Willie Rush Lim

Education

2019 – Present   **PhD Candidate in Mathematics, Stony Brook University, NY**
- ○ Research Interest: Holomorphic dynamics, renormalization theory
- ○ Advisor: Dzmitry Dudko

2015 – 2019   **MSci. Mathematics, Imperial College London, UK**
- ○ First class honors
- ○ Dissertation: "*Quadratic-Like Renormalisation in Holomorphic Dynamics*"
- ○ Advisor: Davoud Cheraghi

Papers

2022   *A Priori Bounds* and Degeneration of Herman Rings of Bounded Type Rotation Number (in preparation)

2022   Combinatorial Rigidity of Bounded Type Herman Quasicircles (in preparation)

Teaching Experience

2022   **Fall**   Course Lecturer, MAT125 Calculus A

2022   **Summer**   Course Instructor, MAT203 Calculus III

2021   **Summer**   Course Instructor, MAT203 Calculus III

2020   **Summer**   Course Instructor, MAT342 Applied Complex Analysis

2019 – present   Teaching Assistant (as a grader and recitation leader)
MAT131 Calculus I, MAT132 Calculus II, MAT211 Intro. to Linear Algebra,
MAT341 Applied Real Analysis, MAT351 Dynamics and Chaos

Honors and Awards

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

Conferences and Workshops

2022   **August**   On Geometric Complexity of Julia Sets IV – Banach Center, IMPAN
Gave a talk titled "*A Priori Bounds and Degeneration of Herman Rings*"

2022   **May**   Adventurous Berkeley Complex Dynamics – MSRI
Participated in a poster session: pdf

2021	September	On Geometric Complexity of Julia Sets III (online) – Banach Center, IMPAN
2021	September	Advancing Bridges in Complex Dynamics (online) – CIRM
2021	March	Many Faces of Renormalisation (online) – Simons Center
2020	March	Analysis, Dynamics, Geometry and Probability – Simons Center

Other Talks

2022	March	*"Intro. to Kahler Geometry"* – Student Differential Geometry Seminar (SDGS)
2021	December	*"Dynamics of Quadratic Polynomials"* – Graduate Student Seminar (GSS)
2021	May	*"Information Inequalities"* – Analysis Student Seminar (ASS)
2021	March	*"What Is... An Orbifold?"* – GSS
2021	March	*"Brunn-Minkowski and Concentration of Measures"* – ASS
2020	October	*"Subharmonic Functions and Convexity"* – ASS
2020	February	*"Subharmonic and Plurisubharmonic Functions"* – SDGS
2019	December	*"Renormalization of Unimodal Maps and Feigenbaum Universality"* – Renormalization Student Seminar
2019	October	*"Brushing the Hairs of Transcendental Entire Functions"* – GSS
2019	February	*"Quasiconformal Deformations and Sullivan's No Wandering Domains"* – IMA's Tomorrow's Mathematicians Today, University of Greenwich
2018	March	*"A Conjecture on Quasiconformal Maps"* – Undergraduate Colloquium, Imperial College London

Outreach and Service

2022	Spring	Directed Reading Program (Fractal Geometry) – Stony Brook University
2021	Spring	Directed Reading Program (The Symmetries of Things) – Stony Brook University
2020 – 2021		Co-organiser of the Graduate Student Seminar – Stony Brook University