

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

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
11/2021	Online Seminar: SRB Measure and Young Towers

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.