

Ke Xu

Nanjing University of Posts and Telecommunications

+86 177 1508 5190 | xuke695615201@gmail.com | 1022010210@njupt.edu.cn | [ORCID](#)

EDUCATION

Nanjing University of Posts and Telecommunications

Nanjing, China

M.Sc.Eng. in Communication & Information System,

National Engineering Research Center of Communications & Networking

Sep 2022 – Jun 2025

- GPA: 3.62/4.00, ranking: 3/60

- 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 & Information Engineering, School of Information Science & Technology

Sep 2018 – Jun 2022

- GPA: 3.51/4.00, Comprehensive GPA: 89.7/100, ranking: 1/28

- Relevant Coursework: Communication Principles (94), Information Theory & Coding (92)

PUBLICATIONS

[1] **Ke 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*, doi: 10.1109/TVT.2024.3467255.

[2] **Ke 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

Hybrid Collaborative Learning for Age of Information Minimization in Massive Access

Author: Ke Xu

Aug 2023 - Jul 2024

- Analyzed the random access procedure using age-critical frameless ALOHA, formulated the optimization problem, and proposed a hybrid collaborative learning algorithm to optimize the age of information.
- Designed reward functions for devices and base stations (BS) to address the trade-off between the age of information and normalized throughput, ensuring cooperative operation.

Research On Massive Random Access for Space-Air-Ground Integrated Network

Author: Ke Xu

Jan 2023 - Jul 2023

- Analyzed the optimization problem of massive access in space-air-ground integrated networks, and proposed a reinforcement learning-based random access method that outperforms the traditional access class barring (ACB) method.

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

Bronze Award

China College Students' Innovational Competition

Jul 2020

Keynote Speaker: Ke Xu

Nantong

Project: Sea Area Communication

Gold Award

HONORS & AWARDS

Outstanding Graduate Student

Sep 2024

The First Prize Scholarship

Sep 2024

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

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

SKILLS

Languages: Mandarin (Native), English (IELTS: 7.0 with L:7.5;R:8.0;W:7.0;S:6.0, 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