

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">• 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) Submitted (2022). arXiv:2209.06099• Dynamical approximations of post-singularly finite entire functions (joint with N. Prochorov and B. Reinke) Submitted (2023). arXiv:2305.17793 Preprints <ul style="list-style-type: none">• Marked cycle curves for quadratic polynomials and rational maps (joint with C. Davis, D. Stoll and G. Tiozzo) Preprint (2024). arXiv:2410.21049• Dynamical approximation of post-singularly finite exponentials Preprint (2023). arXiv:2305.18245	
GRANTS &AWARDS	<i>AMS Graduate Student Travel Grant</i>	Feb 2024
	University of Michigan , Ann Arbor, MI	
	<i>Rackham Conference Travel Grant</i>	Jun 2023, Dec 2023
	<i>Usha Sharma Bhalla Fellowship Fund</i>	Summer 2022, Fall 2023
	<i>Carroll V. Newsom Scholarship</i>	May 2023
	<i>Rackham Graduate Student Research Grant</i>	2023
	<i>Departmental Fellowship</i>	Summer 2020, 2021, 2022
	<i>Lauter Program Associate Fellowship</i> , MSRI, Berkeley, CA	Jan - May 2022
	<i>Stipend</i> , Chennai Mathematical Institute, Chennai, India	2015 - 2018
	<i>Summer Research Fellowship</i> , JNCASR, Bengaluru, India	May - Jun 2017

TEACHING EXPERIENCE

Boston University, Boston, MA

MA 771 (Introduction to Dynamical Systems)

Spring 2025

MA 123 (Calculus I)

Fall 2024

University of Michigan, Ann Arbor, MI

Math 116 (Calculus II)

Fall 2021, Winter 2020, 2021, 2023, 2024

Math 105 (Data, Functions and Graphs)

Fall 2020

Math 215 (Calculus III) Teaching Assistant

Fall 2019

Math 115 (Calculus I)

Fall 2018, Winter 2019

Chennai Mathematical Institute, Chennai, India

Analysis II Teaching Assistant

Spring 2018

Analysis I Teaching Assistant

Fall 2017

INVITED TALKS

Conference Talks & Presentations

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

Midwest Dynamics Early Career Conference (poster presentation), University of Notre Dame, May 2022

Colloquium & Seminar Talks

Harvard University Algebraic Dynamics Seminar

Oct 2024

Boston University Dynamical Systems Seminar

Jan, Sep 2024

IMS and SUNY Stony Brook Dynamics Seminar

Aug 2024

University of Illinois Chicago Dynamics Seminar

Jan 2024

Quasiworld Seminar (online)

Dec 2023

Cornell University Dynamics Seminar

Nov 2023

University of Michigan CADG Seminar

Nov 2020, Apr, Oct 2021, Nov 2023

The Open University Dynamical Systems Seminar (online)

Apr 2023

University of Liverpool Dynamical Systems Seminar

Mar 2023

University of Warwick Geometry and Topology Seminar

Mar 2023

Institute of Mathematical Sciences Chennai, Colloquium

Dec 2022

University of Toronto Dynamics Seminar

Nov 2022

University of Chicago Topology and Geometry Seminar

Oct 2022

TIFR Infosys Chandrasekharan Random Geometry Colloquium (online)

Oct 2022

MSRI Complex Dynamics Junior Seminar

Apr 2022

IUPUI Dynamical Systems Seminar

Nov 2021

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

SERVICE

Boston University, Boston, MA
Co-Organizer, Dynamical Systems Seminar 2024-25
Mentor, BIG Ideas in Dynamics Semester Sep - Dec 2024

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

INTERNSHIPS

MGGG Redistricting Lab Jun - Aug 2023
Tufts University, Medford, MA
 o The mathematics of ranked choice voting
 o Software development: VoteKit, A Swiss army knife for computational social choice research.
<https://pypi.org/project/votekit/>

COMPUTER SKILLS

Python
 Julia
 Git
 C++
 Haskell