

Kun Qian

CONTACT INFORMATION	Department of Electrical Computer Engineering University of California San Diego 9500 Gilman Drive, La Jolla, CA 92093	Homepage: https://kunqian.info Email: qiank10@gmail.com
RESEARCH INTERESTS	<p>IoT Sensing: Wireless sensing for human; Radar sensing for autonomous vehicles.</p> <p>Mobile Computing: Hidden screen-camera communication; Healthcare with Mobile devices; Indoor Localization, Mobile data mining.</p> <p>Wireless networking: Smart surface for next-generation millimeter-wave networking.</p>	
EDUCATION	Tsinghua University Ph.D. in Software Engineering. GPA: 96.2/100, Rank: 1/140. Advisor: Prof. Yunhao Liu.	2014 – 2019
	Tsinghua University B.Sc., Computer Software. GPA: 93.4/100, Rank: 1/60.	2010 – 2014
SELECTED CONFERENCE PUBLICATIONS	<ol style="list-style-type: none">1. John Nolan, Kun Qian(co-primary author), Xinyu Zhang, “RoS: Passive Smart Surface for Roadside-to-Vehicle Communication”, ACM SIGCOMM, 20212. Kun Qian, Shilin Zhu, Xinyu Zhang, Li Erran Li, “Robust Multimodal Vehicle Detection in Foggy Weather Using Complementary Lidar and Radar Signals”, IEEE CVPR, 2021.3. Kun Qian, Yumeng Lu, Zheng Yang, Kai Zhang, Kehong Huang, Xinjun Cai, Chenshu Wu, Yunhao Liu, “Hidden Screen-Camera Communication on an Invisible and Inaudible Dual Channel”, USENIX NSDI, 2020.4. Renjie Zhao, Timothy Woodford, Teng Wei, Kun Qian, Xinyu Zhang, “M-Cube: a millimeter-wave massive MIMO software radio”, ACM MobiCom, 2020.5. Yue Zheng, Yi Zhang, Kun Qian, Guidong Zhang, Yunhao Liu, Chenshu Wu, Zheng Yang, “Zero-Effort Cross-Domain Gesture Recognition with Wi-Fi”, ACM MobiSys, 2019.6. Kun Qian, Chenshu Wu, Yi Zhang, Guidong Zhang, Zheng Yang, Yunhao Liu, “Widar2.0: Passive Human Tracking with a Single Wi-Fi Link”, ACM MobiSys, 2018.7. Kun Qian, Chenshu Wu, Fu Xiao, Yue Zheng, Yi Zhang, “Acousticcardiogram: Monitoring Heartbeats using Acoustic Signals on Smart Devices”, IEEE INFOCOM, 2018.8. Kun Qian, Chenshu Wu, Zheng Yang, Yunhao Liu, Kyle Jamieson, “Widar: Decimeter-Level Passive Tracking via Velocity Monitoring with Commodity Wi-Fi”, ACM MobiHoc, 2017.9. Kun Qian, Chenshu Wu, Zimu Zhou, Yue Zheng, Zheng Yang, Yunhao Liu, “Inferring Motion Direction using Commodity Wi-Fi for Interactive Exergames”, ACM CHI, 2017.	

	<ol style="list-style-type: none"> 10. Kun Qian, Chenshu Wu, Zheng Yang, Zimu Zhou, Xu Wang, Yunhao Liu, “Tuning by Turning: Enabling Phased Array Signal Processing for WiFi with Inertial Sensors”, IEEE INFOCOM, 2016. 11. Chenshu Wu, Zheng Yang, Zimu Zhou, Kun Qian, Yunhao Liu, Mingyan Liu, “PhaseU: Real-time LOS Identification with WiFi”, IEEE INFOCOM, 2015. 12. Kun Qian, Chenshu Wu, Zheng Yang, Yunhao Liu, Zimu Zhou, “PADS: Passive Detection of Moving Targets with Dynamic Speed using PHY Layer Information”, IEEE ICPADS, 2014.
REFEREED JOURNAL PUBLICATIONS	<ol style="list-style-type: none"> 1. Yi Zhang, Yue Zheng, Kun Qian, Guidong Zhang, Yunhao Liu, Chenshu Wu, Zheng Yang. “Widar3.0: Zero-Effort Cross-Domain Gesture Recognition with Wi-Fi”, IEEE TPAMI, 2021. 2. Kun Qian, Zhaoyuan He, Xinyu Zhang, “3D Point Cloud Generation with Millimeter-Wave Radar”, ACM IMWUT, 4(4), 2021. 3. Jingao Xu, Hengjie Chen, Kun Qian, Erqun Dong, Min Sun, Chenshu Wu, Li Zhang, Zheng Yang, “iVR: Integrated Vision and Radio Localization with Zero Human Effort”, ACM IMWUT, 3(3), 2019. 4. Kun Qian, Chenshu Wu, Zheng Yang, Zimu Zhou, Xu Wang, Yunhao Liu, “Enabling Phased Array Signal Processing for Mobile WiFi Devices”, IEEE TMC, 17(8), 2018. 5. Kun Qian, Chenshu Wu, Zheng Yang, Yunhao Liu, Fugui He, Tianzhang Xing, “Enabling Contactless Detection of Moving Humans with Dynamic Speeds using CSI”, ACM TECS, 17(2), 2018.
UNDER SUBMISSION	<ol style="list-style-type: none"> 1. Kun Qian, Lulu Yao, Xinyu Zhang, Tina Ng, “MilliMirror: 3D Printed Reflecting Surface for Millimeter-Wave Coverage Expansion”, Submitted to MobiCom 2022. 2. Timothy Woodford, Kun Qian, Xinyu Zhang, Eugene Chai, Karthikeyan Sundaresan, “Mosaic: Practical Around-Corner Radar for Collision Avoidance”, Submitted to MobiCom 2022. 3. Yi Zhang, Zheng Yang, Chenshu Wu, Kun Qian, Yunhao Liu, “RFNet: A Signal Processing Neural Network and Its Applications in Wireless Sensing”, Submitted to MobiCom 2022.
TEACHING EXPERIENCE	<p>Tsinghua University Fall 2014 – 2016</p> <p>34100294 - Computer And Network Architecture (1) Teaching Assistant</p>
ADDITIONAL EXPERIENCE	<p>University of California San Diego 2018</p> <p>Visiting Scholar in Department Electrical and Computer Engineering Advisor: Prof. Xinyu Zhang Research topic: Millimeter-wave sensing and communication.</p> <p>University of Southern California 2013</p> <p>Visiting Scholar Advisor: Prof. John Heidemann Research topic: Network traffic source measurement.</p>

MENTORING	John Nolan, now Ph.D. student at University of California San Diego.	
	Zhaoyuan He, now Ph.D. student at University of Texas at Austin.	
	Jingao Xu, now Ph.D. student Tsinghua University.	
	Yi Zhang, now Ph.D. student Tsinghua Univeristy.	
	Yue Zheng Ph.D., now at Huawei Inc.	
HONORS & AWARDS	Best Paper Award, MobiCom 2020 (2/384)	2020
	Best In-Session Presentation Award, INFOCOM 2018 (1/4)	2018
	Beijing Outstanding Graduate Award (Ph.D.)	2018
	Honorable Mention Award, CHI 2017	2017
	National Scholarship	2015 – 2018
	Best Paper Candidate, ICPADS 2014 (4/323)	2014
	Tsinghua Future Scholarship Award	2014
	Tsinghua Outstanding Graduate Award	2014
	Beijing Outstanding Graduate Award (B.Sc.)	2014
	Tsinghua Outstanding Graduate Thesis Award	2014
	Tsinghua “December 9th” Scholarship	2013
	National Scholarship	2012
SERVICE	Reviewer: ACM IMWUT, IEEE TMC, IEEE ToN, IEEE TVT, IEEE IoT Journal, ACM UIST 2021, IEEE ICPADS 2021, IEEE MSN 2021, ACM S3 2019.	
REFERENCES	Xinyu Zhang Associate Professor Department Electrical and Computer Engineering University of California San Diego	Yunhao Liu Professor School of Software Tsinghua University
	Zheng Yang Associate Professor School of Software Tsinghua University	John Heidemann Professor Viterbi School of Engineering University of Southern California