Sheng Shen

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RESEARCH INTERESTS

Mobile/wearable computing, wireless sensing, Internet of Things (IoT), AR/VR, localization, smart homes

EDUCATION

University of Illinois at Urbana-Champaign   2017 – 2019
Ph.D., Electrical and Computer Engineering
Advisor: Professor Romit Roy Choudhury

University of Illinois at Urbana-Champaign   2014 – 2017
M.S., Electrical and Computer Engineering
Advisor: Professor Romit Roy Choudhury

University of Science and Technology of China   2010 - 2014
B.E., Electrical Engineering

INTERNSHIP EXPERIENCES

Intel Santa Clara   05/2016 – 08/2016
Intel New Devices Group (in collaboration with Sequoia Applied Technologies)

- Sports analytics with IMU sensors and wireless radios embedded in the ball
- Paper accepted to NSDI'17 and featured on ACM GetMobile magazine cover

Microsoft Research Asia   07/2013 - 05/2014
Mobile and Sensing Systems Group

- WiFi-based indoor localization, sensor sharing across mobile devices, etc.
- Two projects demoed at Microsoft Techfest'14

SELECTED AWARDS

2019: M.E. Van Valkenburg Fellowship
2018: Yee Fellowship
2018: Dr. Ok Kyun Kim Fellowship
2017: Rambus Fellowship
2013: Microsoft Research Asia Young Fellowship
2011, 12, 13, 14: Univ. of Sci. and Tech. of China Outstanding Student Scholarship

MEDIA COVERAGE

MUTE: BBC Radio, NAE Radio, Yahoo, ACM TechNews, Sina, Digital Trends, La Repubblica, …
LipRead: The New York Times, IEEE Spectrum, TechCrunch, The Seattle Times, …
iBall: ACM TechNews, Science Daily, Eurek Alert, ENC Magazine, Tech Funnel, …

PATENTS

US 20180153444A1: Body Movement Tracking. Co-authored with researchers from Intel

PUBLICATIONS

Voice Localization Using Nearby Wall Reflections
Sheng Shen, Daguan Chen, Yu-Lin Wei, Zhijian Yang, Romit Roy Choudhury
ACM MobiCom 2020

MUTE: Bringing IoT to Noise Cancellation
Sheng Shen, Nirupam Roy, Junfeng Guan, Haitham Hassanieh, Romit Roy Choudhury
ACM SIGCOMM 2018

Closing the Gaps in Inertial Motion Tracking
Sheng Shen, Mahanth Gowda, Romit Roy Choudhury
ACM MobiCom 2018

Inaudible Voice Commands: The Real-World Attack and Defense
Nirupam Roy, **Sheng Shen**, Haitham Hassanieh, Romit Roy Choudhury
NSDI 2018

Bringing IoT to Sports Analytics
Mahanth Gowda, Ashutosh Dhekne*, **Sheng Shen***, et al. *(*Co-second author)*
NSDI 2017

IoT Platform for Sports Analytics
Mahanth Gowda, Ashutosh Dhekne*, **Sheng Shen***, et al. *(*Co-second author)*
ACM GetMobile 2017

I am a Smartwatch and I can Track my User's Arm
Sheng Shen, He Wang, Romit Roy Choudhury
ACM MobiSys 2016

AutoLabel: Labeling Places from Pictures and Websites
Rufeng Meng, **Sheng Shen**, Romit Roy Choudhury, Srihari Nelakuditi
ACM UbiComp 2016

Matching Physical Sites with Web Sites for Semantic Localization
Rufeng Meng, **Sheng Shen**, Romit Roy Choudhury, Srihari Nelakuditi
Workshop on Physical Analytics, ACM MobiSys 2015

Dynamic Advance Reservation Multicast in Data Center Networks over Elastic Optical Infrastructure
Sheng Shen, Wei Lu, Xiahe Liu, Long Gong, Zuqing Zhu
ECOC 2013

POSTERS/ABSTRACTS

Poster: Networked Acoustics Around Human Ears
Sheng Shen, Nirupam Roy, Junfeng Guan, Haitham Hassanieh, Romit Roy Choudhury
ACM MobiCom 2018

Poster: (Invited) Bringing IoT to Noise Cancellation
Sheng Shen, Nirupam Roy, Junfeng Guan, Haitham Hassanieh, Romit Roy Choudhury
ACM SIGCOMM 2018

Poster: (Invited) Inaudible Voice Commands
        Nirupam Roy, **Sheng Shen**, Haitham Hassanieh, Romit Roy Choudhury
        NSDI 2018

Extended Abstract: Arm Posture Tracking Using a Smartwatch
        Sheng Shen
        ACM MobiSys 2016 PhD Forum

INVITED TALKS

Invited Colloquium Speaker, University of Science and Technology of China   Hefei, China
Title: Internet of Acoustic Things   05/2018

Feedback Friday in Computer Engineering, University of Illinois   Champaign, IL
Title: Networked Noise Cancellation   04/2018

Admitted Graduate Student Day, University of Illinois   Champaign, IL
Title: Inaudible Voice Commands   03/2018

PROFESSIONAL ACTIVITIES

Invited Reviewer:

- IEEE Transactions on Mobile Computing
- IEEE Transactions on Multimedia
- ACM IMWUT (formerly UbiComp)
- IEEE Wireless Communications Letters
- Pervasive and Mobile Computing

TPC Member:

- IEEE VTC, Spring 2019
- ACM S3 Workshop, 2017, 18
- ACM MobiSys Ph.D. Forum, 2017