

Haofan Lu

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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
 - 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: 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 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, OpenAirInterface5G, srsRAN
- Softwares: Wireless Insite, WaveFarer, Accuver XCAL, Blender