

Mukundan, Malavika

<https://MalavikaMukundan.github.io>

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POSITIONS HELD	<i>Postdoctoral Associate</i> Department of Mathematics and Statistics Boston University, Boston, MA	Sep 2024 -
	<i>President's Postdoctoral Fellow</i> Department of Mathematics University of California, Los Angeles, CA	Jul 2024 - Aug 2024
EDUCATION	University of Michigan , Ann Arbor, MI <i>PhD in Mathematics</i> Advisor: Sarah C. Koch <i>MS in Mathematics</i>	Sep 2018 - May 2024 Sep 2018 - Aug 2020
	Chennai Mathematical Institute , Chennai, India <i>BSc. (Hons.) in Mathematics and Computer Science</i>	Jul 2015 - Apr 2018
	PAPERS	
	Published and Submitted	
	<ul style="list-style-type: none">• Donnay et al., (2025). VoteKit: A Python package for computational social choice research. <i>Journal of Open Source Software</i>, 10(109), 7477, https://joss.theoj.org/papers/10.21105/joss.07477• Dynamical approximations of post-singularly finite entire functions (joint with N. Prochorov and B. Reinke) Submitted. arXiv:2305.17793• Embedding unicritical connectedness loci <i>Conform. Geom. Dyn.</i> 28 (2024), 131-164 https://doi.org/10.1090/ecgd/389• A solution to the degree-d twisted rabbit problem (joint with R. Winarski) Accepted at <i>Ergodic Theory and Dynamical Systems</i> (2025) arXiv:2209.06099	
	Preprints	
	<ul style="list-style-type: none">• A cell decomposition for marked cycle curves (joint with C. Davis, D. Stoll and G. Tiozzo) arXiv:2410.21049• Dynamical approximation of post-singularly finite exponentials arXiv:2305.18245	
GRANTS &AWARDS	<i>AMS-Simons Travel Grant</i> <i>AMS Graduate Student Travel Grant</i>	Jul 2025 - Jun 2027 Feb 2024
	University of Michigan , Ann Arbor, MI <i>Rackham Conference Travel Grant</i> <i>Usha Sharma Bhalla Fellowship Fund</i> <i>Carroll V. Newsom Scholarship</i> <i>Rackham Graduate Student Research Grant</i> <i>Departmental Fellowship</i>	Jun 2023, Dec 2023 Summer 2022, Fall 2023 May 2023 2023 Summer 2020, 2021, 2022
	<i>Lauter Program Associate Fellowship</i> , MSRI, Berkeley, CA <i>Stipend</i> , Chennai Mathematical Institute, Chennai, India <i>Summer Research Fellowship</i> , JNCASR, Bengaluru, India	Jan - May 2022 2015 - 2018 May - Jun 2017

INVITED TALKS

Conferences

JHH80 Dynamical Developments: Degenerations of Flat Surfaces and Rational Maps, Institut de Mathématiques de Toulouse, June 2025
Topics in Complex Dynamics 2025: Connections to Geometry and Analysis, Universitat de Barcelona, June 2025
Degeneration Techniques for Rational Maps, Warwick Mathematics Institute, University of Warwick, May 2025
Early Career Complex Dynamics Workshop, Indiana University Bloomington, Jul 2024
Midwest Dynamical Systems Early Career Conference, The Ohio State University, May 2024
17th Annual Bloomington Geometry Workshop, Indiana University Bloomington, April 2024
Joint Mathematics Meetings: Special Session on the Mathematics of Decisions, Elections and Games, San Francisco, Jan 2024
AMS Fall Southeastern Sectional Meeting: Special Session on Ergodic Theory and Dynamical Systems, University of South Alabama, Oct 2023
Early Career Complex Dynamics Workshop, Indiana University Bloomington, Jun 2023
CMS Summer Meeting: Session on Geometric Topology, pseudo-Anosov Maps and Complex Dynamics, Jul 2023

Colloquia & Seminars

<i>New England Dynamics Seminar</i>	April 2025
<i>Brandeis University Everytopic Seminar</i>	April 2025
<i>Harvard University Algebraic Dynamics Seminar</i>	Oct 2024
<i>Boston University Dynamical Systems Seminar</i>	Jan, Sep 2024
<i>IMS and SUNY Stony Brook Dynamics Seminar</i>	Aug 2024
<i>University of Illinois Chicago Dynamics Seminar</i>	Jan 2024
<i>Quasiworld Seminar (online)</i>	Dec 2023
<i>Cornell University Dynamics Seminar</i>	Nov 2023
<i>University of Michigan CADG Seminar</i>	Nov 2020, Apr, Oct 2021, Nov 2023
<i>The Open University Dynamical Systems Seminar (online)</i>	Apr 2023
<i>University of Liverpool Dynamical Systems Seminar</i>	Mar 2023
<i>University of Warwick Geometry and Topology Seminar</i>	Mar 2023
<i>Institute of Mathematical Sciences Chennai, Colloquium</i>	Dec 2022
<i>University of Toronto Dynamics Seminar</i>	Nov 2022
<i>University of Chicago Topology and Geometry Seminar</i>	Oct 2022
<i>TIFR Infosys Chandrasekharan Random Geometry Colloquium (online)</i>	Oct 2022
<i>MSRI Complex Dynamics Junior Seminar</i>	Apr 2022
<i>IUPUI Dynamical Systems Seminar</i>	Nov 2021

TEACHING

Boston University, Boston, MA

<i>MA 771 (Introduction to Dynamical Systems)</i>	Spring 2025
<i>MA 123 (Calculus I)</i>	Fall 2024

University of Michigan, Ann Arbor, MI

<i>Math 116 (Calculus II)</i>	Fall 2021, Winter 2020, 2021, 2023, 2024
<i>Math 105 (Data, Functions and Graphs)</i>	Fall 2020
<i>Math 215 (Calculus III) Teaching Assistant</i>	Fall 2019
<i>Math 115 (Calculus I)</i>	Fall 2018, Winter 2019

Chennai Mathematical Institute, Chennai, India

<i>Analysis II Teaching Assistant</i>	Spring 2018
<i>Analysis I Teaching Assistant</i>	Fall 2017

MENTORING

Boston University, Boston, MA

<i>Member, Honors Thesis Committee of Hunter Golemon</i>	Spring 2025
<i>Assistant, BIG Ideas in Dynamics Semester</i>	Fall 2024

SERVICE**Boston University, Boston, MA***Co-Organizer, New England Dynamics Seminar*

2025 - Present

Co-Organizer, Dynamical Systems Seminar

2024- Present

University of Michigan, Ann Arbor, MI*Co-Chair, Graduate Student Advisory Committee*

Sep 2022 - Present

Grad Member, Math Department Climate Committee

Sep 2022 - Aug 2023

Co-Organizer, Jobs in Academia for Mathematics (JAMS) Sessions

Apr 2023

Leader, Michigan Math Circle

Nov 2019, Feb 2020, Feb 2021, Apr 2022

Board Member, AWM Student Chapter

Sep 2020 - Aug 2022

Steward, Graduate Employees' Organization (GEO) 3550

Sep 2021 - Aug 2022

Co-Organizer, MREG Workshop

Jun 2022

Teacher's Assistant, MREG Workshop

Jun 2021

Volunteer, F.E.M.M.E.S Capstone

Jun 2020

Volunteer, Math Corps summer camp

July 2020

Chennai Mathematical Institute, Chennai, India*Guest Lecturer, EGMO Training Camp*

Dec 2022

**CONFERENCES
& WORKSHOPS***Thematic Program on Randomness and Geometry, Fields Institute, Toronto, Canada, April 2024**Big Ideas in Dynamics (online participation), Fall 2023**Randomization, Neutrality, and Fairness Workshop, Simons Laufer Mathematics Institute, Berkeley, California, Oct 2023**Quasiworld Workshop, University of Helsinki, Helsinki, Finland, Aug 2023**Around the Mandelbrot set: A conference celebrating the 60th birthday of Mitsuhiro Shishikura (online participation), Tokyo, May 2023**Midwest Dynamical Systems Early Career Conference, University of Notre Dame, May 2022**Complex Dynamics School: Building a Bridge to Higher Dimensions, IUPUI, Mar 2022**Complex Dynamics: from Special Families to Natural Generalizations in One and Several Variables, MSRI, Berkeley, CA, Jan - May 2022**Midwest Dynamical Systems Conference, Northwestern University, Nov 2021**Advancing Bridges in Complex Dynamics (online participation), CIRM, Luminy, France, Sep 2021**Midwest Dynamical Systems Conference, University of Illinois Chicago, Nov 2019**Summer School on Dynamical Systems, University of Houston, Jun 2019**School on Low-Dimensional Geometry and Topology: Discrete and Algorithmic Aspects, Institut Henri Poincaré, Paris, France, Jun 2018***COMPUTER
SKILLS**

Python

Julia

Git

C++

Haskell