GUANXIONG LIU

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OBJECTIVE: Full time job (from May 2015) in Computer Engineering.

EDUCATION:

Worcester Polytechnic Institute (WPI), Worcester, MA GPA: 3.9/4
Master of Science in Computer Engineering May 2015

Southeast University, Nanjing, Jiangsu, China GPA: 3.3/4
Bachelor of Science in Computer Engineering July 2013

SKILLS:

Programming: JAVA, C++, Verilog, SystemC, System Verilog, python
Operating System: Linux (CentOS, Ubuntu), UNIX, Windows
Other: Wireless-LAN, Wireless Localization, Algorithm, ASIC Design and Verification

WORK EXPERIENCE:

Silicon Engineering Intern, Cisco Systems, Inc., Boxborough, MA 05/2014-08/2014
Worked on a Cisco silicon design team that designs next generation network processors for routing products. Designed cross layer data transmission modules which supports both pure data and control data transmission.
- Designed the flow control function inside two data transmission modules which support the channel based credit remap for data flow and also can do the back pressure remap in the opposite data transmission direction.
- Produced the RDL (Register Description Level) design which requires deep understanding of computer architecture. Included 2 types of status/configuration registers, FIFO memories and interrupts tree in design.
- Built the ASIC verification test plan which includes the functional test, code coverage test and system black-box test. Used the embed Perl and System Verilog to implement the test bench.

Software developer Intern, Institute of Image Recognition & Artificial Intelligence 10/2012-05/2013
Worked in a 20 member group that develops the Microwave Image Processing System for Airport Security with $100,000 in funds. Design the system to read in bit image and show up particular prohibited items (metal tools).
- Built the IO interface of the Microwave Image Processing System with C++ and OpenCV.
- Designed and created the binarization, expansion & corrosion and detection model of this system.

PROJECT EXPERIENCE:

Transaction Level Modeling and Design, WPI 09/2014-12/2014
Finished a series of digital circuit design based on the highly level modeling language (C++, System C and TLM).
- Learned to use C++, System C and TLM 2.0 to do the digital system modeling and design.
- Designed digital circuits in different level including: gate level, RT level and transaction level.

PUBLICATION:

International Conference on Computing, Networking and Communications 2015:
Effects of Calibration RFID Tags on performance of Inertial Navigation in Indoor Environment
- Built a mathematical model of deployment of RFID calibration tags in RF/INS hybrid localization system.

IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks 2015:
Direction Estimation Error Model of Embedded Magnetometer in Indoor Navigation Environment
- Built an error model of magnetometer and analyzed the performance of RF/INS hybrid localization system

On the Accuracy of Wi-Fi Localization using Robot and Human Collected Signatures
- Compared performance of robot with human collected database based on different localization algorithm.

RESEARCH EXPERIENCE:

Direct Research, Wireless Localization, CWINS Lab, WPI 10/2013-Current
Conducted wireless localization research in the CWINS Lab under the guidance of the Professor Kaveh Pahlavan
- Utilized smart-phone and its embedded sensors to build the inertial navigation platform based on step detection.
- Combined different RF localization method (RFID, machine learning) with the INS to create a hybrid system.