

# Si Chen

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## Education

- + **University at Buffalo - SUNY** Buffalo, NY  
*Ph.D., Computer Science (GPA 3.8)* Sep. 2012 - Expected in Fall 2016
  - Research Assistance in Ubiquitous Security and Privacy Research Laboratory (UbiSeC Lab)
- + **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)
- + **China Agricultural University** Beijing, China  
*B.S., Measuring & Control Technology and Instrumentations* 2006-2010
  - Graduated with Honors, Top 100 Excellent Graduate Theses award winner

## Research Projects

- + **AcousAuth** Buffalo, NY  
*Ubiquitous Security and Privacy Research Laboratory (UbiSeC Lab)* Jun. 2013
  - A smartphone empowered personal authentication system exploiting keyless acoustic communication. In *Mobicom'13 App Competition Finalists (top 10)*
- + **Cognitive Radio Framework** Buffalo, NY  
*Wireless Networks and Embedded Systems Laboratory* 2011 - Expected in May. 2012
  - Implemented TCP/IP protocol into GNU Radio testbed USRP2
  - GNU Radio co-operative setup
  - Establish Bridge and framework abstraction for the cognitive radio framework

## Selected Pubcations

- + 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'2014)**
- + Si Chen, Muyuan Li, Kui Ren , "The power of indoor crowd: Indoor 3D maps from the crowd," in **Computer Communications Workshops (INFOCOM WKSHPS), 2014**
- + E Koski, S Chen, S Pudlewski, T Melodia, "Network simulation for advanced HF communications engineering," in **The 12th International Conference on Ionospheric Radio Systems and Techniques (IRST2012)**

## Work Experience

- + **Sina 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
  - Designed and implemented an algorithm to calculate daily hottest words from Weibo (Chinese twitter) search log in Python
  - Created an usage frequency indicator to show Weibo's current usage frequency in different areas using IP address geolocation database and Python, PHP with MySQL, Javascript

- + ASSE/WH China
  - Website Developer and Website Administrator (Part-time job)*
    - Re-constructed company's website using Mambo CMS System
    - Built an online registration system using PHP and MySQL

Beijing, China  
Oct. 2007- Feb. 2008

## School Projects

- + **Face-feature Recognition System**

*Multimedia Systems , CSE 534* *Fall 2010*

  - Designed and implemented a digital video processing system for face-feature recognition
  - Implemented Scale-invariant feature transform (SIFT) algorithm and image processing functions in C with OpenCV and VLFeat library
- + **Analog Circuit Design and MOSFET Device Design**

*Analog Circuit, EE 591* *Fall 2010*

  - Designed a high-frequency cascade amplifier, simulated it using HSPICE, and did layout using Cadence Virtuoso Layout software
- + **Novel Dual-band Bandpass Filter with Microstrip Meander-loop Resonator**

*RF&Microwave Circuits, EE569* *Fall 2010*

  - Worked on the RF&Microwave Circuits final project in a team of three
  - Designed a Novel Dual-band bandpass filter with microstrip meander-loop resonator and stimulate it in HFSS
- + **Other Projects**

*China Agricultural University* *2006-2010*

  - Used "Storm!" robot with sensor board and programmed in C language to create a robot which can shutdown a PC automatically
  - Built a Simple Image Manipulation program using VC++ with MFC framework and OpenCV
  - Built a Sensitive Listener, on 2" × 2.5" piece of breadboard
  - Used PCI6011 Data-acquisition Board and programmed in VB to create a Computer Weight Measurment System

## 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
- ✓ Awarded 'Excellent Graduate in China Agricultural University' 2010
- ✓ Awarded in National Innovation Experiment Program for Undergraduates (\$3200) 2009-2010
- ✓ Undergraduate Research Program (\$500) 2007-2008
- ✓ Third Prize of International Interdisciplinary Contest in Modeling 2009
- ✓ Third Prize of Scholarship for Excellent Academic Performance (\$100) 2007,2008,2009
- ✓ Awarded twice 'The best debater' title in debate competitions (College of Engineering) 2006,2007

## Skills

**Programming Languages:** Python, C, T<sub>E</sub>X, Javascript, Shell, SQL, PHP, HTML, Perl, Java, Assembly, haskell

**Operating Systems:** Linux (Archlinux), Mac OS X, Windows, FreeBSD

**Applications:** MATLAB, Vim, Cadence Virtuoso, L<sup>A</sup>T<sub>E</sub>X, Photoshop, MS Office, Dreamweaver, Sed, gdb

**Framework:** GNU Radio (Python), Django (Python), Web.py (Python), jQuery(Javascript), SAE

**Miscellaneous:** software configuration management, excellent troubleshooting and debugging skills, exceptional problem solving skills

## Interests

**Academic:** Wireless Sensor and Actor networks, Cognitive Radio/Dynamic Spectrum Access Networks, Optimization of wireless communication networks

**Sports:** Jogging and swimming

**Computers:** Enjoy using and learning Linux systems, Building electronics projects, and writing small tool-kits using Python

**Membership:** Student member of Institution of Mechanical Engineers (IMechE) in 2009-2010

**Other:** Reading novels, Raising pets