

Yafeng Wu

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EDUCATION

UNIVERSITY OF VIRGINIA		Charlottesville, VA
Ph.D in Computer Science	GPA: 3.9/4.0	2005-July, 2011
<ul style="list-style-type: none">Outstanding Research Graduate Student Award (2 out of 100)		
UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA		China
Master of Engineering in Computer Science	GPA 3.9/4.0	2002-2005
<ul style="list-style-type: none">Excellent Graduate Student Award (top 2%)		
Bachelor in Computer Science	GPA 3.6/4.0	1997-2002
<ul style="list-style-type: none">Outstanding student award for Academic achievement 1998-2002 (top 10%)		
Bachelor in Economic Management (Dual Degree)	GPA 3.7/4.0	1999-2002
GRE Score: 680/800 Verbal, 800/800 Analytical, 800/800 Quantitative		

RESEARCH EXPERIENCE

Research Assistant, UVA Real-time System Lab	2005-present
<ul style="list-style-type: none">Designed multi-channel algorithms and network protocols to provide reliable and real-time wireless communication. One of protocols reduced end-to-end transmission data loss by 15% and decreased latency by 15%.Designed and built a new MAC protocol which uses a novel coding based technique to recover packets after collision. The protocol improved transmission efficiency of sensor networks by 20%.Designed and built large wireless sensor systems for environmental monitoring of islands off the shore of Virginia. The system is funded by U.S. Long-term Ecological Research Network. http://www.cs.virginia.edu/~yw5s/luster/Designed and built a novel run time assurance framework for Wireless Sensor Systems, which can automatically generate codes according to user requirements, and self-testing system functionality at the runtime.	
Research Assistant, Algorithm and High Performance Computing Group	2002-2005
<ul style="list-style-type: none">Designed various optimization algorithms to solve graph theory problems.Designed and built energy-efficient routing and multicast protocols in Wireless Mesh Networks.	

PUBLICATION

Y. Wu, G. Zhou and J. Stankovic. <i>ACR: Active Collision Recovery in Dense Wireless Sensor Network</i> , INFOCOM 2010
Y. Wu, K. Kapitanova, J. Li, J. Stankovic, S. Son and K. Whitehouse, <i>Run Time Assurance of Application-Level Requirements in Wireless Sensor Networks</i> , IPSN, SPOTS track (the 2nd rank in 86 submissions), 2010.
Y. Wu, M. Keally, G. Zhou and W. Mao, <i>Traffic-Aware Channel Assignment in Wireless Sensor Networks</i> , WASA 2009.
Y. Wu, J. Stankovic, T. He, J. Lu and S. Lin. <i>Realistic and Efficient Multi-Channel Communications in Wireless Sensor Networks</i> , INFOCOM 2008.
<ul style="list-style-type: none">Other 5 authored and co-authored published papers

WORK EXPERIENCE

YAHOO! INC	SUNNYVALE, CA
Senior System Engineer in Sponsored Search Team	Aug 2010 ~ present
<ul style="list-style-type: none">Designed and implemented scalable UDP software (using Perl) to manage communication between Ads search frontend and backend servers, which improves Ads Search Performance by balancing load among backend servers, and provides fault-tolerant techniques to deal with network failures and server crashes.The software was launched to productions that servers billions of dollars a year for Yahoo! Ads search. It allowed Yahoo save potentially \$350,000 by substituting expensive CISCO hardware currently used for the similar functionality.	

COMPUTER SKILLS

Programming Language

- Expertise in C/C++. Developed embedded system drivers, file systems for low-power sensor devices, wireless communication protocols.
- Experience in core JAVA. Developed networking simulators, and communication management software.
- Experience in Perl and Shell programming. Developed text processing software and web server applications.
- Familiar with Matlab programming.
- Familiar with SQL.

Algorithm:

- Strong on Algorithm design, analysis, testing and evaluation.
- Rich experience on design distributed algorithm in large scale systems.
- Very knowledgeable on graph theory, game theory and stochastic and probability theory.

Networking:

- Expertise on designing and developing various wireless protocols, including MAC, routing, and transport layer protocols, especially for Wireless Sensor Networks.
- Experience on socket programming with TCP and UDP.
- Knowledgeable on wireless communication standards, including IEEE 802.11, and IEEE 802.15.4.
- Experienced for common networking simulators, such as NS-2 and Glomosim .

System:

- Experience on Unix and Linux programming and Linux kernel development.
- Experience on Large Scale Server systems with High data volume.
- Expertise on TinyOS and other operating systems for wireless sensor and embedded systems.
- Experience on development on large scale and distributed systems.

LEADSHIP ROLES AND ADDITIONAL INFORMATION

Team Leader of LUSTER project

2007-2008

- Led team of 5 graduate students to build this large system.

Graduate Student President, CS Dept. of USTC

2004-2005

- Leader of 200-member group that organized research conferences with other universities.
- Organized the first university software contest of Anhui Province.

Caption of USTC Debating Team

1999

- Led the 6-member debate team to win Runner-up in National University Debating Competition.
- Won **Excellent Debater Award** in the competition. (top 5% of debaters)

Languages: Chinese (native), English (fluent).