

Haofan Lu

Email: haofan@cs.ucla.edu | Phone: (310) 622-2943 | Homepage: luhaofan.github.io
404 Westwood Plaza, ENG VI Room 497, Los Angeles, CA 90095

RESEARCH INTERESTS

- AI for Wireless, 3D Reconstruction, Neural Radiance Fields

EDUCATION

University of California, Los Angeles	Sep 2021 – Jun 2026 (Expected)
PhD student in Computer Science Department	
<ul style="list-style-type: none">• Advisor: Professor Omid Abari — Intelligent Connectivity (ICON) Group• Thesis Project: AI-assisted Integrated Sensing and Communication for NextG Wireless Networks	
University of Illinois at Urbana-Champaign	Sep 2017 – Jun 2021
<i>B. S.</i> in Electrical Engineering	GPA: 3.88
<ul style="list-style-type: none">• Thesis Advisor: Professor Romit Roy Choudhury• Thesis Project: Indoor Localization with the Assistance of Ultrasonic Beacons	
Zhejiang University	Sep 2017 – Jun 2021
<i>B. Eng.</i> in Electrical Engineering and Automation	GPA: 3.94
<ul style="list-style-type: none">• Capstone: An on-bike crowd-sourcing urban air-quality monitoring system (Dean's Best Social Impact Award)	
HONORS & AWARDS	
Amazon AI Fellowship [Link]	2024
Qualcomm Innovation Fellowship [Link]	2024
PhD Research Fellowship of University of California, Los Angeles	2021
Graduation with Highest Honor of University of Illinois at Urbana-Champaign	2021
Dean's List of University of Illinois at Urbana-Champaign	2020

SELECTED PUBLICATIONS

- [ICML'24] [Haofan Lu](#), Christopher Vattheuer, Baharan Mirzasoleiman, Omid Abari "NeWRF: A Deep Learning Framework for Wireless Radiation Field Reconstruction and Channel Prediction" [\[Paper\]](#) [\[Poster\]](#) [\[Slides\]](#) [\[Code\]](#)
- [HotMobile'24] [Tianxiang Li](#), Mohammad H. Mazaheri, Kalaivani Kamalakannan, [Haofan Lu](#), Omid Abari "Can IoT Devices be Powered up by Future Indoor Wireless Networks?". [\[Paper\]](#) [\[Slides\]](#)
- [SIGCOMM'23] [Haofan Lu](#), Mohammad Hosseini Mazaheri, Omid Abari, "A Millimeter Wave Backscatter Network for Joint Communication and Localization". Acceptance rate: 71/323 = 22.0%. [\[Paper\]](#) [\[Slides\]](#)
- [IEEE IoT Journal'23] [Ali Abedi](#), [Haofan Lu](#), Alex Chen, Charlie Liu, Omid Abari, "WiFi Physical Layer Stays Awake and Responds When Should Not". IF: 10.6. [\[Paper\]](#)
- [HotNets'22] [Haofan Lu](#), Tianxiang Li, Reza Rezvani, Ali Abedi, Omid Abari, "Bringing WiFi Localization to Any WiFi Devices". Acceptance rate: 32/104 = 30.8%. [\[Paper\]](#) [\[Slides\]](#)

INDUSTRY EXPERIENCE

Samsung Research America - Standard and Mobility Innovation Lab	Jun 2023 – Sep 2023
Research Intern	
<ul style="list-style-type: none">• Project: WiFi-based velocity estimation and tracking for Ambient Intelligence• Developed an indoor device-free tracking system based on WiFi, and filed a patent for the code and artifacts	
Hewlett Packard Labs - Networking and Distributed Systems Lab	Jun 2024 – Sep 2024
Research Intern	
<ul style="list-style-type: none">• Project: Integrated Sensing and Communication for Private 5G Systems• Profiled the handover latency between commercial deployed WiFi and Private 5G networks• Designed and Implemented a 5G-based sensing system to reduce the handover latency	

TECHNICAL SKILLS

- Languages: Python, MATLAB, C/C++, CUDA
- Frameworks & Platforms: PyTorch, ESP-IDF, USRP, GNU Radio, OpenAirInterface5G, srsRAN
- Softwares: Wireless Insite, WaveFarer, Accuver XCAL, Blender