

Objective	Seeking an internship position which can explicitly utilize my programming and computer skills to solve stimulating problems in wireless and embedded systems.		
Technical Skills	<p>Embedded Systems: Experience with C/C++ on MSP430, AVR and ARM architectures for control and signal processing including Arduino, Raspberry Pi, BeagleBone, OpenWRT, TinyOS and Contiki. Experience with PCB design for embedded system using Eagle.</p> <p>Wireless Communication: Experience with 802.11bgn, 802.15.4, 6LowPAN and TCP/IP protocol. Proficiency in data collection, analysis and visualization. Proficiency in signal processing, synthesis and analysis programs developed in Python and Matlab.</p>		
Relevant Projects	<p>Interconnecting 802.11 Devices to 802.15.4 Devices without Gateway Designed and implemented a WiFi to IEEE 802.15.4 sensor nodes communication system based on OpenWRT and TinyOS without using a gateway. Designed a new modulation and demodulation scheme based on two different physical layers. Experimented and analyzed the wireless channel performance for both 802.11 and 802.15.4.</p> <p>Prototyping Wearable Device for Real Dancing Performance Designed and implemented a novel wearable device for dancers to capture and synchronize their dancing performance. Developed a new primitive to help synchronizing multiple dancers using timestamped accelerometer. Programmed and analyzed current commercial smart watch for accelerometer data acquisition, such as Samsung Gear, Pebbel and Android Wear.</p> <p>Twonet: Large-Scale Wireless Sensor Network Testbed with Dual-Radio Nodes Developed a system for dual band wireless sensor network to procure and analyze the wireless connectivity simultaneously. Built and debugged a distributed system for wireless sensor network testbed with servers, proxies and sensor nodes utilizing Python, Shell scripts based on Ubuntu 13.04; Validated and enabled a wireless sensor network testbed - Twonet to make it public for the academia usage.</p> <p>Pace at Which US Government Can Update its Websites Collected a list of top 500 government websites from Alexa Top Sites service. Investigated how soon US government can update their websites during the shutdown event using Shell and Python scripts.</p> <p>BeagleBone Cape for Visual Light Communication Designed and Implemented a BeagleBone Cape for a visual light communication system. Created a new network interface in BeagleBone for the enabled visual light communication.</p> <p>TelosC Platform for TinyOS Created a new platform with MSP430 and CC1101 for TinyOS. Experimented and Implemented CC1101 radio stack based on TinyOS.</p>		
Education	<p>Ph.D. student in Computer Science University of Houston, Houston, USA</p> <p>M.S. in Communication and Information System Wuhan University of Technology, Wuhan, China</p> <p>B.S. in Communication Engineering Wuhan University of Technology, Wuhan, China</p>	<p>08/2013-now</p> <p>06/2013</p> <p>06/2011</p>	<p>Advisor: Prof. Omprakash Gnawali</p>
Internship	<p>IBM China Development Lab</p> <p>Designed and implemented automated and manual test cases for the deployment of IBM cloud services using IBM Rational Application Developer and bash scripts.</p>	<p>Beijing, China</p> <p>02/2013-05/2013</p>	
Selected Publications	<p>Shengrong Yin, O. Gnawali, P. Sommer and B. Kusy: <i>Multi Channel Performance of Dual Band Low Power Wireless Network</i>. In Proceedings of the 11th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS 2014).</p>		
Patents	<p>CN102322857B(granted)</p> <p>"Position and posture measuring system and method for mechanical equipment", designed and implemented an adaptive navigating system for road header underground using C/C++.</p>		