

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, Internet of Things, Mobile Computing, and Integrated Sensing and Communication

EDUCATION

University of California, Los Angeles Sep 2021 – Jun 2026 (Expected)

PhD student in Computer Science Department

- 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

B. S. in Electrical Engineering

GPA: 3.88

- Thesis Advisor: Professor Romit Roy Choudhury
- Thesis Project: Indoor Localization with the Assistance of Ultrasonic Beacons

Zhejiang University Sep 2017 – Jun 2021

B. Eng. in Electrical Engineering and Automation

GPA: 3.94

- Capstone: A on-bike crowd-sourcing urban air-quality monitoring system (**Dean's Best Social Impact Award**)

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?" [\[Paper\]](#) [\[Slides\]](#)
- **[Under submission]** [Haofan Lu](#), Tianxiang Li, Omid Abari "Enhancing IoT Communication and Localization via Smarter Antenna" [\[Paper\]](#)
- **[SIGCOMM'23]** [Haofan Lu](#), Mohammad Hossein 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

- **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

- **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, Docker, OpenAirInterface, srsRAN
- Softwares: Wireless Insite, WaveFarer, Accuver XCAL

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