

Michael J. Schultz

Curriculum vitae

Address: 5592 Waterman Blvd., Unit #B3 Birth date: February 3, 1985
Saint Louis, MO 63112-1867, USA Birth place: Arlington Heights, IL, USA
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Research Interests

Networking: network monitoring; high-speed networking. **Systems:** transactional memory; concurrency; scalable computing; virtual machines. **Programming Languages:** compilers and optimization; correctness. **Software Engineering:** design patterns; static program analysis.

Educational Background

Washington University in Saint Louis Saint Louis, Missouri
Doctor of Philosophy, *Computer Science*, Fall 2009–present.
Advisor: Patrick Crowley

Marquette University Milwaukee, Wisconsin
Master of Science, *Computer Science*, August 2009.
Thesis topic: *Using Software Transactional Memory in Interrupt-Driven Systems*.
Advisor: Dennis Brylow

Marquette University Milwaukee, Wisconsin
Bachelor of Science, *Computer Science and Mathematics*, May 2007.
Major GPA: 3.72/4.00; Overall GPA: 3.33/4.00.

Research Activities

Papers

- **Michael J. Schultz** and Patrick Crowley. *Performance Analysis of Packet Capture Methods in a 10 Gbps Virtualized Environment*. In the *21st International Conference on Computer Communications and Networks*, Munich, Germany, July/August 2012.
- **Michael J. Schultz**, Ben Wun, and Patrick Crowley. *A Passive Network Appliance for Real-Time Network Monitoring*. In the *ACM/IEEE Symposium on Architectures for Networking and Communications Systems*, Brooklyn, New York, October 2011.

Thesis

- **Michael J. Schultz**. *Using Software Transactional Memory in Interrupt-Driven Systems*. Master's Thesis, Marquette University, August 2009.

Posters

- Adam T. Koehler, **Michael J. Schultz**, and Dennis Brylow. Forward Thinking Poster Session 2008: *Solid State Persistent Memory Devices for Embedded Xinu*; Milwaukee, WI.
- **Michael J. Schultz** and Dennis Brylow. LCTES 2008 Student Poster Session: *Adding Software Transactions to the Kernel*; Tucson, AZ.
- Aaron Gember, Paul Hinze, **Michael J. Schultz**, and Dennis Brylow. Forward Thinking Poster Session 2007: *When Machines have Deadlines—Building a Real-Time Embedded Operating System*; Milwaukee, WI.

Grants

- **Michael J. Schultz, PI.** *Securing Industrial Control Networks with Network Forecasting*. NSF SBIR Award Number: 1248147, Award Amount: \$180,000.

Professional History

Senior Engineer August 2012 – present
Observable Networks, Inc.

Designed and developed algorithms to analyze network meta-data for malicious behavior; designed a scalable architecture to handle growth in customers and data volume.

Research Assistant August 2009 – present
Department of Computer Science and Engineering, Washington University in Saint Louis
Applied Research Laboratory

Research Assistant May 2007 – August 2009
Department of Mathematics, Statistics, and Computer Science, Marquette University
Systems Laboratory

Developer and Director September 2005 – May 2007
College of Communication, Student Media Interactive, Marquette University
Led a team of student developers and designers for the web presence of the newspaper, journal, radio, television, and advertising.

Projects and Services

Projects

- Embedded Xinu 1.0—released July 2007; ANSI C compliant release of the Xinu operating system targeting the MIPS platform; updated to v1.5 September 2008 with inclusion of an Ethernet driver and extensive code cleanup.
- Microwulf—built Fall 2008; portable four-node beowulf cluster.

Committees

- MSCS Undergraduate Committee—2006–2007 academic year; advocate for MSCS undergraduate interests.
- Student Media Board—2006–2007 academic year; helped begin convergence of student media outlets (paper, television, radio, and journal); assisted in hiring of managers for the next academic year.

Extra-Curricular

- ACM Student Chapter—*secretary* 2008–present
- Marquette University Linux Users Group—*co-founder* 2006; *president* 2006–2007; *system administrator* 2007–present.

Conferences Attended

ICCCN 2012 21st International Conference on Computer Communications and Networks; Munich, Germany, July/August 2012.

ANCS 2011 ACM/IEEE Symposium on Architectures for Networking and Communications Systems; Brooklyn, NY, October 2011.

ANCS 2010 ACM/IEEE Symposium on Architectures for Networking and Communications Systems; La Jolla, CA, October 2010.

Strangeloop 2010 Strangeloop 2010; Saint Louis, MO, October 2010.

SIGCSE 2010 ACM Technical Symposium in Computer Science Education; Milwaukee, WI, March 2010.

SIGCSE 2009 ACM Technical Symposium in Computer Science Education; Chattanooga, TN, March 2009.

EMSOFT 2008 International Conference on Embedded Systems; co-located with **CASES** International Conference on Compilers, Architecture, and Synthesis for Embedded Systems; co-located with **CODES+ISSS** International Conference on Hardware-Software Codesign and System Synthesis; Atlanta, GA, October 2008.

PLDI 2008 ACM SIGPLAN Conference on Programming Language Design and Implementation; co-located with **LCTES 2008** ACM SIGPLAN/SIGBED Conference on Languages, Compilers, and Tools for Embedded Systems; Tucson, AZ, June 2008.

SIGCSE 2008 ACM Technical Symposium in Computer Science Education; Portland, OR, March 2008.

Professional and Scholarly Societies

- Association for Computing Machinery (ACM)
 - SIGOPS: Special Interest Group on Operating Systems
- Institute of Electrical and Electronic Engineers (IEEE) - Computer Society
- Upsilon Pi Epsilon - Honor Society in Computer Science
- Pi Mu Epsilon - Honor Society in Mathematics