CURRICULUM VITAE

Hao, Shugang

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(current version: 26 July 2025)

EDUCATION

- **Doctor of Philosophy** 08/2022
  - *Engineering Systems and Design, Singapore University of Technology and Design, Singapore*
  - *Advisor: Associate Professor Lingjie Duan (Associate Head of Pillar)*

- **Bachelor of Engineering** 06/2017
  - *Information Engineering, South China University of Technology, Guangzhou, Guangdong, China*

WORKING EXPERIENCE

- **Research Fellow** 09/2022 - 02/2026 (expected)
  - *Engineering Systems and Design Pillar, Singapore University of Technology and Design, Singapore*
  - *Advisor: Associate Professor Lingjie Duan (Associate Head of Pillar)*

RESEARCH INTERESTS

- LLM-enhanced network optimization theory

- LLM alignment

- mobile crowdsourcing

- Game theory and mechanism design

AWARDS

- **SUTD President's Graduate Fellowship**, 2017 - 2022.

- **ACM MobiHoc 2019/SIGMobile student travel grant**.

PUBLICATIONS

- Journal papers

(J3) **Shugang Hao** and Lingjie Duan, *"To Save Mobile Crowdsourcing from Cheap-talk: A Game Theoretic Learning Approach,"* IEEE Transactions on Mobile Computing (**IEEE TMC**), vol. 23, no. 8, pp. 8418-8430, August 2024.

(J2) **Shugang Hao** and Lingjie Duan, *"To Help or Disturb: Introduction of Crowdsourced WiFi to 5G Networks,"* IEEE Transactions on Mobile Computing (**IEEE TMC**), vol. 22, no. 9, pp. 5583-5596, September 2023.

(J1) **Shugang Hao** and Lingjie Duan, *"Regulating Competition in Age of Information under Network Externalities,"* IEEE Journal on Selected Areas in Communications (**IEEE JSAC**), vol. 38, no. 4, pp. 697-710, April 2020.

- Conference papers

  (C5) **Shugang Hao***, Hongbo Li* and Lingjie Duan, *"To Theoretically Understand Transformer-Based In-Context Learning for Optimizing CSMA"*, in ACM International Symposium on Mobile Ad Hoc Networking and Computing (**ACM MobiHoc**), Houston, Texas, USA, Oct. 27-30, 2025. (* The two authors contributed equally to this work.)

  (C4) **Shugang Hao** and Lingjie Duan, *"Online Learning from Strategic Human Feedback in LLM Fine-Tuning"*, IEEE International Conference on Acoustics, Speech, and Signal Processing (**IEEE ICASSP**, oral), Hyderabad, India, April 6-11, 2025.

  (C3) **Shugang Hao** and Lingjie Duan, *"Algorithm Design for Continual Learning in IoT Networks"*, IEEE International Conference on Acoustics, Speech, and Signal Processing (**IEEE ICASSP**), Hyderabad, India, April 6-11, 2025.

  (C2) **Shugang Hao** and Lingjie Duan, *"To Save Crowdsourcing from Cheap-Talk: Strategic Learning from Biased Users,"* in the 21th International Symposium on Modeling and Optimization in Mobile, Ad hoc, and Wireless Networks (**IEEE WiOpt**), Singapore, August 24-27, 2023.

  (C1) **Shugang Hao** and Lingjie Duan, *"Economics of Age of Information Management under Network Externalities,"* in ACM International Symposium on Mobile Ad Hoc Networking and Computing (**ACM MobiHoc**), Catania, Italy, July 2-5, 2019.

TEACHING EXPERIENCES

- **Teaching Assistant**

  ESD-40.012 Manufacturing and Service Operation, 2020 Spring & 2019 Spring,

  Singapore University of Technology and Design.

SERVICES

- **Conference Chairs**
  - Web Chair, ACM SenSys 2024, Hangzhou.
  - Local Arrangement Chair, AIoTSys 2024, Hangzhou.
  - Local Arrangement Chair, IEEE/IFIP WiOpt 2023, Singapore.

- **Technical Program Committee Member**
  - AIoTSys 2024, Hangzhou.

- **Technical Reviewers**
  - IEEE Journal on Selected Areas in Communications,
  - IEEE Transactions on Networking,
  - IEEE Transactions on Mobile Computing,
  - IEEE Internet of Things Journal,
  - IEEE Transactions on Wireless Communications,
  - ACM Transactions on Sensor Networks,
  - IEEE Transactions on Communications,
  - IEEE Transactions on Vehicular Technology,
  - IEEE Transactions on Cognitive Communications and Networking,

- IEEE Communication Letters,
- IEEE Wireless Communications Magazine,
- ACM MobiHoc Symposium, IEEE SECON, IEEE ICC, IEEE GLOBECOM, IJCNN.

- **Professional Membership**
  - Institute of Electrical and Electronics Engineers (IEEE),
  - IEEE Communications Society.

INVITED TALKS

- **"The Economics of Competition under Network Externalities**,"
  – at Fuzhou University (online), 12/01/2024.
  – at Sun Yat-sen University, Guangzhou, Guangdong, China, 14/09/2023.

- **"To Help or Disturb: Introduction of Crowdsourced WiFi to 5G Networks**,"
  - at South China University of Technology, Guangzhou, Guangdong, China, 12/09/2023,
  - at Northwest Normal University (online), 29/09/2022.

- **"To Save Crowdsourcing from Cheap-talk: Strategic Learning from Biased Users**,"
  – at Sun Yat-sen University (Zhuhai Campus), Zhuhai, Guangdong, China, 09/09/2023.

- **"Economics of Age of Information Management under Network Externalities**,"
  - at Guangdong University of Technology, Guangzhou, Guangdong, China, 31/08/2019,
  - at Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, Guangdong, China, 30/08/2019,
  - at South China University of Technology, Guangzhou, Guangdong, China, 27/08/2019.