

# Si Chen

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## EDUCATION

- **University at Buffalo - SUNY, Buffalo, NY, USA**  
Ph.D. in Computer Science and Engineering, May 2016  
Thesis: “Cloud-assisted Mobile Sensing System”  
Advised by Professor Kui Ren
- **University at Buffalo - SUNY, Buffalo, NY, USA**  
M.S. in Electrical Engineering, May 2012  
Thesis: “Groundwave Modelling and Online Simulation System for Advanced HF Radio Networking”  
Advised by Professor Tommaso Melodia
- **China Agricultural University, Beijing, China**  
B.S. in Measuring & Control Technology and Instrumentations (School of Engineering), June 2010

## PUBLICATIONS

### Conference Papers

- C-1. Jian Zhang, Tao Xie, Yuzhuo Jing, Yanjie Song, Guanzhou Hu, **Si Chen**, Shu Yin. BORA: A Bag Optimizer for Robotic Analysis. *SC20: The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC'20)*, Atlanta Hilton, GA , November 9, 2020.  
**Acceptance ratio = 22.3 %.**
- C-2. Yanliang Zou , Chen Chen, Tongliang Deng, Jian Zhang, **Si Chen**, Xiaomin Zhu, Shu Yin. SHC: A method for stackable parallel file systems in userspace. *21st IEEE International Conference on High Performance Computing and Communications, 17th IEEE International Conference on Smart City and 5th IEEE International Conference on Data Science and Systems (HPCC/SmartCity/DSS 2019)*, Zhangjiajie, China, August 10, 2019.
- C-3. Linh Ngo, Liu Cui, **Si Chen**. Computing Infrastructures to Support Cybersecurity Education. *The 34th Annual Spring Conference of the Pennsylvania Computer and Information Science Educators (PACISE'19)*, Millersville, PA, April 12, 2019.  
**Best Paper Award**
- C-4. Jiacheng Shang, **Si Chen**, Jie Wu. SRVoice: A Robust Sparse Representation-based Liveness Detection System . *IEEE 24th International Conference on Parallel and Distributed Systems (IEEE ICPADS 2018)*, Singapore, December 11, 2018.
- C-5. Jiacheng Shang, **Si Chen**, Jie Wu. Defending Against Voice Spoofing: A Robust Software-based Liveness Detection System . *The 15th International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS 2018)*, Chengdu, China., October 9-12, 2018.  
**Acceptance ratio = 42/205 = 20.5 %.**

C-6. Shu Yin, Bing Jiao, Xiaomin Zhu, Xiaojun Ruan, **Si Chen**, Zhuo Tang. DuoFS: A Hybrid Storage System Balancing Energy-Efficiency, Reliability, and Performance. *Parallel, Distributed and Network-based Processing (PDP), 2018 26th Euromicro International Conference on, Cambridge, UK., March 21-23, 2018.*  
**Acceptance ratio** = 27/92 = 29.3 %.

C-7. **Si Chen**, Kui Ren, Sixu Piao, Cong Wang, Qian Wang, Jian Weng, Lu Su, Aziz Mohaisen. You Can Hear But You Cannot Steal: Defending against Voice Impersonation Attacks on Smartphones. *The 37th IEEE International Conference on Distributed Computing Systems (ICDCS'17), Atlanta, GA, June 5-8, 2017.*  
**Acceptance ratio** = 89/531 = 16.8 %.

#### **Best Student Paper Award, Top 1 of 531 submissions**

**Media coverage:** Scientific American, Phys.org, CBS, Financial Express, Tech Radar, NDTV, Science Daily, Gizmodo. etc.

C-8. **Si Chen**, Muyuan Li, Kui Ren, Xinwen Fu, Chunming Qiao. Rise of the Indoor Crowd: Reconstruction of Building Interior View via Mobile Crowdsourcing. *The 13th ACM Conference on Embedded Networked Sensor Systems (SenSys'15), Seoul, South Korea, November 1-4, 2015.*  
**Acceptance ratio** = 20.5%. **Citations** > 30

C-9. **Si Chen**, Muyuan Li, Kui Ren, Chunming Qiao. CrowdMap: Accurate Reconstruction of Indoor Floor Plan from Crowdsourced Sensor-Rich Videos. *The 35th IEEE International Conference on Distributed Computing Systems (ICDCS'15), Columbus, Ohio, June 29 - July 2, 2015, pp. 1-10.*  
**Acceptance ratio** = 70/543 = 12.89%. **Citations** > 30

C-10. Muyuan Li, Haojin Zhu, Zhaoyu Gao, **Si Chen**, Le Yu, Shangqian Hu, Kui Ren. All your location are belong to us: Breaking mobile social networks for automated user location tracking. *The 15th ACM international symposium on Mobile ad hoc networking and computing (Mobihoc'14), Philadelphia, PA, August 11-14, 2014, pp. 43-52, 10-page .*  
**Acceptance ratio** = 40/211 = 18.9%. **Citations** > 100.

C-11. Eric Koski, **Si Chen**, Scott Pudlewski, Tommaso Melodia. Network simulation for advanced HF communications engineering. *The 12th International Conference on Ionospheric Radio Systems and Techniques (IRST'12) York, UK, May 15-17, 2012, pp. 45.*

C-12. **Si Chen**, Lina Ling, Yuan Rongchang, Longqing Sun. Classification Model of Seed Cotton Grade Based on Least Square Support Vector Machine Regression Method. *The 6th IEEE International Conference on Information and Automation for Sustainability (ICIAFS'12), Beijing, China, 2012, pp. 198-202.*

C-13. Rongchang Yuan, Zhengjiang Li, **Si Chen**. Movement and deformation of virtual object based on argument passing method. *The IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems (VEC-IMS'12), Tianjin, China, 2012, pp. 103-106 .*

- C-14. Rongchang Yuan, **Si Chen**, Zhengjiang Li, Shengrong Lu, Li Wang, Haigan Yuan. Simulation and Models on Control of Pests with Ozone in Greenhouses Plant. *The IASTED International Conference on Modeling, Simulation, and Identification (MSI'11)*, Pittsburgh, PA, Nov 7-9, 2011.
- C-15. Rongchang Yuan, Haigan Yuan, **Si Chen**, Longqing Sun, Feng Qin, Han Zhang, Yukun Zhu, Daokun Ma. Research on the k-coverage local wireless network and its communication coordination mechanism design. *the 5th International Conference on Computer and Computing Technologies in Agriculture (CCTA '11)*, Beijing, China, Oct 29-31, 2011.

### Journal and Magazine Articles

- J-1. Jiacheng Shang, **Si Chen**, Shu Yin, Jie Wu.. ARSpy: Breaking Location-based Multi-player Augmented Reality Application for User Location Tracking. *IEEE Transactions on Mobile Computing (TMC)*, 2020.  
Accepted for publication.
- J-2. Yuyang Zhao, Guangquan Xu, Yuyang Zhao, Litao Jiao, Meiqi Feng, Zhong Ji, Emmanouil Panaousis, **Si Chen**, Xi Zheng. TTSVD: an Efficient Sparse Decision Making Model with Two-way Trust Recommendation in the AI Enabled IoT Systems. *IEEE Internet of Things Journal (IoT)*, 2020.  
Accepted for publication.
- J-3. Zhang Xiao, Jiqiang Liu, **Si Chen**, Yongjun Kong, Kui Ren. PriWhisper+: An Enhanced Acoustic Short-range Communication System for Smartphones.  
. *IEEE Internet of Things Journal (IoT)*, 2018  
Accepted for publication.
- J-4. **Si Chen**, Qin Zhan, Guoliang Xing, Kui Ren. Securing acoustics-based short-range communication systems: an overview. *Journal of Communications and Information Network*, 2016.  
Accepted for publication.
- J-5. Bingsheng Zhang, Qin Zhan, **Si Chen**, Muyuan Li, Kui Ren, Cong Wang, Di Ma. PriWhisper: Enabling Keyless Secure Acoustic Communication for Smartphones. *IEEE Internet of Things Journal (IoT)*, 2014.  
Accepted for publication. Citations > 50.

### Research Posters

- P-1. Liu Cui, **Si Chen**, Zhen Jiang. Quality of Experience Aware Collaborative Augment Reality system (Q-CARs). *the 2nd ACM/IEEE International Conference on Internet-of-Things Design and Implementation (IoTDI '17)*, 2017.

### ACADEMIC ACTIVITIES

- **Program Committee (PC)** for the 8th IEEE International Conference on Smart City and Informatization (iSCI 2020).

- **Program Committee (PC)** for the 2020 International Conference on Frontiers in Cyber Security (FCS2020).
- **Program Committee (PC)** for the 1st IEEE International Workshop on Advances in Fog/Edge Computing (AFEC 2020).
- **Technical Program Committee (TPC)** for Workshop on Edge, Fog, and Cloud Computing for the Internet of Things in conjunction with MobiQuitous 2019
- **Technical Program Committee (TPC)** for CPSCom 2019
- **Technical Program Committee (TPC)** for Milcom 2016, 2017, 2018, 2019
- Author (Contributor) of book “**Encyclopedia of Wireless Networks**” (**Section: Security, Privacy and Trust**)
- “**Cyber Security and Trusted Computing: Network Security Technology**” **session chair** for Milcom 2018
- “**Data Intensive Service-based Application (DISA)**” **session chair** for SEKE 2018
- “**Wireless Network Security**” **session chair** for Milcom 2017
- “**IoT Device Security**” **session chair** for Milcom 2016
- **Conference Reviewer** for **INFOCOM 2019, MobiCom’18 (External), MobiHoc’18 (External), Milcom’18, IMWUT’17 (UbiComp), Milcom 2017, ICNC’17 CIS, ICDCS’17, Milcom 2016, ICCCN’16, ACM CCS’15, ICDCS’15, ESORICS’15, AsiaCCS’15, Cloud’15, ICCCN’15, DBSec’15, CoudCom’15, ACM CHI’15, CloudNet’15, ISC’15, Securecomm’15, IEEE MSN’15, IPCCC’15, INFOCOM’14, ACM CCS’14, ICDCS’14, ESORICS’14, ICNP’14, AisaCCS’14, MobiHoc’14, CNS’14, CloudNet’14, DBSec’14, SecureComm’14.**
- **Journal Reviewer** for **Computer Networks, Mobile Networks and Applications, MDPI Electronics, MDPI Sensor, IEEE Internet of Things Journal (IoT), IEEE Transactions on Mobile Computing (TMC), IEEE Transactions on Dependable and Secure Computing(TDSC), IEEE JSAC Special Issue on Human-In-The-Loop Mobile Networks (JSAC-HMN), Special Issue of Vehicular Communications on Vehicular Cloud Networking (VEHCOM 2016), IEEE Trans. on Parallel and Distributed Systems, IEEE Trans. on Services Computing, IEEE Trans. on Smart Grid, IEEE Trans. on Vehicular Technology, IEEE Trans. on Wireless Communications, IEEE Security & Privacy magazine, IEEE Network Magazine, Journal of Computer Security, Journal of Mobile Communication, Computation and Information, Journal of Parallel and Distributed Computing.**
- **Webchair** for the 27th IEEE Annual Computer Communications Workshop (CCW’13).

## WCU SERVICES

- Committee for Advising Excellence, [2020 - present]
- Graduate Coordinator for Computer Science, [2020 - present]
- Advisor for WCU Cybersecurity Club. [2020 - present]
- System Administrator of Computer Science Department, [2019 - present]
- CSM Recruitment Committee. [2019 - present]
- Computer Science Search Committee. [2017 - present]
- Advisor for WCU Computer Science Club. [2016 - present]
- Co-Advisor for Bin Lu Women in Computer Science Club. [2017 - present]
- Coach for ICPC ACM programming competition. [2016, 2017]

## TEACHING

- CSC 471: Malware Analysis
- CSC 472: Software Security
- CSC 497/583: Advanced Topics in Computer Security
- CSC 495/583: Cloud-assisted Mobile Sensing System
- CSC 530 - Data Structures
- CSC 141 - Computer Science I
- CSC 142 - Computer Science II
- CSC 240 - Computer Science III
- CSC 241 - Data Structure and Algorithms
- CSC 110 - Fundamentals in Computer Science
- CSC 115 - Introduction to Computer Programming

## HONORS AND AWARDS

- IEEE Senior Member, 2020
- Best Paper Award, PACISE, 2019
- Google Cloud Research Grant, 2019
- WCU Outstanding Faculty Recipients 2016-2017, 2017-2018
- Best Student Paper Award, IEEE ICDCS, 2017
- WCU Research in Mathematics and the Sciences (RIMS) Award 2016-2017
- Microsoft Research Azure Research Grant for "CrowdMap++: Reconstruction of Context-Rich Building Floorplan via Mobile Crowdsourcing", 2016-2017
- Student Travel Grant Awards, IEEE ICDCS 2015
- The 19th Annual International Conference on Mobile Computing and Networking (ACM Mobicom'13) App Competition Finalists (top 10), 2013
- National University Student Innovation Program Award, 2009-2010
- Third Prize of International Interdisciplinary Contest in Modeling (ICM), 2009