Si Chen

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Education

University at Buffalo - SUNY Buffalo, NY
M.S., Electrical Engineering (GPA 3.793) *Sep. 2010 - Expected in May. 2012*

- 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
- Relevant courses: Application of MATLAB, C Programming Language, Principles of Microcomputer and Interface Technology, Signal Processing, Sensor and Detecting circuits, Practical Image Processing, Computer Measurement & Control Technology, Principle & Application of Single Chip Microcomputer

Research Projects

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

Intellectualized Greenhouse Measuring & Control System Beijing, China
Project Leader, National Innovation Program for Undergraduates of China *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

Pubcations

- 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 **IASTED International Conference on Modelling, Simulation, and Identification (MSI'2011)**, Pittsburgh, USA, November 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 **the Fifth International Conference on Computer and Computing Technologies in Agriculture (CCTA2011)**, Beijing, China, October 2011

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 algorithem 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** 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

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" $\times$ 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/C++, TEX, Javascript, Shell, SQL, PHP, HTML, Perl, Java (JSP), Assembly, haskell

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

Applications: MATLAB, Vim, Cadence, LATEX, 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