

Anirban Bhaduri

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Employment

University of Cincinnati, Cincinnati, Ohio Aug. 2026– Present
Visiting Assistant Professor

Education

University of South Carolina, Columbia, South Carolina Jan. 2021–Jul. 2026
Ph.D. in Mathematics
Advisor: Matthew Ballard
Dissertation Title: *Derived Categories of Non-Commutative Curves*

University of Calcutta, Kolkata, West Bengal, India Aug. 2017–Jun. 2019
M.Sc. in Mathematics

University of Calcutta, Kolkata, West Bengal, India Aug. 2014–Jun. 2017
B.Sc. (Honours) in Mathematics

Research Interests

Derived Categories in algebraic geometry and representation theory of finite-dimensional algebra.

Publications and Preprints

1. A. Bhaduri, S. Dey, and P. Lank. “Preservation for generation along the structure morphism of coherent algebras over a scheme.” *Bulletin of the London Mathematical Society* **57** (2025), 1885–1896.
2. A. Bhaduri, I. Goldberg, and A. A. Robotis. “Dimension Theory of Noncommutative Curves.” Submitted.
3. A. Bhaduri, Y. Davidov, E. Faber, K. Honigs, P. McDonald, C. E. Overton-Walker, and D. Spence. “An Explicit Derived McKay Correspondence for Some Complex Reflection Groups of Rank Two.” *Advances in Mathematics*, Volume 489, 2026, 110794, ISSN 0001-8708.
4. A. Bhaduri, T. De Deyn, M. Hrbek, P. Lank, and K. Manali Rahul. “Nonexistence of Singly Compactly Generated t -Structures for Schemes.” Submitted.
5. M. Ballard and A. Bhaduri. “Orlov Spectra for Weighted Projective Lines.” In preparation (*draft available upon request*).
6. M. Ballard and A. Bhaduri. “Summand Minimal Generation in Derived Categories.” In preparation.

Teaching Experience

University of Cincinnati, Cincinnati, Ohio

- MATH 1021: College Algebra (Sections: 011 and 013) Fall 2026

University of South Carolina, Columbia, S.C.

Instructor of Record

- MATH 115: Precalculus 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: Precalculus 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: Precalculus Mathematics Spring 2022

Teaching Assistant

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

Invited Talks

- Algebra-Topology Seminar, University of Alabama Fall 2026
- Auburn Algebra Seminar, Auburn University Spring 2026
- Commutative Algebra and Algebraic Geometry Seminar, University of Minnesota Twin Cities Fall 2025
- AMS Special Session on Homological and Categorical Methods in Commutative Algebra, Southeastern Sectional Meeting, Tulane University Fall 2025
- Hawai'i Algebra Seminar, University of Hawai'i at Mānoa Fall 2025
- Georgia Algebraic Geometry Symposium, University of Georgia Spring 2025
- Syzygies and Mirror Symmetry Virtual Seminar Spring 2025
- Derived Obsessed Graduate Students Seminar Spring 2025
- Graz Algebra and Geometry Seminar, University of Graz Fall 2024
- AGNES, Dartmouth College Fall 2024

Professional Service and Activities

- Co-organizer, AMS Special Session on Derived Categories, Stability Conditions, and Homological Mirror Symmetry, Spring Eastern Sectional Meeting, Boston College Spring 2026
- Co-organizer, Derived and (Non)Commutative Enthusiasts (D.A.N.C.E.) Seminar, Virtual Spring 2025–Spring 2026
- Co-organizer, Toric Geometry in Mirror Symmetry Reading Seminar, University of South Carolina Summer 2025
- Co-organizer, Mathematical Research Communities Special Session, Joint Mathematics Meetings, San Francisco, CA Spring 2024
- Co-organizer, A.G.C.A.N.T. Graduate Student Seminar, University of South Carolina Fall 2023
- Graduate Mentor, Graduate Peer Mentoring Program, University of South Carolina Spring 2023–Spring 2024

Selected Conferences and Workshops

- Building the Mathematical Library of the Future, S.L.Math Mar. 15– Apr. 18, 2027
- Arbeitsgemeinschaft: New Homological Methods in Toric Geometry, Oberwolfach Oct. 11–16, 2026
- Summer School on Formalization of Mathematics, I.C.A.R.M. July 7–18, 2026
- Southeastern Sectional Meeting, Tulane University Oct. 3–5, 2025
- Commutative Algebra Market Preparation Workshop, University of Nebraska–Lincoln Aug. 12–14, 2025
- Georgia Algebraic Geometry Symposium, University of Georgia Mar. 21–23, 2025
- AGNES, Dartmouth College Nov. 8–10, 2024
- Introductory Workshop on Noncommutative Algebraic Geometry, SLMath Feb. 5–9, 2024
- Connections Workshop on Noncommutative Algebraic Geometry, SLMath Feb. 1–2, 2024
- Mathematics Research Communities, American Mathematical Society Jun. 4–10, 2023
- Concluding Conference of the Simons Collaboration on Homological Mirror Symmetry, Simons Center for Geometry and Physics Apr. 25–28, 2023
- Derived Categories, Moduli Spaces, and Hyperkähler Varieties Mini-school and Conference, University of Michigan Jul. 30–Aug. 5, 2022
- Homological Mirror Symmetry, University of Miami Apr. 4–8, 2022

Technical Skills

Mathematical and computational tools: LaTeX, SageMath, Macaulay2, Git, Overleaf

Programming: Python (basic), C++, Lean

Languages: English (fluent), Bengali (native)