

Xu Zhang

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Education

Huazhong University of Science and Technology, China
Master of Information and Communication Engineering

GPA: 3.64/4 June 2024

Huazhong University of Science and Technology, China
Bachelor of Telecommunication Engineering

GPA: 3.87/4 June 2021

Academic Experience

Game Theoretic Modeling and Optimization for Resource Sharing of Massive Intelligent Things in 6G (Founded by National Natural Science Foundation of China)

Research Assistant

September 2021 - present

- Proposed a novel framework for strategic semantic communication.
- Investigated the fundamental limit of distortion rate for strategic semantic communication problems.
- Demonstrated that committing to an encoding strategy cannot always achieve distortion reduction at the encoder.
- Proposed a feasible condition under which committing to an encoding strategy to improve distortion performance.

Network Resource Sharing and Allocation for Next Generation Communication Systems (Founded by Fundamental Research Funds for the Central Universities Grant)

Research Assistant

July 2019 - June 2021

- Contributed to proposing a novel VAE framework for wireless access latency reduction for Internet of Vehicles.
- Contributed to model establishment and investigating the impact of major factors on the performance of AoI.

Research on detection and protection methods of malicious network software, Provincial College Student Innovation and Entrepreneurship Training Program, China

Project Leader

October 2018 - October 2020

- Reproduced Mirai virus source code under Linux operating system.
- Simulated Mirai virus attack behavior within the NS3 network simulation platform and gathered data.

Next-generation Wireless Network Technologies Course, Huazhong University of Science and Technology, China

Teaching Assistant

September 2022 – June 2023

- Directly responsible for answering questions from students about mobile cellular networks and WiFi networks.

Publications

- Yong Xiao, **Xu Zhang**, Yingyu Li, Guangming Shi, and Tamer Başar, "Rate-distortion Theory for Strategic Semantic Communication," IEEE Information Theory Workshop (ITW), Mumbai, India, November 2022.
(<https://ieeexplore.ieee.org/document/9965825>)

Work Experience

Cloud and Smart Industries Group (CSIG) | Tencent Holdings Ltd

June 2020 – August 2020

Intern

- Developed a robust user data management system using Java and Sql Server
- Optimized the code logic leading to a 20% increase in system running speed

Academic Honors

- National Scholarship for Master Student, 2022
- National Scholarship for Bachelor Student, 2019
- Provincial Excellent Project in Innovation and Entrepreneurship Training Program for college students, 2020
- Prize for Outstanding Project in China College Students' 'Internet+' Innovation and Entrepreneurship Competition, 2019
- National Encouragement scholarship for Bachelor Student, 2018

Technical Skills

- Programming Languages: C, Python, H5, Java, Verilog, Matlab; TOEFL iBT 100 Scores