Zhehui (Kelsey) Zhang

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EDUCATION

University of California, Los Angeles (UCLA)   **Los Angeles, CA**
Ph.D. Student in Computer Science (GPA: 3.9/4.0)   *September 2016 - Present*
Advisor: Prof. Songwu Lu
Research Interests: *wireless networks, mobile systems, mobile computing, network security*

Shanghai Jiao Tong University (SJTU)   **Shanghai, China**
B.S. in Computer Science & Technology (Major GPA: 3.9/4.0)   *June 2016*

SELECTED PUBLICATIONS

In total, I have Ten papers published, Two US patents filed (One granted)

Zhehui Zhang, Shu Shi, Varun Gupta, Rittwik Jana. *Analysis of Cellular Network Latency for Edge-Based Remote Rendering Streaming Applications*. SIGCOMM Workshop on NEAT, 2019.

Yuanjie Li, Chunyi Peng, **Zhehui Zhang**, Zhaowei Tan, Haotian Deng, Jinghao Zhao, Qianru Li, Yunqi Guo, Kai Ling, Boyan Ding, Hewu Li, Songwu Lu. *Experience: A Five-Year Retrospective of MobileInsight*. MobiCom, 2021.

Yuanjie Li, Qianru Li, **Zhehui Zhang**, Ghufran Baig, Lili Qiu, Songwu Lu. *Beyond 5G: Reliable Extreme Mobility Management*. SIGCOMM, 2020.

Zhehui Zhang, Duowen Liu, Sujie Zhu, Shangjie Chen, Xiaohua Tian. *Squeeze More from the Fingerprints Reporting Strategy for Indoor Localization*. Proc. IEEE SECON, 2016

EXPERIENCE

University of California, Los Angeles   **Los Angeles, CA**
Graduate Research Assistant | Python, C/C++, Android   *September 2016 – Present*
• Investigated dependent misconfigurations in 4G/5G and designed an in-phone detection tool (Submitted to SIGCOMM)
• Designed a device side cellular analytics tool for cross-layer network diagnosis
• Implemented delay-doppler profile-based channel estimation for extreme mobility
• Analyzed radio latency for VR/AR applications and co-designed a low latency solution under LTE
• Co-developed MobileInsight, an extensible cellular network monitoring and analysis tool
• Built a modem log extractor based on MediaTek chipsets, supporting LTE control plane protocols

Alibaba group   **Sunnyvale, CA**
Research Intern | C/C++   *July 2019 – September 2019*
• Designed a relative path control scheme by leveraging hashing linearity in data center networks (Submitted to ATC)
• Analyzed TCP Reno/BBR performance and the impact on applications upon various failure scenarios
• Implemented a protocol of concept in Linux kernel that reduce failure disruption from minutes to seconds

AT&T Labs   **Bedminster, NJ**
Student Technician II | C/C++, Android   *June 2018 – August. 2018*
• Integrated an edge cloud-based VR system and a remote server based 360 video streaming system (Accepted by NEAT)
• Examined how radio configurations impact VR latency on an LTE-integrated edge cloud testbed
• Reduced end-to-end latency by 57% with field-of-view prediction and GPU acceleration

Ohio State University   **Columbus, OH**
Visiting Scholar | Python, Android   *June 2017 – August. 2017*
• Implemented run-time network statistics visualization tools for smartphones
• Developed analyzers to extract LTE/ UMTS/ WCDMA protocol dynamics including data/call service

SERVICES AND HONORS

Reviewer at IEEE TVT, **External reviewer** at ACM MobiCom, IEEE INFOCOM   *2015-2020*
Outstanding TA award honorable mention   *2019*
Organizing Committee member at N2Women   *2017*
Student Travel Grant – SIGCOMM'19, SIGMETRICS'18, SECON'16   *2016, 2018, 2019*

SKILLS

Programming Languages: Python, C/C++, Java, MATLAB, Verilog
Tools and Framework: Android, GNU Radio, Network simulators (NS2/3, Mininet), Tensorflow, Flask, Flink