

# YUGUANG LI

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## OBJECTIVE

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Any researching opportunities to help transforming the networks and communication systems with special interests in innovative networking architectures and cyber security

## EDUCATION

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**Boston University, College of Engineering** Boston, MA September 2011 - May 2013

Master of Engineering in Electrical Engineering, GPA: 3.77/4.00

*Master's Project: "Cloud-based Cyber Services for Smart Lighting"*

**Xi'an Jiaotong University** Xi'an, Shaanxi, P.R. China September 2006 - July 2010

Bachelor of Engineering in Automation Engineering, GPA: 85/100; *SiYuan scholarship*

*Thesis: "The Wind Turbine Failure Predictions and Diagnostic Monitoring"*

## WORKING EXPERIENCE

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**RapidSOS,LLC**

*Software Engineer*

March 2014 - Present

*Boston, MA*

- Working on the application backend and Leading the development of telephony
- Participated to implement the REST APIs for the backend with Django REST framework
- Set up and configured the Asterisk telephony server on AWS Cloud
- Designed the Class-based automated message generate modules for Interactive Voice Response(IVR)
- Implemented the telephony applications on Asterisk server by python and Asterisk REST APIs
- Established the interconnection code library to interacts with the partner's APIs

**The Laboratory of Networking and Information Systems**

*Research Assistant on Prof. David Starobinski's team*

June 2013 - December 2014

*Boston University, Boston, MA*

- Helped mostly on Networks Security and Security Education
- Established a serials of Labs for graduate course EC521: Cyber Security
- Designed the Lab contents: SQL injection, Password cracking, Metasploit, Network attacks and Snort
- Arranged for the lab environment with two VMs: Kali Linux and Metasploitable2

**The Laboratory of Network-based Complex Control Systems**

*Researcher on Prof. Dejun Mu's team*

October 2010 - July 2011

*Northwestern Polytech. Univ., Xi'an, China*

- Worked mainly on mathematical modelling, algorithms design and simulations for Network-based systems
- Established a dynamic transmission algorithm based on feedback and buffers on the server-side
- Proposed the probability models of VANET with different mechanisms
- Simulated and Verified the improved transmission systems

## FEATURED PROJECTS

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**Lab Curriculum Design for Computer Cyber Security**

*The Laboratory of Networking and Information Systems*

June 2013 - October 2013

*Boston University, Boston, MA*

- Chosen the intrinsic-security lab environment within a private Virtual Network
- Designed the progressive labs using popular pen-testing tools
- Tested all the designed labs and drafted the lab documents
- Presented a paper according to this project at CISSE 2014, June, San Diego,USA

**Cloud-based Cyber Services for Smart Lighting**

*Master's project*

October 2012 - April 2013

*Boston University, Boston, MA*

- Master's project for a Cloud-based intelligent lighting system using Java
- Compared the existing Cloud services and came up with an optimal solution: Amazon Web Service
- Designed multi-thread chat server and socket communication between client and server
- Implemented the web-based front end using JSPs embedded with HTML5, CSS3 and Javascript
- Deployed the system onto Cloud with Amazon RDS database and tested all the functionalities
- Supervised by Prof. Thomas Little

### **Motion Curve Detection within Wireless Sensor Networks**

September 2011 - December 2011

*Course of Networking the Physical World*

*Boston University, Boston, MA*

- Utilized a Wireless Sensor Network (WSNET) system based on TinyOS motes with MTS400 sensor board
- Analyzed the sensor data packets transfer between MicaZ motes using the MIB520 Gateway
- Developed a lite Integral Algorithm to detect motion of the motes using Dual-axis Accelerometer Sensors
- Designed and implemented the GUI in Matlab for displaying and controlling the motion curve

### **The Embedded Audio-Video Transmission System for WLAN**

November 2010 - April 2011

*The Laboratory of Network-based Complex Control Systems*

*Northwestern Polytech. Univ., Xi'an*

- Proposed a dynamic transmission algorithm server-side based on RTCP feedback and buffering mechanism
- Implemented the Adaptive Rate Control Algorithm on the embedded Linux-Server
- Verified the better QoS of the improved embedded transmission system within WLAN

### **Packet Reachability of VANET in Bidirectional Road Scenario**

May 2010 - November 2010

*The Laboratory of Network-based Complex Control Systems*

*Northwestern Polytech. Univ., Xi'an*

- Proposed a probability model for End-to-End and Store-Carry-Forward mechanism respectively
- Simulated the models using Monte Carlo method in Matlab
- Compared the packet reachability between E2E and SCF within Bidirectional Road Scenario

### **The Wind Turbine Failure Predictions and Diagnostic Monitoring**

October 2009 - July 2010

*Bachelor's Thesis*

*Xi'an Jiaotong University, Xi'an*

- Integrated the existing Neural Networks Prediction Algorithm to the Wind Turbine Control Server
- Designed and implemented the Failure Prediction and Diagnostic Monitoring Control Panel by MFC
- Verified the Prediction Algorithm and the system with sample databases for LAN

## **TEACHING EXPERIENCE**

**Spring 2013: Computer Communication Networks**

*College of Engineering, Boston University*

## **TECHNICAL STRENGTHS**

<b>Compile Languages</b>	Java, C/C++
<b>Scripting &amp; Other Languages</b>	Python, PHP, Javascript; HTML, CSS, XML, JSON
<b>Operating Systems</b>	Linux, Kail Linux, OSs with Unix kernel, Windows
<b>Databases &amp; Tools</b>	Postgres, MySQL; Git, Vim, Matlab, Wireshark, Pen-testing Tools
<b>Protocols &amp; APIs</b>	HTTP/HTTPS, SIP, RTP/RTCP; jQuery, Google APIs
<b>Servers &amp; Cloud</b>	Nginx, Unicorn, Apache2, Tomcat7, Asterisk; AWS, DigitalOcean
<b>Frameworks &amp; Architecture</b>	Django, Strut2, Spring, Bootstrap; REST

## **PUBLICATIONS**

Yansu Hu, **Yuguang Li**, The QoS Research of H.264 Video Transmission in Embedded Wireless LAN, Computer Science(ISSN 1002-137X), vol.38, no.5, pp.83-85, 2011

Panguo Fan, **Yuguang Li**, et al, Packet Reachability of VANET in Bidirectional Road Scenario, 12th IEEE International Conference on Communication and Technology, Nov. 2010