

Willie Rush Lim

Employment

2024 – current **Tamarkin Assistant Professor, Brown University, RI**

Education

2019 – 2024 **PhD in Mathematics, Stony Brook University, NY**
○ Dissertation: “*From Herman Rings to Herman Curves*”
○ Advisor: Dzmitry Dudko

2015 – 2019 **MSci. in Mathematics, Imperial College London, UK**

Research Interests

Dynamical systems, in particular complex dynamics and renormalization theory

Papers

- [3] Hyperbolicity of renormalization of critical quasicycle maps. Submitted. [arXiv:2405.09008](https://arxiv.org/abs/2405.09008)
[2] Rigidity of J-rotational rational maps and critical quasicycle maps. [arXiv:2308.07217](https://arxiv.org/abs/2308.07217)
To appear in Transactions of the AMS.
[1] A priori bounds and degeneration of Herman rings with bounded type rotation number.
Invent. Math. (2025). <https://doi.org/10.1007/s00222-025-01369-2>

Recent Talks

2025	August	Fields-CNAM Nonlinear Days 2025, Fields Institute
2025	August	Geometric Complexity of Julia Sets VI, Bedlewo
2025	June	Topics in Complex Dynamics, University of Barcelona
2025	February	Geometry & Topology Seminar, Brown University
2024	November	Dynamical Systems Seminar, Stony Brook University
2024	November	Dynamical Systems Seminar, Cornell University
2024	October	Dynamical Systems Seminar, Boston University
2024	April	AMS Sectional Meeting, UW-Milwaukee
2024	April	Workshop on Dynamical Systems and Related Topics, UMD
2024	January	Geometry & Topology Seminar, Brown University
2023	November	Quasiworld Seminar, Online
2023	March	Complex Analysis and Dynamics Seminar, CUNY
2022	November	Dynamical Systems Seminar, Stony Brook University

Teaching Experience

2025	Fall	Instructor, MATH1710 Topology
2025	Fall	Instructor, MATH1110 Ordinary Differential Equations
2025	Spring	Lecturer, MATH180 Multivariable Calculus
2024	Fall	Lecturer, MATH200 Multivariable Calculus
2023	Summer	Instructor, MAT127 Calculus C (part of Simons STEM Scholars Summer Bridge)
2022	Fall	Lecturer, MAT125 Calculus A
2022	Summer	Instructor, MAT203 Calculus III
2021	Summer	Instructor, MAT203 Calculus III
2020	Summer	Instructor, MAT342 Applied Complex Analysis
2019 – 2024		Teaching Assistant (as a grader and recitation leader) Calculus I, Calculus II, Calculus IV, Intro. to Linear Algebra, Applied Real Analysis, Applied Complex Analysis, Dynamics and Chaos, Graduate Complex Analysis

Honors and Awards

2024	Chairman's Award for Excellence in Teaching, Stony Brook University
2019	IBM Prize for Excellence in Pure Mathematics
2019	Prize for Excellence in Support of Teaching, Imperial College London
2017	G-Research Prize
2015 – 2019	Dean's List, Imperial College London
2015 – 2019	President's Undergraduate Scholarship, Imperial College London

Outreach and Service

2022	Fall	Co-organizer of ENYGMMa (Empowering New York Gender Minority Mathematicians)
2022	Summer	Instructor of the Mathematics Summer Program (MathCamp) for high school students
2021 – 2022		Directed Reading Program
2020 – 2021		Co-organizer of the Graduate Student Seminar