

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

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

Jan 2021 –

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

China

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

Sept 2016 – July 2020

Distinctions

China Scholarship Council, UoB

2021–25

Outstanding undergraduate thesis, SUSTech

2020

First-class scholarship, SUSTech

2017–18

First prize, Chinese Mathematics Competition (Guangdong)

2017

Conferences and workshops

Young Group Theorists Workshop, SwissMAP, Les Diablerets, Switzerland

Sept 2022

Groups St Andrews, Newcastle

Aug 2022

Simple groups, representations and applications, Isaac Newton Institute, University of Cambridge

July 2022

Groups and Graphs, Jiangxi University of Science and Technology (online)

July 2022

23rd Postgraduate Group Theory Conference, London

July 2022

43rd Australasian Combinatorics Conference, Melbourne (online)

Dec 2021

Groups, Graphs and Combinatorics, Shenzhen (online)

Nov 2021

LMS Graduate Student Meeting, London Mathematical Society (online)

Nov 2021

Workshop on Group Actions and Transitive Graphs, Kunming

Jan 2021

Workshop on Combinatorics and Graph Theory, Shenzhen

Oct 2020

International Conference on Algebraic Combinatorics, Jiaozuo

Sept 2019

The Third International Conference on Group Actions and Transitive Graphs, Shenzhen

Oct 2018

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

Selected talks

2022

- Bases for primitive permutation groups*. Group Theory Seminar, SUSTech 24 May
- 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/> 2021 –

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)