Boyuan Zhao

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Personal Info

Name:	Boyuan Zhao
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Education

Since 10/2021	**PhD in Mathematics**, University of St Andrews, Supervised by Mike Todd and Kenneth Falconer
09/2020–08/2021 Distinction (GPA 17.3/20)	MSc Mathematics University of St Andrews Dissertation: On rotation number and unique minimal sets of circle homeomorphisms. Advisor: Mike Todd
09/2017–08/2020 First Class Honours	BSc Mathematics with Modern Languages University College London

Research Interests

I am interested in multiple topics in ergodic theory and dynamical systems, more precisely,

- Countable Markov shifts and Strongly positive recurrence
- Dynamical Borel-Cantelli lemmas and one-dimensional dynamics
- Extreme Value Theory, Recurrence events

Research Output

1. B. Zhao, *Almost sure convergence of cover times for ψ-mixing systems.* (2024) preprint,

2. M. Todd and B. Zhao, *Countable Markov Chain with Exponential Mixing.* (2024), preprint, ARXIV.2403.02092

3. B. Zhao, *Closest distance between iterates of typical points* . Discrete Contin. Dyn. Syst. 44(8), (2024) 2252-2279. PDF

Scholarship and Fundings

Conferences Attended and Presentations

Jul 2024	Workshop on Dynamical Systems: Geometric and Statistical Properties
	University of Warwick
Jun 2024	British Mathematical Colloquium
	talk title: Countable Markov shifts with exponential mixing
	University of Manchester
Dec/2023	Workshop on Probabilistic Methods in Dynamics
	talk title: Maximal length of subsequence matching and Renyi entropy
	Universidade do Porto
May/2023	Thermodynamic Formalism: Non-additive Aspects and Related Topics
	IMPAN, Bedlewo.
Sep/2022	Ergodic Theory and Fractal Geometry Conference
	University of Birmingham
04/2022	University of St Andrews Analysis Group Seminar
	Talk Title: Minimal distance between orbits
03/2022	Junior Ergodic Theory Seminar
	ICMS, Edinburgh

Other Interests and Skills

Track and cross country athlete, competing in Scottish Student Sport and BUCS.
Fluent Spanish at B2 level and Portuguese at B1.
Irish & Scottish folk musician.