

# Anirban Bhaduri

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## *Education*

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**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*

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My research interest lies in the intersection of:

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

## *Publications and Preprints*

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- **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 preparation.**

## *Invited Talks*

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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*

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#### **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

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*Professional Activities*

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

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*Conferences and Workshops Attended*

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**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.