Jiaheng Wang

Laboratory for Foundations of Computer Science,
Informatics Forum, University of Edinburgh, Scotland, EH8 9AB, UK
Email: pw384@hotmail.com (Personal) / jiaheng.wang@ed.ac.uk (Term time)
Homepage: https://pw384.github.io/

Education

- Ph.D. student   University of Edinburgh, 2020 - ?
  Advisor: Heng Guo
- B.Sc. *summa cum laude* in Computer Science *(Turing Class)*   Peking University, 2016 - 2020

Visiting (for at least one month)

- Institute for Theoretical Computer Science, Shanghai University of Finance and Economics
                                                                                    2020/05 - 2020/09
  Advisor: Pinyan Lu
- Laboratory for Foundations of Computer Science, University of Edinburgh   2019/07 - 2019/08
  Advisor: Heng Guo
- Institute of Computing Technology, Chinese Academy of Sciences   2018/09 - 2020/01
  Advisor: Xiaoming Sun

Honours and Awards

- Informatics Global PhD Scholarship (3.5 years)   University of Edinburgh, 2020
- Turing Class Scholarship   Peking University, 2019
- May 4$^{\text{th}}$ Scholarship   Peking University, 2018
- Merit Student Award   Peking University, 2018
- Award for Academic Excellents   Peking University, 2017

Research Interests

- Algorithms and complexity of approximate counting.
- Extremal combinatorics.

Research Articles

[4] **Swendsen-Wang Dynamics for the Ferromagnetic Ising model with External Fields.**
  Weiming Feng, Heng Guo and **Jiaheng Wang**.
  submitted
  arXiv: 2205.01985
[3] **Improved Bounds for Randomly Colouring Simple Hypergraphs.**
  Weiming Feng, Heng Guo and **Jiaheng Wang**.
  26th International Conference on Randomization and Computation (RANDOM 2022).
  arXiv: 2202.05554
[2] **Inapproximability of Counting Hypergraph Colourings.**
  Andreas Galanis, Heng Guo and **Jiaheng Wang**.
  submitted
  arXiv: 2107.05486

Last update: 16/07/2022

[1] **On the Degree of Boolean Functions as Polynomials over $\mathbb{Z}_m$.**
Xiaoming Sun, Yuan Sun, **Jiaheng Wang**, Kewen Wu, Zhiyu Xia and Yufan Zheng.
47th International Colloquium on Automata, Languages and Programming (ICALP 2020).
arXiv: 1910.12458

Teaching

- At University of Edinburgh:
    - INFR08026 Introduction to Algorithms and Data Structures   Teaching Assistant/Tutor, 2021/22
- At Peking University:
    - 04834010 Randomized Algorithms   Teaching Assistant, 2020 Spring
    - 04833440 Introduction to the Theory of Computation   Teaching Assistant, 2020 Spring
    - 04833040/04832363 Introduction to Computer Systems   Teaching Assistant/Tutor, 2019 Fall
    - 04833440 Introduction to the Theory of Computation   Teaching Assistant, 2019 Spring
    - 04833040/04832363 Introduction to Computer Systems   Teaching Assistant/Tutor, 2018 Fall

Services and Activities

- Conference reviewer: ICALP'21, SODA'21
- Student organizer of SAGT'18 (organizing volunteers, getting involved in press, etc.)

Talks

- Improved Bounds for Randomly Colouring Simple Hypergraphs
    - Highlights of Algorithms, LSE & QMUL, London, United Kingdom
- Inapproximability of Counting Hypergraph Colourings
    - CS Peer Talk, Peking University, Beijing, China (virtual)
    - Highlights of Algorithms, LSE & QMUL, London, United Kingdom
- On the Degree of Boolean Functions as Polynomials over $\mathbb{Z}_m$.
    - ICALP 2020, Saarbrücken, Germany (virtual conference)