

CURRICULUM VITAE

Hao, Shugang

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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 fine-tuning from human feedback
- 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, AIOISys 2024, Hangzhou.
- Local Arrangement Chair, IEEE/IFIP WiOpt 2023, Singapore.

- **Technical Program Committee Member**

- AIOISys 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.