Milind V Gunjal

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Employment

Administrative Teaching Assistant (Florida State University)	2023-Present
Teaching Assistant (Florida State University)	2019-2023

Education

PhD at Florida State University	2019-2025
MS at Florida State University (CGPA: 3.91/4)	2019-2021
BS-MS at IISER-Kolkata (CGPA: 8.56/10, Valedictorian)	2014-2019

Areas of interest

Mathematics • Algebraic topology, Category theory, Homotopy theory, K-theory.

Fellowships & awards

Distinguished Teaching Assistant	2023
Kishore Vaigyanik Protsahan Yojana (KVPY) Fellow	2014-2019
Indian Institute of Technology Joint Entrance Exam Advanced Qualified	2014

Research projects undertaken

K-theory of a Waldhausen Category (PhD thesis)	10/2020- 04/2025
Advisor: Dr. Ettore Aldrovandi, FSU	
Vector bundles from algebraic viewpoint (MS thesis)	08/2018- 05/2019
Supervisor: Dr. Somnath Basu, IISER-K	
Representation theory of GL(2,F_q)	08/2018- 12/2018
Supervisor: Dr. Utsav Choudhury, ISI-Kolkata	

Study of simplicial and singular homology	05/2018- 07/2018
Supervisor: Dr. Priyavrat Deshpande, CMI, Chennai	
Hilbert Nullstellensatz	01/2018- 05/2018
Supervisor: Dr. Somnath Basu, IISER-K	
Study of modules of ring of continuous functions	08/2017- 12/2017
Supervisor: Dr. Somnath Basu, IISER-K	
Study of evolutionary game theory	05/2017- 07/2017
Supervisor: Dr. Supratim Sengupta, IISER-K	
Study of elementary number theory and cryptography	05/2016- 07/2016
Supervisor: Dr. S A Katre, SPPU, Pune	

Seminars and Conference Talks

AMS Sectional Meeting at FSU (Upcoming)	03/2024
Lloyd Roeling Conference at UL (Upcoming)	03/2024
Cohomology with values in Picard Categories (Advanced Seminar in Algebra at FSU) (Slides)	12/2023
Stabilization of 2-Crossed Modules (BUGCAT'23) (Slides)	11/2023
K-theory of a Waldhausen category (Kan Seminar) (Slides)	11/2023
Homotopy theory of Model Categories (Advanced Seminar in Algebra at FSU) (Notes)	04/2023
Stabilization of 2-Crossed Modules (Advanced Seminar in Algebra at FSU) (Slides)	04/2022
2-type of the K-theory of a Waldhausen category (FSU) (Slides)	12/2021

Seminars and Conferences Attended

AMS Sectional Meeting at FSU (Upcoming)	03/2024
Lloyd Roeling Conference at UL (Upcoming)	03/2024
Binghamton University Graduate Combinatorics Algebra Topology Conference	11/2023
Online workshop on $(\infty, 2)$-Categories	10/2023-11/2023
Kan Seminar	09/2023-12/2023
eCHT Research Seminar	09/2023-11/2023
Summer school on Scissors Congruence, Algebraic K-Theory, and Trace Methods, IU	06/2023
Mid-Atlantic Topology Conference, UPenn	04/2023
Advance Seminar in Topology and Geometry, FSU	08/2019 - Present
Advanced Seminar in Algebra, FSU	08/2019 - Present
Seminar series on Moduli spaces, IISER-K	11/2018
FACETS, IMSc, Chennai	07/2018
Young Topologists' Meet, CMI, Chennai	07/2018
Madhava Mathematics Competition Nurture Camp, CMI, Chennai	06/2018
Learning seminar on Morse Theory, IISER-K	01/2018 - 04/2018

Teaching

Calculus II (MAC2312) (Instructor at FSU)	Fall 2023
Calculus II (MAC2312) (Instructor at FSU)	Spring 2023
Discrete Mathematics I (MAD2104) (Recitation Instructor at FSU)	Fall 2022
Calculus I (MAC2311) (Instructor at FSU)	Summer 2022
Calculus I (MAC2311) (Instructor at FSU)	Spring 2022
Calculus I (MAC2311) (Recitation Instructor at FSU)	Fall 2021
Precalculus Algebra (MAC1140) (Instructor at FSU)	Spring 2021
Precalculus Algebra (MAC1140) (Instructor at FSU)	Fall 2020

Advanced Courses Undertaken

- **Stable Homotopy Theory** (eCHT, WSU)
- **Symplectic Geometry** ref. Ana Cannas da Silva - Lecture Notes (FSU)
- **Differential Geometry of Bundles** ref. Sharpe - Differential Geometry (FSU)
- **Algebraic Geometry** ref. David Eisenbud and Joe Harris - 3264, and Robin Hartshorne - Algebraic Geometry (FSU)
- **Homological Algebra** ref. C. Weibel - An Introduction to Homological Algebra (FSU)
- **Algebraic Geometry by way of Scheme Theory** ref. Ravi Vakil - The Rising Sea: Foundations of Algebraic Geometry (FSU)
- **Introduction to Fourier Analysis** ref. Stein and Shakarchi - Introduction to Fourier Analysis (FSU)
- **Geometric Structures on Manifolds** (FSU)
- **Logic, Type Theory, and the Mechanization of Mathematics** (FSU)
- **Differential Topology II** ref. John Lee - Introduction to Smooth Manifolds (FSU)
- **Groups, Rings, Vector Spaces I-III** ref. Paolo Aluffi - Chapter 0. (FSU)
- **Topology I-II** ref. James Munkres - Topology (FSU)
- **Measure and Integration I** Gerald B. Folland - Real Analysis Modern Techniques and their Applications (FSU)
- **Complex Analysis** ref. John B. Conway - Functions of One Complex Variable (FSU)