

Si Chen

4285 Chestnut Ridge Road, Apt 1-D
Amherst, NY 14228

☎ (716)335-8052
✉ schen23@buffalo.edu

Education

- * **University at Buffalo - SUNY** Buffalo, NY
Ph.D., Computer Science (GPA 3.8) Sep. 2012 - Present
 - Research Assistance in Ubiquitous Security and Privacy Research Laboratory (UbiSeC Lab), Advisor: Dr. Kui Ren
 - Relevant courses: Applied Cryptography and Computer Security, Wireless Network Security, Theory of Computation, Modern Network Concept, Wireless Networking and Mobile Computing
- * **University at Buffalo - SUNY** Buffalo, NY
M.S., Electrical Engineering (GPA 3.8) Sep. 2010 - May. 2012
 - Research Assistance in Wireless Networks and Embedded Systems Lab (WINES Lab), Advisor: Dr. Tommaso Melodia
 - Relevant courses: Multimedia Wireless Sensor Network, Principle of Information Theory and Coding, Optimization of Wireless Network
- * **China Agricultural University** Beijing, China
B.S., Measuring & Control Technology and Instrumentations 2006-2010
 - Graduated with Honors, Top 100 Excellent Graduate Theses award winner

Publications

- * Si Chen, Muyuan Li, Kui Ren, Xinwen Fu, Chunming Qiao, “Rise of the Indoor Crowd: Reconstruction of Building Interior View via Mobile Crowdsourcing,” in **Proceedings of the 13th ACM Conference on Embedded Networked Sensor Systems (SenSys 2015)**, 2015.
- * Si Chen, Muyuan Li, Kui Ren, Chunming Qiao, “CrowdMap: Accurate Reconstruction of Indoor Floor Plan from Crowdsourced Sensor-Rich Videos,” in **Proceedings of the 35th IEEE International Conference on Distributed Computing Systems (ICDCS’15)**, 2015.
- * Si Chen, Muyuan Li, Zhan Qin, Kui Ren, “IndoorCrowd2D: Building Interior View Reconstruction via Mobile Crowdsourcing,” in **Proceedings of the IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)**, 2015.
- * 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,” in **Proceedings of the 15th ACM international symposium on Mobile ad hoc networking and computing (Mobihoc’14)**, 2014.
- * Bingsheng Zhang, Qin Zhan, Si Chen, Muyuan Li, Kui Ren, Cong Wang, Di Ma, “PriWhisper: Enabling Keyless Secure Acoustic Communication for Smartphones,” in **IEEE Internet of Things Journal**, 2014.
- * Si Chen, Muyuan Li, Kui Ren, “The power of indoor crowd: Indoor 3D maps from the crowd,” in **Proceedings of the IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)**, 2014.
- * Si Chen, Muyuan Li, Zhan Qin, Bingsheng Zhang, Kui Ren, “AcousAuth: An acoustic-based mobile Application for user authentication,” in **Proceedings of the IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)**, 2014.
- * Muyuan Li, Si Chen, Kui Ren, “Enabling private and non-intrusive smartphone calls with LipTalk,” in **Proceedings of the IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)**, 2014.

- * Eric Koski, Si Chen, Scott Pudlewski, Tommaso Melodia, "Network simulation for advanced HF communications engineering," in *Proceedings of the 12th International Conference on Ionospheric Radio Systems and Techniques (IRST2012)*, 2012.
- * Si Chen, Lina Ling, Yuan Rongchang, Longqing Sun, "Classification Model of Seed Cotton Grade Based on Least Square Support Vector Machine Regression Method," in *Proceedings of the IEEE International the 6th International Conference on Information and Automation for Sustainability (ICIAfS'12)*, 2012.
- * Rongchang Yuan, Zhengjiang Li, Si Chen, "Movement and deformation of virtual object based on argument passing method," in *Proceedings of the IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems (VECIMS'12)*, 2012.
- * Rongchang Yuan, Si Chen, Zhengjiang Li, Shengrong Lu, Li Wang, Haigan Yuan, "Simulation and Models on Control of Pests with Ozone in Greenhouses Plant," in *Proceedings of the IASTED International Conference on Modelling, Simulation, and Identification (MSI'2011)*, 2011.
- * Rongchang Yuan, HaiganYuan, 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," in *Proceedings of the 5th International Conference on Computer and Computing Technologies in Agriculture (CCTA 2011)*, 2011

Selected Research Projects

- * **IndoorCrowd** Buffalo, NY
Project Leader, Ubiquitous Security and Privacy Research Laboratory (UbiSeC Lab) Jun. 2013 - Present
 - Designed and Implemented a smartphone empowered cloud-based crowdsourcing system for large-scale indoor scene reconstruction.
- * **AcousAuth** Buffalo, NY
Project Leader, Ubiquitous Security and Privacy Research Laboratory (UbiSeC Lab) Jun. 2013 - Oct. 2013
 - Designed and Implemented a smartphone empowered personal authentication system exploiting keyless acoustic communication.
 - Winner of the 19th Annual International Conference on Mobile Computing and Networking (MobiCom'13) App Competition Finalists (top 10).
- * **Ground Wave Simulator** Buffalo, NY
Project Leader, Wireless Networks and Embedded Systems Laboratory (WINES Lab) 2011 - May. 2012
 - Implemented an online ground wave simulation system based on NS-2 open source network simulator, GRWAVE and VOACAP Software to simulate advanced high frequency (HF) network.
- * **Cognitive Radio Framework** Buffalo, NY
Wireless Networks and Embedded Systems Laboratory (WINES Lab) 2011 - Jan. 2012
 - Implemented TCP/IP protocol into GNU Radio testbed USRP2
 - GNU Radio co-operative setup
- * **Intellectualized Greenhouse Measuring & Control System** Beijing, China
Project Leader, National University Student Innovation Program 2009 - May. 2010
 - Used CC2430 wireless node and Zigbee stack (Z-stack) to measure and control a greenhouse model's humidity and temperature.
 - Used Python, PHP, Javascript (jQuery), MySQL and C to create a realtime B/S System.
 - Designed a PCB with controllers that can use CC2430 with computer to remote control the greenhouse model.
 - Designed and built a greenhouse model.
 - Implemented PHP reflection mechanism to create a plugin system for further system enhancement.

Previous Work Experience and Internships

- * **University at Buffalo - SUNY** Buffalo, US
Research Assistant Aug. 2013 - Aug. 2015
- * **Sina Weibo (China)** Beijing, China
Application Dev Engineer (Internship) Apr. 2010 - July. 2010
 - Used Python (Matplotlib), Javascript (jQuery) and PHP with MySQL to build an UNIX cluster administration system
 - Created an usage frequency indicator to show Weibo's current usage frequency in different areas using Python, C, PHP with MySQL, Javascript
- * **ASSE/WH China** Beijing, China
Website Developer and Website Administrator (Part-time job) Oct. 2007- Feb. 2008
 - Re-constructed company's website using Mambo CMS System
 - Built an online registration system using PHP and MySQL

Extracurriculum Works

- * Used SigOps uBoot System (UIUC), C, Assembly to create my own operating system 'Quake'
- * Used Python, MySQL to create a program which helps me to increase Weibo followers automatically
- * Used Python, jQuery, PHP, MySQL to build an on-line GPA Calculate System
- * Used Python, C++, Sed, PHP, MySQL and Javascript to design an Automatic Tests Score SMS Notifier
- * Used CC2430 wireless single chip microcomputer and TinyOS embedded system, PHP, MySQL, C, Shell Script to create an Amphibian & Reptiles Aquarium Monitoring System
- * Used Google Map API, Javascript, HTML to design an on-line alumni catalog
- * Co-founder and technique advisor of the Future Engineers Association (FEA)

Honors and Awards

Top 100 Excellent Graduate Theses in China Agricultural University	2010
Excellent Graduate Award in China Agricultural University	2010
National University Student Innovation Program Award (\$3200)	2009-2010
Undergraduate Research Program Award (\$500)	2007-2008
Third Prize of International Interdisciplinary Contest in Modeling (ICM)	2009
Third Prize of Scholarship for Excellent Academic Performance (\$100)	2007,2008,2009
Awarded twice "The best debater" title in debate competitions	2006,2007

Skills

Programming Languages: Python, C, \LaTeX , Javascript, Shell, SQL, PHP, HTML, Perl, Java, Haskell, Assembly

Operating Systems: Linux (Gentoo Linux), OS X, Windows, FreeBSD

Applications: MATLAB, Vim, Cadence Virtuoso, \LaTeX , Photoshop, MS Office

Framework: Android Development Framework (JAVA), GNU Radio (Python), Django (Python), Web.py (Python), jQuery(Javascript)

Miscellaneous: Rapid Prototyping Ability, Excellent Troubleshooting and Debugging Skills, Good Problem Solving Skills.