TAMIM SOOKOOR
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EDUCATION

University of Virginia Charlottesville, VA
Ph.D., Computer Science, August 2012 (GPA: 3.5)
M.S., Computer Science, December 2009 (GPA: 3.6)
- Advisor: Kamin Whitehouse
- Ph.D. Dissertation: *Application Development for Cyber-Physical Systems: Programming Language Concepts and Case Studies*
- Master's Thesis: *The Design of MDB: A Macrodebugger for Wireless Embedded Networks*

Vanderbilt University Nashville, TN
B.E., Computer Engineering with Minor in Mathematics, May 2006 (GPA: 3.8) *Summa Cum Laude*
- Undergraduate coursework: Operating Systems; Algorithms; Programming Languages; Computer Architecture; Embedded Systems; FPGA Design; Special Topics in Software Design

EXPERIENCE

U.S. Army Research Laboratory - U.S. Army's corporate laboratory Aberdeen, MD
Computer Scientist Aug 2012–Present
- Extending the EMANE network emulator to model computation on battlefield networks.
- Collaborating with professors from Georgia Tech, Texas A&M, RPI, and UTEP to implement the subsystems required of a future battlefield computation network.

University of Virginia - #2 American public university Charlottesville, VA
Graduate Research Assistant May 2006–Aug 2012
- Lead two research projects resulting in six conference publications (three as the lead author) and three journal articles (one as the lead author) in top Computer Science conferences and journals.
- Helped write grant proposals and advised junior and undergraduate students.
- Collaborated with the Environmental Wireless Sensor Network group to implement and deploy a system to monitor sunlight under shrub thickets resulting in a conference publication.

PROJECTS

- **Occupancy-based Home Heating and Cooling** (2009 — 2012): Cyber-Physical System (CPS) that reduced the heating and cooling costs of homes by unto 28% with only about $25 in additional hardware. [Python, Java, MySQL, Oracle]
  Resulted in three journal articles, four conference publications, and one workshop paper.
- **Macroprogramming System for CPSs** (2007 — 2009): Vector-based programming language and time-travel debugger to ease CPS application development. [Matlab, Java, Python]
  Resulted in two conference publications, one workshop paper, and two conference demonstrations.

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AWARDS

- Department of Defense SMART Fellowship - 2010: One of 298 fellows selected from 3400 applicants to receive a full scholarship for my last two years of graduate study in addition to an annual stipend of $41,000 based on outstanding academic performance and research potential.
- Vanderbilt University Dean's Award for Outstanding Scholarship - 2006: Awarded to each member of the senior class whose GPA equals or exceeds the top 5 percent of the previous year's seniors.

PUBLICATIONS

Refereed Journal Articles (3 total)

- Tamim Sookoor, Brian Holben, and Kamin Whitehouse. Feasibility of Retrofitting Centralized HVAC Systems for Room-Level Zoning, in *Elsevier Journal on Sustainable Computing, Informatics and Systems*, 2013.
- Virginia Smith, Tamim Sookoor, and Kamin Whitehouse. Modeling Building Thermal Response to HVAC Zoning, in *ACM SIGBED Review, Special Issue on Networks of Cooperating Objects*, vol. 9, no. 3, pp. 39 – 45, September 2012.
- Kamin Whitehouse, Juhi Ranjan, Jiakang Lu, Tamim Sookoor, Mehdi Saadat, Carrie Burke, Galen Staengle, Anselmo Canfora, and Hossein Haj-Hariri. Towards Occupancy-driven Heating and Cooling, in *IEEE Design & Test, Special Issue on Green Computing*, vol. 29, no. 4, pp. 17 – 25, July/August 2012. *Impact Factor: 1.62*

Refereed Conference Papers (7 total)

- Tamim Sookoor, and Kamin Whitehouse. RoomZoner: Occupancy-Based Room-Level Zoning of a Centralized HVAC System, in *The 4th International Conference on Cyber-Physical Systems*, pp. 209 – 218, Philadelphia, PA, USA, April 2013. *Acceptance Rate: 23%*
- Tamim Sookoor, Brian Holben, and Kamin Whitehouse. Feasibility of Retrofitting Centralized HVAC Systems for Room-Level Zoning, in *The 3rd International Green Computing Conference*, pp. 1 – 10, San Jose, CA, USA, June 2012. *Acceptance Rate: 30%*
- Timothy Hnat, Vijay Srinivasan, Jiakang Lu, Tamim Sookoor, Raymond Dawson, John Stankovic, and Kamin Whitehouse. The Hitchhiker's Guide to Successful Residential Sensing Deployments, in *The 9th ACM Conference on Embedded Networked Sensing Systems*, pp. 232 – 245, Seattle, WA, USA, November 2011. *Acceptance Rate: 19.5%* (40+ citations)
- Jiakang Lu, Tamim Sookoor, Vijay Srinivasan, Gao Ge, Brian Holben, John Stankovic, Eric Field, and Kamin Whitehouse. The Smart Thermostat: Using Occupancy Sensors to Save Energy in Homes, in *The 8th ACM Conference on Embedded Networked Sensing Systems*, pp. 211 – 224, Zurich, Switzerland, November 2010. *Acceptance Rate: 17%* (90+ citations)
- Tamim Sookoor, Timothy Hnat, Pieter Hooimeijer, Westley Weimer, and Kamin Whitehouse. Macrodebugging: Global Views of Distributed Program Execution, in *The 7th ACM Conference on Embedded Networked Sensing Systems*, pp. 141 – 154, Berkeley, CA, USA, November 2009. *Acceptance Rate: 17.6%* (40+ citations)
- Timothy Hnat, Tamim Sookoor, Pieter Hooimeijer, Westley Weimer, and Kamin Whitehouse. MacroLab: A Vector-based Macroprogramming Framework for Cyber-Physical Systems, in *The 6th ACM Conference on Embedded Networked Sensing Systems*, pp. 225 – 238, Raleigh, NC, USA, November 2008. *Acceptance Rate: 16%* (60 citations)
- Leo Selavo, Anthony Wood, Qiuhua Cao, Tamim Sookoor, Hengchang Liu, Aravind Srinivasan, Yafeng Wu, Woochul Kang, John Stankovic, Don Young, and John Porter. LUSTER: Wireless Sensor Network for Environmental Research, in *The 5th ACM Conference on Embedded Networked Sensing Systems*, pp. 103 – 116, Sydney, Australia, November 2007. *Acceptance Rate: 17%* (180+ citations)