

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,

- Symbolic Dynamics and Thermodynamic Formalism for One-Dimensional Systems
- Extreme Value Theory, Recurrence events
- Chaotic Cryptography and Steganography

RESEARCH PUBLICATIONS

- B. Zhao, *Closest Distance between Iterates of Typical Points*, To appear in *Discrete and Continuous Dynam. Systems* (2024). [PDF](#)
- M. Todd and B. Zhao, *Countable Markov Chain with Exponential Mixing*, [ARXIV.2403.02092](#)

SCHOLARSHIP AND FUNDINGS

10/2021-10/2025 China Scholarship Council Programme

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.