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Google Scholar: [Shuaifan Xia](#)

Chinese

English

French

Native Speaker

TOEFL 107

B1

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

- 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.
- 2019 **National Innovation Project Grants for College Students.**
Topic: Autonomous Intrusion Detection System for Industrial Control System.
Role: Team leader, and IDS developer.
- 2019 **Zhejiang Provincial *Xinmiao* Talent Project Grants.**
Topic: Autonomous Firewall System for Industrial Control System.
Role: Team leader, and firewall developer.