

Yanzi Zhu

CONTACT	Phone: 1-520-477-8020	Email: zhuyanzi at gmail dot com
INTERESTS	Wireless systems; security and privacy; mobile sensing; data analysis & modeling	
SKILLS	System design, data & signal processing, networking, coding (Python, Matlab, C++)	
EDUCATION	University of California, Santa Barbara , Santa Barbara, CA M.S. and Ph.D., Computer Science, September 2019 <ul style="list-style-type: none">• Advisors: Prof. Ben Y. Zhao and Prof. Haitao (Heather) Zheng University of Minnesota , Minneapolis, MN B.S., Electrical Engineering (<i>High Distinction</i>), May 2014 <ul style="list-style-type: none">• Advisor: Prof. Kiarash Bazargan	
INDUSTRY EXPERIENCE	Software Engineer , <i>Google</i> , WA	Sept. 2019 — Present
	<ul style="list-style-type: none">• Manager: David Chu• Performing networking-related analysis for Google products	
	MmWave Engineer Intern , <i>Facebook</i> , CA	June 2018 — Sept. 2018
	<ul style="list-style-type: none">• Manager: Krishna Gomadam• Conducted a full-stack mmWave network diagnosis and optimization platform, including data infrastructure, analysis backend, and web UI• Led contractors in building the system, and deployed the system in multiple countries	
	MmWave Engineer Intern , <i>Facebook</i> , CA	June 2017 — Sept. 2017
	<ul style="list-style-type: none">• Manager: Djordje Tujkovic• Implemented a machine-learning-oriented anomaly detection system• Designed PHY-layer algorithms to mitigate wireless interference in the mesh network	
	MmWave Engineer Intern , <i>Facebook</i> , CA	June 2016 — Sept. 2016
	<ul style="list-style-type: none">• Manager: Djordje Tujkovic• Performed mmWave measurements and channel analysis for the Terragraph project• Designed a measurement software platform (in Python & C++)	
RESEARCH EXPERIENCE	Graduate Researcher , <i>SAND Laboratory</i> , IL	Sept. 2014 — Sept. 2019
	<ul style="list-style-type: none">• Revealed a novel passive reconnaissance attack using ambient WiFi signals to monitor human locations, and proposed defenses against such attacks• Designed a single-device mmWave mobile imaging system to detect the object's location, surface boundary, curvature, and material, while tolerating trajectory noise• Implemented a mobile energy-saving scheme by data-driven network stack offloading	
	Undergraduate Researcher , <i>FPGA Laboratory</i> , MN	Nov. 2012 — May 2014
	<ul style="list-style-type: none">• Developed a computational method named <i>binary stochastic</i> that maintains high fault tolerance and low computing latency (in hardware architecture)	
PUBLICATIONS	<ol style="list-style-type: none">1. Yanzi Zhu, Zhujun Xiao, Yuxin Chen, Zhijing Li, Max Liu, Ben Y. Zhao and Haitao Zheng. "Et Tu Alexa? When Commodity WiFi Devices Turn into Adversarial Motion Sensors." <i>Proceedings of the Network and Distributed System Security Symposium (NDSS)</i>, 2020.2. Zhujun Xiao, Yanzi Zhu, Yuxin Chen, Ben Y. Zhao, Junchen Jiang, and Haitao Zheng. "Addressing Training Bias via Automated Image Annotation." <i>arXiv preprint arXiv:1809.10242</i>, 2018.	

3. Zhijing Li, Zhujun Xiao, **Yanzi Zhu**, Irene Pattarachanyakul, Ben Y. Zhao, and Haitao Zheng. “Adversarial Localization against Wireless Cameras.” *Proceedings of Workshop on Mobile Computing Systems and Applications (HotMobile)*, Tempe, AZ, Feb. 2018.
4. **Yanzi Zhu**, Yuanshun Yao, Ben Y. Zhao and Haitao Zheng. “Object Recognition and Navigation using a Single Networking Device.” *Proceedings of International Conference on Mobile Systems, Applications, and Services (MobiSys)*, Niagara Falls, NY, Jun. 2017.
5. Zhijing Li, Ana Nika, Xinyi Zhang, **Yanzi Zhu**, Yuanshun Yao, Ben Y. Zhao and Haitao Zheng. “Identifying Value in Crowdsourced Wireless Signal Measurements.” *Proceedings of International Conference on World Wide Web (WWW)*, Perth, Australia, Apr. 2017.
6. Maryam Eslami Rasekh, Zhinus Marzi, **Yanzi Zhu**, Upamanyu Madhow and Haitao Zheng. “Noncoherent mmWave Path Tracking.” *Proceedings of Workshop on Mobile Computing Systems and Applications (HotMobile)*, Sonoma, CA, Feb. 2017.
7. **Yanzi Zhu**, Yibo Zhu, Ana Nika, Ben Y. Zhao and Haitao Zheng. “Trimming the Smartphone Network Stack.” *Proceedings of Workshop on Hot Topics in Networks (HotNets)*, Atlanta, GA, Nov. 2016.
8. Ana Nika, Zhijing Li, **Yanzi Zhu**, Yibo Zhu, Ben Y. Zhao, and Haitao Zheng. “Empirical Validation of Commodity Spectrum Monitoring.” *Proceedings of ACM Conference on Embedded Networked Sensor Systems (SenSys)*, Stanford, CA, Nov. 2016.
9. **Yanzi Zhu**, Yibo Zhu, Ben Y. Zhao and Haitao Zheng. “Reusing 60GHz Radios for Mobile Radar Imaging.” *Proceedings of Annual International Conference on Mobile Computing and Networking (MobiCom)*, Paris, France, Sept. 2015.
10. Yibo Zhu, **Yanzi Zhu**, Zengbin Zhang, Ben Y. Zhao, and Haitao Zheng. “60GHz Mobile Imaging Radar.” *Proceedings of Workshop on Mobile Computing Systems and Applications (HotMobile)*, Santa Fe, NM, Feb. 2015.
11. **Yanzi Zhu**, Peiran Suo, and Kia Bazargan. “Binary Stochastic Implementation of Digital Logic.” *Proceedings of ACM International Symposium on Field Programmable Gate Arrays (FPGA)*, Monterey, CA, Feb. 2014.

TALKS & POSTERS

1. **Yanzi Zhu**, Ben Y. Zhao and Haitao Zheng. “MmWave Sensing.” *Millimeter-Wave Networks and Sensing Systems (mmNets)*, Snowbird, UT, Oct. 2017.
2. **Yanzi Zhu**, Yibo Zhu, Ben Y. Zhao and Haitao Zheng. “60GHz Mobile Radar Imaging.” *Google Faculty Summit*, Mountain View, CA, Oct. 2015.

AWARDS

Travel Awards	
• Networked Systems Design and Implementation (NSDI)	2015 & 2016
• Mobile Computing and Networking (MobiCom)	2015 & 2016

TEACHING EXPERIENCE

Graduate Teaching Assistant	Oct. 2014 — June 2015
CS 8 Intro to Computer Science	Prof. C.K. Kroc
CS 16 Problem Solving with Computers	Prof. P. Conrad
CS 176A Intro to Computer Communication Networks	Prof. B.Y. Zhao
CS 176C Advanced Topics in Internet Computing	Prof. H. Zheng