Zishuo Zhao 赵梓硕

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PhD Candidate (ABD), ISE, University of Illinois Urbana-Champaign

Background

- **2021/01 - now** PhD Candidate (ABD), Department of Industrial & Enterprise Systems Engineering, University of Illinois Urbana-Champaign
  Research Area: Operations Research
  Advisor: Yuan Zhou
  Expected Graduation: 2026 (depending on my research progress)
  Tentative Thesis Title: *Incentive Design for Digital Economy and AI Platforms*

- **2023/09 - 2024/08** Visiting Student, Institute for Data Systems and Society (IDSS), Massachusetts Institute of Technology
  Research Topic: Data-Driven Dynamic Mechanism Design
  Advisor: David Simchi-Levi

- **2020/08 - 2021/01** Research Assistant, Haihua Institute for Frontier Information Technology
  Research Topic: Network Optimization
  Advisor: Longbo Huang

- **2016/05 - 2020/07** Undergraduate Student, Institute for Interdisciplinary Information Sciences (Yao Class), Tsinghua University
  Research Topic: Geometry-Based Visual SLAM
  Advisor: Shi-Min Hu

- **2015/08 - 2016/05** Undergraduate Student, Department of Computer Science and Technology, Tsinghua University

Selected Papers

Bayesian Mechanism Design for Blockchain Transaction Fee Allocation [Link]

Xi Chen*, David Simchi-Levi*, <u>Zishuo Zhao</u>*, Yuan Zhou*. (alphabetical order)

Operations Research (2025).

Best Paper Award, *NeurIPS Workshop on Decentralization and Trustworthy Machine Learning in Web3 (NeurIPS DMLW'22).*

Crypto Economics Security Conference (CESC 2022).

Invited to OR Talk by 运筹OR帷幄 (OR China) in 2024.

Invited to *INFORMS Annual Meeting 2022.*

Proof-of-Learning with Incentive Security [Link]

<u>Zishuo Zhao</u>, Zhixuan Fang, Xuechao Wang, Xi Chen, Hongxu Su, Haibo Xiao, Yuan Zhou.

In Submission (2025).

Invited to *INFORMS Conference on Security (IConS'24).*

ACM EC Workshop on Foundation Models and Game Theory (ACM EC FMGT'24).

A preliminary version presented on *INFORMS Annual Meeting 2023.*

It Takes Two: A Peer-Prediction Solution for Blockchain Verifier's Dilemma [Link]

<u>Zishuo Zhao</u>, Xi Chen, Yuan Zhou.

In Submission (2025).

Invited to OR Talk by 运筹OR帷幄 (OR China) in 2024.

Other Papers

Personalized Pricing with Group Fairness Constraint [Link]

Xin Chen*, Zexing Xu*, <u>Zishuo Zhao</u>*, Yuan Zhou*. (alphabetical order)

ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT 2023)

Dynamic Car Dispatching and Pricing: Revenue and Fairness for Ridesharing Platforms [Link]

<u>Zishuo Zhao</u>, Xi Chen, Xuefeng Zhang, Yuan Zhou

International Joint Conference on Artificial Intelligence (IJCAI 2022), **Long Oral (3.75%)**.

Invited to *INFORMS Annual Meeting 2021.*

ClusterSLAM: A SLAM Backend for Simultaneous Rigid Body Clustering and Motion Estimation [Link]

Jiahui Huang, Sheng Yang, <u>Zishuo Zhao</u>, Yukun Lai, Shi-Min Hu.

Computational Visual Media (CVM), Volume 7, pages 87–101 (2021).

International Conference on Computer Vision (ICCV 2019).

Working Projects

Online Mechanism Design in Crowdsourcing Systems

with David Simchi-Levi, Qiushi Han and Renfei Tan.

Awards

Academic

- **Best Paper Award**, NeurIPS Workshop on Decentralization and Trustworthy Machine Learning in Web3, 2022

- Crypto Economics Security Conference (CESC) Travel Award, 2022

- UIUC Graduate College Conference Presentation Award, 2021

- Xuetang Scholarship in Tsinghua University, 2016-2020

- 12th place in 2nd THUCTF Cybersecurity Contest in Tsinghua University, 2020

- 12th place in 24th Artificial Intelligence Programming Contest in Tsinghua University, 2020

- 15th place in 20th Artificial Intelligence Programming Contest in Tsinghua University, 2016.

- Second Prize in Chinese Mathematical Olympiad (CMO), 2014

- First Prize in National Olympiad in Informatics in Provinces (NOIP), 2013

Arts

- Finalist Award in the "一盏茶时 (*IIIS Tea Time*)" photography exhibition for the 12th Anniversary of IIIS, Tsinghua University, 2023.

- Scholarship for Arts Excellence in Tsinghua University, 2018.

- Third Prize in the Art Festival of No.1 Middle School affiliated to CCNU, for piano performance *Hatsukoi*, 2013.

Academic Activities

Academic Services

- Invited to OR Talk by 运筹OR帷幄 (OR China) for two talks in 2024.

- Facilitator in section Revenue & Pricing, INFORMS Annual Meeting, 2021.

- Invited to the Alumni Forum for the 10th Anniversary of IIIS, Tsinghua University in 2021.

Conference & Journal Reviewing

- Conference Reviewing: ESA (2024)

- Journal Reviewing: Operations Research (2025)

Advising

- Haibo Xiao (Undergraduate at Tsinghua University. Next step: Tsinghua PhD)

- Hongxu Su (PhD student at HKUST(GZ))

- Qiushi Han (Undergraduate at UIUC. Next step: MIT ORC PhD)

- Renfei Tan (PhD student at MIT)

Teaching

- Teaching Assistant, Causal & Statistical Inference, Fall 2018, Tsinghua University.

- Discussion Session, Calculus, Fall 2015, Tsinghua University.

Miscellaneous

Languages

- Mandarin Chinese (native)

- English (fluent)

- Classical Chinese (writing as a hobby)

Coding Skills

- Mainly using C++, MATLAB and Mathematica, also with command of Python, Java, PHP.

- With some knowledge in ROS, Verilog HDL and assembly language.

- Open to learn new programming languages when in need.

Extracurricular Activities

- I have an amateur interest in Capture-The-Flag (CTF) cybersecurity competitions, and developed two Reverse challenges in the TQLCTF 2022.

- I have a wide scope of hobbies in arts and aerobic sports, especially in vocal music, photography, piano, table tennis and orienteering.

(Updated on Apr 30, 2025)