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Chinese

English

French

Native Speaker

TOEFL 107

A2

Education

- 2024-on

Ingénieur in Computer Science, Télécom Paris, Île-de-France, France.

GPA: 3.93/4.0

Core Courses: Parallel and Distributed Computing, Data Mining, Graph Learning
- 2022-2025

M.Eng in Computer Science, Tongji University, Shanghai, China.

GPA: 4.83/5.0 Ranking: 1/48 *Summa Cum Laude*

Research Area: Internet of Things, Wireless Communication
- 2018-2022

B.Eng in Information Security, Hangzhou Dianzi University, Zhejiang, China.

GPA: 4.72/5.0 Ranking: 1/116 *Summa Cum Laude*

Core Courses: Computer Networks, Principles of Communication, Signals and Systems
- 2015-2018

Hangzhou Xuejun Highschool, Zhejiang, China.

Research Experience

- 2022-on

Resonant Beam System

Employing intra-cavity laser beam resonance to achieve high-efficiency wireless power transfer, communication, and positioning.

Role: Project member, researcher, and simulation program developer.
- 2019-2022

Insight Security

An integrated network security solution for industrial control system.

Role: Project leader, system architect, and developer.

Publication Highlights

- 2025

Integrated Sensing and Communication System Based on Radio Frequency Resonance Beam.

Y. Guo, [S. Xia](#), M. Xiong, Q. Liu, S. Zhou, W. Fang, Q. Jiang, G. Yan, J. Mu.

Under submission to IEEE Transactions on Signal Processing. [arXiv:2501.18878](#).
- 2025

Mobile Self-Protection Resonant Beam SWIPT with Adaptive Phase Control.

X. Wang, [S. Xia](#), W. Fang, M. Liu, M. Xiong, Q. Liu, Z. Pan.

IEEE Internet of Things Journal
doi:[10.1109/JIOT.2025.3595641](#)
- 2025

Frequency Division Duplexing Resonant Beam Communication.

[S. Xia](#), Q. Liu, Q. Jiang, W. Fang, M. Liu.

IEEE Transactions on Wireless Communications
Accepted for publication.
- 2024

Millimeter-wave Resonant Beam SWIPT.

[S. Xia](#), Q. Jiang, W. Fang, Q. Liu, S. Zhou, M. Liu, M. Xiong.

IEEE Internet of Things Journal
doi:[10.1109/JIOT.2024.3452121](#) Open science: [Collin911/RF-RBSWIPT](#)
- 2023

Auto-Protection for Resonant Beam SWIPT in Portable Applications.

[S. Xia](#), Q. Liu, M. Liu, W. Fang, M. Xiong, Y. Bai, X. Li.

IEEE Internet of Things Journal
doi:[10.1109/JIOT.2023.3298521](#) Open science: [Collin911/Resonant-Beam-AutoPro](#)
- 2023

NLOS Transmission Analysis for Mobile SLIPT Using Resonant Beam.

M. Liu, [S. Xia](#), M. Xiong, M. Xu, Q. Liu, H. Deng.

IEEE Transactions on Wireless Communications
doi:[10.1109/TWC.2023.3277593](#)
- 2022

Integrated Communication and Positioning With Resonant Beam.

M. Liu, [S. Xia](#), M. Xiong, M. Xu, W. Fang, Q. Liu.

IEEE Transactions on Wireless Communications
doi:[10.1109/TWC.2022.3173929](#)

Patents

- 2023 **A Portable Auto-Protected Simultaneous Wireless Information and Power Transfer System.**
Q. Liu, S. Xia, M. Liu, Y. Bai, S. Han, M. Xu, X. Li.
CN Patent No.: CN116707652A. Under examination as to substance.
- 2023 **A Barcode Scanning System based on Resonant Beam System.**
Q. Liu, X. Li, S. Xia.
CN Patent No.: CN1172773030A. Under examination as to substance.
- 2023 **A Priority-based Dynamic Communication Resource Allocation Method and Apparatus.**
Q. Liu, Y. Zhu, S. Xia, Q. Jiang, S. Shen.
CN Patent No.: CN116347634A. Under examination as to substance.
- 2021 **An Intrusion Detetion Method and Apparatus based on Modbus Packet Reassembly.**
W. Yin, Q. Zheng, H. Hu, S. Xia, K. Ye, X. Zhang, L. Zhai, T. Wu.
CN Patent No.: CN114124447A. Patent granted in 2024.
- 2020 **A Lightweight Certificate-Free Industrial Internet of Things Access Control Method and System.**
Q. Chen, T. Wu, Q. Zheng, L. Dong, C. Hu, S. Xia, et., al.
CN Patent No.: CN111526130A. Patent granted in 2021.

Work Experience

- 2025–2025 **Peer Reviewer.**
IEEE Journal on Selected Areas in Communications, and Autonomous Intelligent Systems.
- 2023–2025 **Research Mentor**, Chase Education Technology Co., Ltd., Hubei, China.
Mentor undergraduate students in conducting research projects related to computer science.
- 2019–2022 **Teaching Assistant**, Hangzhou Dianzi University, China.
Signals and Systems, Steganography and Digital Watermarking.
- 2021–2022 **President of Student Union**, Hangzhou Dianzi University, China.
Responsible for internal and financial affairs, and the Dept. Cultural & Academic Activities.

Honors

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| 2024 | France Excellence EIFFEL Scholarship. | Campus France, France. |
| 2024 | National Scholarship for Master Students. | Ministry of Education, China. |
| 2023 | Honorable Mention of Excellent Graduate Students. | Tongji University, Shanghai, China. |
| 2023 | National Scholarship for Master Students. | Ministry of Education, China. |
| 2022 | Valedictorian of the University Graduation Ceremony. | Hangzhou Dianzi University, Zhejiang, China. |
| 2022 | University Scholarship for Meritorious Graduates. | Hangzhou Dianzi University, Zhejiang, China. |
| 2021 | Zhejiang Provincial Scholarship. | Department of Education, Zhejiang, China. |
| 2021 | Top-10 Students of the Year. | Hangzhou Dianzi University, Zhejiang, China. |
| 2020 | National Scholarship for Undergraduate Students. | Ministry of Education, China. |
| 2019 | Zhejiang Provincial Scholarship. | Department of Education, Zhejiang, China. |

Awards & Grants

- 2021 **Interdisciplinary Contest in Modeling (ICM).**
Topic: Exploration of the Impact Factors for Music Trending - A Graph-based Approach.
Role: Team leader, core-model builder, and paper writer.
Honorable Mention, USA.
- 2021 **China College Computer Competition (C4).**
Topic: Integrative Security Solution including Firewalls, Intrusion Detection Systems (IDS), and Vulnerability Assessments, for Industrial Networks and the Internet of Things.
Role: Team leader, IDS algorithm designer, and visualization platform developer.
Second Prize in Easter China Division, China.

- 2021 **Challenge Cup College Scientific Innovation Contest.**
Topic: Cloud-Edge-Terminal Collaborative Security Protection for the Internet of Things.
Role: Acting team leader, IDS algorithm designer, and visualization platform developer.
Third Prize in Zhejiang Province, China.
- 2020 **Challenge Cup College Entrepreneurship Contest.**
Topic: Cloud-Edge-Terminal Collaborative Security Protection for the Internet of Things.
Role: Team leader, project keynote speaker.
Third Prize in Zhejiang Province, China.
- 2020 **National Innovation Project Grants for College Students.**
Topic: Integrated Network Security System for Industrial Control System.
Role: Acting team leader, IDS algorithm designer, and visualization platform developer.
Accomplished project.
- 2019 **National Innovation Project Grants for College Students.**
Topic: Autonomous Intrusion Detection System for Industrial Control System.
Role: Team leader, and IDS developer.
Accomplished project.
- 2019 **Zhejiang Provincial *Xinmiao* Talent Project Grants.**
Topic: Autonomous Firewall System for Industrial Control System.
Role: Team leader, and firewall developer.
Accomplished project.