

Hong Yi Huang

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School of Mathematics, University of Bristol, Bristol BS8 1UG, UK

Research interests

- Group theory (finite and algebraic)
- Algebraic combinatorics
- Representation theory

Education

School of Mathematics, University of Bristol (UoB)

United Kingdom

Jan 2021 –

- PhD in Mathematics
- Supervisor: Professor Tim Burness
- Scholarship: China Scholarship Council

Department of Mathematics, Southern University of Science and Technology (SUSTech)

China

Sept 2016 – July 2020

- Bachelor of Science
- Supervisor: Professor Cai Heng Li
- Thesis: On valency problems of Saxl graphs of almost simple primitive groups with soluble stabiliser

Distinctions

China Scholarship Council, UoB	<i>2021–25</i>
Outstanding undergraduate thesis, SUSTech	<i>2020</i>
First-class scholarship, SUSTech	<i>2017–18</i>
First prize, Chinese Mathematics Competition (Guangdong)	<i>2017</i>

Conferences and workshops

Groups St Andrews, Newcastle	<i>Aug 2022</i>
Groups and Graphs, Jiangxi University of Science and Technology (online)	<i>July 2022</i>
43rd Australasian Combinatorics Conference, Melbourne (online)	<i>Dec 2021</i>
Groups, Graphs and Combinatorics, Shenzhen (online)	<i>Nov 2021</i>
LMS Graduate Student Meeting, London Mathematical Society (online)	<i>Nov 2021</i>
Workshop on Group Actions and Transitive Graphs, Kunming	<i>Jan 2021</i>
Workshop on Combinatorics and Graph Theory, Shenzhen	<i>Oct 2020</i>
International Conference on Algebraic Combinatorics, Jiaozuo	<i>Sept 2019</i>
The Third International Conference on Group Actions and Transitive Graphs, Shenzhen	<i>Oct 2018</i>

Journal publications and preprints

- [3] On base sizes for primitive groups of product type
joint with T.C. Burness
41 pages, submitted, arXiv:2202.02816
- [2] On the Saxl graphs of primitive groups with soluble stabilisers
joint with T.C. Burness
Algebraic Combinatorics, to appear
- [1] On valency problems of Saxl graphs
joint with J. Chen
Journal of Group Theory 25 (2022), 543–577
doi: 10.1515/jgth-2021-0123

Selected talks

2022

Regular orbits of primitive groups on power sets. Group Theory Seminar, SUSTech 19 Feb

2021

Base-two primitive permutation groups and their Saxl graphs. 43rd Australasian Combinatorics Conference 13 Dec

Regular suborbits of finite primitive groups. Groups, Graphs and Combinatorics, SUSTech 14 Nov

Base-two primitive permutation groups and their Saxl graphs. LMS Graduate Student Meeting 8 Nov

The distinguishing number of permutation groups. Group Theory Seminar, SUSTech 9 Oct

Groups, graphs and transitivity. Junior Algebra Colloquium, UoB 21 May

The probabilistic method in group theory. Discrete Mathematics Seminar, SUSTech 22 Apr

Simple groups, fixed point ratios and applications II, Seminar on Classical Groups, SUSTech 8 Apr

Simple groups, fixed point ratios and applications I, Seminar on Classical Groups, SUSTech 11 Mar

On valency problems of Saxl graphs. Workshop on Group Actions and Transitive Graphs 2 Jan

2020

On valency problems of Saxl graphs. Discrete Mathematics Seminar, SUSTech 26 Nov

On valency problems of Saxl graphs. SUSTech 17 Nov

Seminar organisations

Group Theory Seminar, SUSTech (online), <https://www.gtseminar.xyz/> 2022 –

Teaching

Tutorial leader, School of Mathematics, UoB

- 2021–2022 TB1: MATH10010 Introduction to Proofs

Teaching assistant, Department of Mathematics, SUSTech

- 2019–2020 Spring: MA109 Advanced Linear Algebra
- 2019–2020 Fall: MA107 Advanced Linear Algebra I
- 2018–2019 Spring: MA104b Linear Algebra II

Homework marker, Department of Mathematics, SUSTech

- 2020–2021 Spring: MA321 Group Representation Theory, and MA219-16 Elementary Number Theory
- 2019–2020 Fall: MA321 Group Representation Theory, and MA219 Abstract Algebra (H)

- 2018–2019 Spring: MAT8010 Combinatorics (PG)
- 2017–2018 Fall: MA219-16 Elementary Number Theory, and MA213-16 Mathematical Analysis

Research visits

2021: SUSTech, China (2 months)

2020: SUSTech, China (6 months)