

Kun Qian

CONTACT INFORMATION

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RESEARCH INTERESTS

Mobile Computing, Wireless Sensing

EDUCATION

Tsinghua University, Beijing, China

Ph.D., Software Engineering, January 2019

- Advisors: Yunhao Liu, Ph.D.
- GPA: 96.2/100, Rank: 1/140

B.S., Computer Software, July 2014

- GPA: 93.4/100, Rank: 1/60

REFEREED CONFERENCE & WORKSHOP PUBLICATIONS

1. **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.
2. **Kun Qian**, Zhaoyuan He, Xinyu Zhang, “3D Point Cloud Generation with Millimeter-Wave Radar”, ACM IMWUT, 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, 2021.
4. Renjie Zhao, Timothy Woodford, Teng Wei, **Kun Qian**, Xinyu Zhang, “M-Cube: a millimeter-wave massive MIMO software radio”, ACM MobiCom, 2020. (Best Paper Award, 2 out of 384 submissions)
5. 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, 2019.
6. 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.
7. **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.
8. **Kun Qian**, Chenshu Wu, Fu Xiao, Yue Zheng, Yi Zhang, “Acousticcardiogram: Monitoring Heartbeats using Acoustic Signals on Smart Devices”, IEEE INFOCOM, 2018.
9. **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.
10. **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. (Honorable Mention Award, top 5% of submissions)

11. **Kun Qian**, Chenshu Wu, Zheng Yang, Chaofan Yang, Yunhao Liu, "Decimeter Level Passive Tracking with WiFi", ACM HotWireless, Oct 03, 2016.
12. **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.
13. Chenshu Wu, Zheng Yang, Zimu Zhou, **Kun Qian**, Yunhao Liu, Mingyan Liu, "PhaseU: Real-time LOS Identification with WiFi", IEEE INFOCOM, 2015.
14. **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. (Best Paper Candidate, 4 out of 323)

REFEREED
JOURNAL
PUBLICATIONS

1. Jing Chu, Xu Wang, **Kun Qian**, Lina Yao, Fu Xiao, Jianbo Li, Zheng Yang, "Passenger demand prediction with cellular footprints", IEEE TMC, 2020.
2. **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.
3. **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.

RESEARCH
EXPERIENCE

- Visiting Graduate** April 2018 – September 2018
Department of Electrical and Computer Engineering,
University of California San Diego
Supervisor: Xinyu Zhang, Ph.D.
Research Content: MMWave Sensing and Communication.
- Visiting Student** July 2013 – August 2013
Information Science Institute,
University of South California
Supervisor: John Heidemann, Ph.D.
Research Content: Measurement of Network Traffic Source.
- Research Assistant** February 2015 – January 2019
Institute of Trustworthy Networks and Systems,
Tsinghua University
Supervisor: Yunhao Liu, Ph.D. and Zheng Yang, Ph.D.

TEACHING
EXPERIENCE

- Teaching Assistant** Fall 2014, 2015, 2016
34100294 - Computer And Network Architecture (1)
Instructor: Yunhao Liu, Ph.D. and Zheng Yang, Ph.D.
School of Software,
Tsinghua University

AWARDS

- Student Awards — Tsinghua University
- Beijing Outstanding Graduate (Ph.D.) 2018
 - National Scholarship 2018,2017,2016,2015,2012
 - Future Scholarship Award of Tsinghua University 2014
 - Outstanding Graduate of Tsinghua University 2014
 - Beijing Outstanding Graduate (B.S.) 2014
 - Outstanding Graduate Thesis of Tsinghua University 2014
 - "December 9th" Scholarship 2013