Curriculum Vitae

Aditya De Saha

March 18, 2025

Education

- **Phd in Mathematics**, University of Florida (2021 - present)
- **Master of Mathematics**, Indian Statistical Institute (2019-2021)
- **Bachelor of Mathematics**, Indian Statistical Institute (2016-2019)

Research Interests

- Coarse Geometry, Asymptotic Dimension theory.
- Geometric Group theory, Boundaries of Hyperbolic spaces or groups, and CAT(0) complexes
- Group (co)homology, cohomological dimension of groups, spaces, and associated problems (like cohomological dimension of homomorphisms, etc.)
- Persistent homology theory, developing equivariant methods for computing persistent homologies.

Publications and Preprints

- [DD24] **On Cohomological Dimension of Group Homomorphisms** (with Alexander Dranishnikov) Published in the Proceedings of the AMS on november 2024.
- [Ada+24] **Persistent Equivariant Cohomology** (Joint work with Henry Adams, Evgeniya Lagoda, Michael Moy, Nikola Sadovek) pre-print on arxiv.
- [Sah25] **Fixed-point-free Involutions on boundaries of Right-Angled Coxeter Groups** pre-print on arxiv.

Past Talks

- (July 2023) *On Cohomological Dimension of Group Homomorphisms*, 40th Annual Workshop in Geometric Topology at Colorado College, Colorado Springs.
- (May 2023) *On Cohomological Dimension of Group Homomorphisms*, GTA:Philadelphia 2023, Temple University
- (February 2023) *On Cohomological Dimension of Group Homomorphisms*, Topology and Dynamics Seminar, University of Florida
- **Graduate Student Topology Seminar Talks**:

– (November 2024) *Yu's Property A for Metric Spaces*, series of two lectures
– (September 2023) *Bestvina's Complex*, series of two lectures.
– (September 2022) *Group Cohomology and Group Extensions.*
– (April 2022) *The Eilenberg-Ganea Theorem and Finite-Dimensional $K(G,1)$ -complexes.*

References

[Ada+24] Henry Adams et al. *Persistent equivariant cohomology.* arXiv:2408.17331. Aug. 2024. DOI: 10.48550/arXiv.2408.17331. URL: http://arxiv.org/abs/2408.17331 (visited on 10/11/2024).

[DD24] Aditya De Saha and Alexander Dranishnikov. "On cohomological dimension of homomorphisms". English. In: *Proceedings of the American Mathematical Society* 152.11 (Nov. 2024), pp. 4607–4621. ISSN: 0002-9939, 1088-6826. DOI: 10.1090/proc/16943. URL: https://www.ams.org/proc/2024-152-11/S0002-9939-2024-16943-4/ (visited on 03/14/2025).

[Sah25] Aditya De Saha. *Fixed-point-free involutions on the boundaries of Right-angled Coxeter Groups.* arXiv:2503.11725 [math]. Mar. 2025. DOI: 10.48550/arXiv.2503.11725. URL: http://arxiv.org/abs/2503.11725 (visited on 03/18/2025).