

Website: [collin911.github.io/homepage](https://collin911.github.io/homepage)  
Email: [shuaifan.xia@telecom-paris.fr](mailto:shuaifan.xia@telecom-paris.fr)  
ORCID: [0000-0002-9769-4373](https://orcid.org/0000-0002-9769-4373)  
Google Scholar: [Shuaifan Xia](#)

Chinese	Native Speaker
English	TOEFL 107
French	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, Concurrent Programming, 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, Cybersecurity
- 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](#)
- 2024

**Frequency Division Duplexing Resonant Beam Communication.**

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

Major revision submitted to IEEE Transactions on Wireless Communications.
- 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

- 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   **FLTRP-ETIC Cup English Reading Comprehension Contest.**  
First Prize in Zhejiang Province, China.
- 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.