

# Kang Yang

## Curriculum Vitae

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## EDUCATION

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- PhD Student University of California, Merced, CA, USA, *Jan 2020 - Dec 2024 (expected)*.  
Research Focus: AI for Wireless Networking and Sensing.  
Advisor: [Wan Du](#) in Department of Computer Science and Engineering.
- Master of Engineering Xi'an Jiaotong University, Xi'an, China, *Sept 2016 - Jun 2019*.  
Research Focus: Reinforcement Learning Applications and Big Data Analytics.
- Bachelor of Engineering Xi'an University of Science and Technology, Xi'an, China, *Sept 2012 - Jun 2016*.

## AWARD

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- 2024 UC Merced Professional Development Award
- 2024 - 2025 Farms Food Future Innovation Initiative (F3) R&D GSR Award
- 2023 - 2024 Farms Food Future Innovation Initiative (F3) R&D GSR Award
- 2022 UC Merced GSA Conference Travel Award
- The Best Paper Runner-up Award, IEEE DCOSS-IoT 2021, as the first author

## PUBLICATION

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Note: \* marks co-primary authors.

### Conference

- [C5] Kang Yang, Yuning Chen, and Wan Du. OrchLoc: In-Orchard Localization via a Single LoRa Gateway and Generative Diffusion Model-based Fingerprinting. In the 22nd ACM International Conference on Mobile Systems, Applications, and Services (**MobiSys**), 2024.
- [C4] Kang Yang\*, Yuning Chen\*, Xuanren Chen, and Wan Du. Link Quality Modeling for LoRa Networks in Orchards. In the 22nd ACM/IEEE Conference on Information Processing in Sensor Networks (**IPSN**), 2023.
- [C3] Kang Yang and Wan Du. LLDPC: A Low-Density Parity-Check Coding Scheme for LoRa Networks. In the 20th ACM Conference on Embedded Networked Sensor Systems (**SenSys**), 2022.
- [C2] Kang Yang, Xi Zhao, Jianhua Zou, and Wan Du. ATPP: A Mobile App Prediction System Based on Deep Marked Temporal Point Processes. In the 17th IEEE International Conference On Distributed Computing in Sensor Systems and the Internet of Things (**DCOSS-IoT**), 2021. **Best Paper Runner-Up Award**.
- [C1] Zhihao Shen\*, Kang Yang\*, Wan Du, Xi Zhao, and Jianhua Zou. DeepAPP: A Deep Reinforcement Learning Framework for Mobile Application Usage Prediction. In the 17th ACM Conference on Embedded Networked Sensor Systems (**SenSys**), 2019.

### Journal

- [J7] Kang Yang and Wan Du. A Low-Density Parity-Check Coding Scheme for LoRa Networks. **ACM Transactions on Sensor Networks**, pp. 1-28, 2024.
- [J6] Kang Yang, Miaomiao, Liu, and Wan Du. RALoRa: Rateless-Enabled Link Adaptation for LoRa Networking.

**IEEE/ACM Transactions on Networking**, pp. 1-16, 2024.

[J5] Zhihao Shen, Kang Yang, Xi Zhao, Jianhua Zou, and Wan Du. Fast Map Matching for Cellular Data. **IEEE Transactions on Knowledge and Data Engineering**, pp. 1-18, 2024.

[J4] Kang Yang, Xi Zhao, Jianhua Zou, and Wan Du. ATPP: A Mobile App Prediction System Based on Deep Marked Temporal Point Processes. **ACM Transactions on Sensor Networks**, vol. 19, no. 3, pp. 1-24, 2023.

[J3] Miaomiao Liu, Kang Yang, Yanjie Fu, Dapeng Oliver Wu, and Wan Du. Driving Maneuver Anomaly Detection based on Deep Auto-Encoder and Geographical Partitioning. **ACM Transactions on Sensor Networks**, vol. 19, no. 2, pp. 1-22, 2023.

[J2] Zhihao Shen\*, Kang Yang\*, Wan Du, Xi Zhao, and Jianhua Zou. DeepAPP: A Deep Reinforcement Learning Framework for Mobile Application Usage Prediction. **IEEE Transactions on Mobile Computing**, vol. 22, no. 2, pp. 824-840, 2021.

[J1] Kang Yang, Yuning Chen, and Wan Du. FLog: Link Quality Modeling for LoRa Networking in Orchards. Under Submission in ACM Transactions on Sensor Networks.

## GRANT/PROPOSAL

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**Title:** Reliable and Energy-Efficient LoRa Networks for Smart Irrigation and Groundwater Recharging in Orchards  
PRINCIPAL INVESTIGATOR: Kang Yang

DURATION: August 15, 2023 - August 14, 2024

FUNDING: Funded by the Farms Food Future Innovation Initiative (F3) R&D GSR Program through the US Department of Commerce, Economic Development Administration Build Back Better Regional Challenge

**Title:** (Renewal) Reliable and Energy-Efficient LoRa Networks for Smart Irrigation and Groundwater Recharging in Orchards

PRINCIPAL INVESTIGATOR: Kang Yang

DURATION: August 15, 2024 - August 14, 2025

FUNDING: Funded by the Farms Food Future Innovation Initiative (F3) R&D GSR Program through the US Department of Commerce, Economic Development Administration Build Back Better Regional Challenge

## BOOK CHAPTER

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Publishing House of Mobile Big Data Analytics for Social Computing. Print ISBN: 9787121401695. Chapters Electronics Industry 7 and 10.

## RESEARCH EXPERIENCE

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Research Assistant University of California, Merced, CA, USA. Jan 2022 - May 2023.  
Research Focus: Artificial Intelligence of Things (AIoT).

Research Assistant Xi'an Jiaotong University, Xi'an, China. Jun 2019 - Dec 2019.  
Research Focus: Mobile Computing.

## TEACHING EXPERIENCE

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- Spring 2021 Course: CSE 005 Introduction to Computer Applications.  
Role: Teaching Assistant.
- Fall 2020, 2021 Course: CSE 150 Operating Systems.  
Role: Teaching Assistant.
- Spring 2020 Course: CSE 021 Introduction to Computing II.

Role: Teaching Assistant.

## PROFESSIONAL SERVICE

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Conference Reviewer IEEE ICC 2024.

ACM SenSys 2022 Shadow Program Committee.

IEEE GLOBECOM 2021.

Journal Reviewer ACM Transactions on Sensor Networks.

IEEE Transactions on Wireless Communications.

ACM Transactions on Internet of Things.

Journal of Systems Science and Systems Engineering.

IEEE/ACM Transactions on Networking.

External Reviewer USENIX ATC 2024, ACM SenSys 2023, IEEE INFOCOM 2020 2021 2023, ACM BuildSys 2023, IEEE ICDCS 2020 2022, ACM UbiComp 2020, IEEE/ACM Transactions on Networking, IEEE Transactions on Mobile Computing.

## PRESENTATION

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- Improving the Energy Efficiency and Reliability of LoRa Networks Using Coding Techniques  
EECS Seminar talk at University of California, Merced, March 2024
- LLDPC: A Low-Density Parity-Check Coding Scheme for LoRa Networks  
Conference talk at SenSys, Boston, November 2022
- ATPP: A Mobile App Prediction System Based on Deep Marked Temporal Point Processes  
Conference talk at DCOSS-IoT, Virtual, June 2021

## TECHNICAL SKILL

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Language Python, Java, C/C++, MATLAB.

Framework Pytorch, Tensorflow, CUDA, Apache Spark, Apache Hadoop.

Other Tools Vim, Linux Shell.

## REFERENCE

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Ph.D. Advisor Wan Du [↗](#), Assistant Professor, University of California, Merced.  
wdu3@ucmerced.edu.