Series (A.G.N.E.S.) 2024 November 8-10, 2024. Dartmouth College.

Introductory Workshop: Noncommutative Algebraic Geometry February 5-9, 2024. Simons Laufer Mathematical Sciences Institute, formerly Mathematical Sciences Research Institute.

Connections Workshop: Noncommutative Algebraic Geometry February 1-2, 2024. Simons Laufer Mathematical Sciences Institute, formerly Mathematical Sciences Research Institute.

Mathematics Research Communities - 2023 June 4 -10, 2023. American Mathematical Society.

Concluding Conference of Simons Collaboration on Homological Mirror Symmetry April 25-28, 2023. Simons Center for Geometry and Physics, Stony Brook University.

Derived Categories, Moduli Spaces and Hyperkahler Varieties Minischool(July 30-31,2022) and Conference(August 1-5,2022). University of Michigan.

Homological Mirror Symmetry April 4-8, 2022. University of Miami.

Analysis, Algebra, Number Theory and Probability Workshop February, 2019. Department of Mathematics, Rahara Ramkrishna Mission Vivekananda Centenary College, Kolkata, West Bengal, India.