

Ke Xu

Nanjing University of Posts and Telecommunications

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EDUCATION

Nanjing University of Posts and Telecommunications

Nanjing, China

MPhil in Communication and Information System, College of Telecommunications and Information Engineering,

National Engineering Research Center of Communications & Networking

Sep 2022 – Jun 2025

- GPA: 84/100
- **Research Interests:** Wireless communications, MAC protocol, deep reinforcement learning, reconfigurable intelligent surface, random access procedure, cell-free network, mMTC

Nantong University

Nantong, China

B.Eng. in Electronics and Information Engineering, School of Information Science & Technology

Sep 2018 – Jun 2022

- Comprehensive GPA: 89.7/100, ranking: 1/28

Nagasaki Wesleyan University, Nagasaki Institute of Applied Science

Jul 2019

Summer program of Telecommunications

Nagasaki, Japan

PUBLICATIONS

- [1] **K. Xu**, Y. Xu, and Xiaoming Wang, Xianbin Wang “A Hybrid Collaborative Learning for Age of Information Minimization in Massive Access,” *IEEE Transactions on Vehicular Technology*. (under review, R2)
- [2] **K. Xu**, Y. Xu, and X. Wang, “Research On Massive Random Access Method for Space-Air-Ground Integrated Network,” *Mobile Communications*, vol. 47, no. 7, pp. 58–63, Jul. 2023, doi: 10.3969/j.issn.1006-1010.20230514-0001.

RESEARCH EXPERIENCE

National Natural Science Foundation of China

Jan 2023 – Present

Supervisor: Youyun Xu

Nanjing

Project: Multi-RIS-assisted V2X Communication Enhancement Technology in Urban Environments

No.62371246

- Analyzing the channel space-time characteristics and extracted features and dimensions of channel matrix with multiple sparsity structure of the multi-RIS system channel.
- Solving the problem of high overhead of channel estimation in double selective fading in urban environment, achieving accurate online CSI output with low pilot and low latency.
- Optimizing beam and access efficiency under uncertain and complex link blockage, realizing the seamless coverage of multi-mobile vehicle communication.

Research on Service Customized Network Architecture and Key Technologies

Jan 2023 – Jan 2024

National Innovation Center par Excellence, Jiangsu Industrial Technology Research Institute

Nanjing

Project: Key Technologies and Application Scenarios of Deterministic Networks

- Analyzed the application scenarios and requirements of deterministic networking technologies in the industrial Internet, vehicle networks (V2X), and mobile communication networks, and wrote a related report.

The National Key Research and Development Program of China (International)

Sep 2021 – Sep 2022

Supervisor: Youyun Xu

Nanjing

Project: A New Generation Wireless Mobile Communication System for Intelligent Railway

No. 2016YFE0200200

- Proposed a new generation integrated architecture for railway wireless mobile communication ground-air integration
- Completed the development and testing of the LTE-R experimental system, and the R&D of 5G-R railway dedicated network base stations and terminal products

SCIENTIFIC COMPETITIONS

The Challenge Cup College Student Entrepreneurship Plan Competition

May 2023

Leader: Ke Xu

Nanjing

Project: Construction Project of Smart Power IoT platform based on 5G

College-level Bronze Award

- Built a smart energy IoT platform based on 5G. The platform could collect status information from various terminal devices, use edge computing technology to intelligently identify the status information, and upload sensitive status information to the cloud platform via 5G communication technology.

China College Students' Innovational Competition

Jul 2020

Keynote Speaker: Ke Xu

Nantong

Project: Sea Area Communication

College-level Gold Award

- Built a shipborne base station network, designed a mobile shipborne antenna, and used a Customer Premises Equipment (CPE) platform to convert LTE and 5G signals into WiFi signals.

HONORS & AWARDS

The Third Prize Scholarship	Sep 2023
Bronze Award of 2023 "The Challenge Cup" in NJUPT	May 2023
The First Prize Scholarship(top 10%)	Sep 2022
Recommendation: Formally recommended for further studies in MPhil at NJUPT(top 3%, 1/28)	Sep 2021
The First Prize Scholarship	Sep 2021
Jiangsu Computer Rank Examination Certificate, level 3:	
Achieved the highest level with a focus on Microcomputer Principle and Interface Technology	May 2021
The Second Prize Scholarship	Sep 2020
Gold Award of 2020 China College Students' Innovational Competition in Nantong University	Jul 2020
The First Prize Scholarship	Sep 2019

WORKING EXPERIENCE

NJUPT Research Academy of Communication & Networking Industry	Aug 2022 – Aug 2023
<ul style="list-style-type: none">Intelligent and Digital Transformation of Manufacturing Industry with Jiangsu Province Government<ul style="list-style-type: none">Conducted factory field research, generated diagnostic reports about the level of their intelligent transformation and the places need improving.Communication Network and Intelligent Terminal Research with Sheng Xun Co., Ltd<ul style="list-style-type: none">Conducted researches on standards and patents of wearable electronic devices, involving in 3GPP reports and Chinese patents, a patent disclosure is accomplished.	
China Mobile Communications Corporation, Siyang Branch	Jun 2022 – Jul 2022
<ul style="list-style-type: none">Checked the connected functionality of Base Station in 3G, LTE, and 5G regularlyNegotiation of construction of central communication processing roomAssisted with communication workers to strip and weld optical fiberAcceptance check of construction of BBU and RRUParticipated in using emergency diesel generators for base stationInstalled broadband to customers at homeReceived customer complaint calls and conducted field tests for signal quality	

SKILLS

Languages: Mandarin (Native), English (IELTS: 6.5, CET4: 548, CET6: 531)
Technical: Matlab, Python, LaTeX, Arduino, Unity, C++
Artistic: Silver Award of the 6th National College Student Art Exhibition in Jiangsu Province(vocal), as Tenor, 2020; Champion of the College-level Singing Competition in Nantong University, 2018
Volunteer: Advanced Individual Award of Summer Social Practice, 2019; Volunteer as sports player assistant of Sports Day in Nantong University, 2019