

# 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 98 Scores