

# Timothy William Hnat

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CONTACT INFORMATION	Department of Computer Science School of Engineering University of Virginia 151 Engineers Way, P.O. Box 400740 Charlottesville, VA 22904-4740 USA	<i>Voice:</i> 502.609.4987 <i>Fax:</i> 434.982.2214 <i>E-mail:</i> hnat@cs.virginia.edu <i>Web:</i> www.timothyhnat.com
RESEARCH INTERESTS	Distributed Systems, Machine Learning, Networking, Programming Languages, Wireless Sensor Networks	
EDUCATION	<b>University of Virginia</b> , Charlottesville, Virginia USA Ph.D., Computer Science(Expected: May 2011) <ul style="list-style-type: none"><li>• Dissertation Topic: Efficiently Programming and Managing Very Large Scale Wireless Embedded Networks</li><li>• Advisor: Professor Kamin Whitehouse</li><li>• Area of Study: Wireless Sensor Networks</li></ul> <b>University of Louisville</b> , Louisville, Kentucky USA M.Eng., Computer Engineering and Computer Science(August 2006) <ul style="list-style-type: none"><li>• <i>Summa cum Laude</i>, With Highest Honors in Engineering</li><li>• Thesis Topic: A Secure Point-to-Point Key Distribution Algorithm for Wireless Sensor Networks</li><li>• Advisor: Professor Rammohan K. Ragade</li><li>• Area of Study: Wireless Sensor Networks</li></ul> B.S., Computer Engineering and Computer Science(August 2005) <ul style="list-style-type: none"><li>• <i>Summa cum Laude</i>, With Highest Honors in Engineering</li></ul>	
AWARDS	<b>University of Virginia</b> , Charlottesville, Virginia USA <ul style="list-style-type: none"><li>• Frank Anger Memorial ACM SIGBED/SIGSOFT Student Award, 2009</li><li>• SenSys Student Travel and Conference Funding Award, 2009</li><li>• SenSys Student Conference Funding Award, 2008</li><li>• IPSN Student Travel and Conference Funding Award, 2008</li><li>• UVA Fellowship, 2006–2011</li></ul> <b>University of Louisville</b> , Louisville, Kentucky USA <ul style="list-style-type: none"><li>• Fischer Family Scholarship, University of Louisville, 2001–2006</li><li>• ACM Distinguished Student Award, 2005</li><li>• Speed School Alumni (Scholarship), Speed School of Engineering, University of Louisville, 2001–2002</li></ul>	
ACADEMIC EXPERIENCE	<b>University of Virginia</b> , Charlottesville, Virginia USA <i>Graduate Student Researcher</i> <b>August 2006 to present</b> <ul style="list-style-type: none"><li>• Worked for Professor Kamin Whitehouse</li><li>• Research focused on programming systems and languages for large scale wireless embedded networks</li></ul> <i>Teaching Assistant</i> <b>August 2006 to May 2007</b> <ul style="list-style-type: none"><li>• Assisted with Computer Networks (CS 457), Program and Data Representation (CS 216), and Computer Architecture (CS 333)</li></ul>	

- Provided support to engineering students with assignments.
- Responsible for running relevant lab sessions.
- Graded homework assignments and exams.

## PUBLICATIONS

- Tamim I. Sookoor, **Timothy W. Hnat**, Pieter Hoomimeijer, Westley Weimer, Kamin Whitehouse. *Macrodebugging: Providing Abstract Views of System State*. The 7th ACM Conference on Embedded Network Sensor Systems (SenSys), Berkeley, CA, Nov. 2009
- **Timothy W. Hnat**, Tamim I. Sookoor, Pieter Hoomimeijer, Westley Weimer, Kamin Whitehouse. *MacroLab: A Vector-based Macroprogramming Framework for Cyber-Physical Systems*. The 6th ACM Conference on Embedded Network Sensor Systems (SenSys), Raleigh, NC, Nov. 2008
- S. Braun, W. P. Hnat, **T. W. Hnat**, H. L. Legan, *Taking the guesswork out of mandibular symphyseal distraction osteogenesis*. American Journal of Orthodontics and Dentofacial Orthopedics, Volume 119, Number 2, 2001
- S. Braun, W. P. Hnat, B. Kusnoto, **T. W. Hnat**, *A new accurate approach to the anterior ratio with clinical applications. Part 1: A computer program*. American Journal of Orthodontics and Dentofacial Orthopedics, Volume 115, Number 4, 1999

## DEMOS

- **Timothy W. Hnat**, Tamim I. Sookoor, Kamin Whitehouse. *Macrodebugging with MDB Framework for Cyber-Physical Systems*. The 7th ACM Conference on Embedded Network Sensor Systems (SenSys), Berkeley, CA, Nov. 2009
- Tamim I. Sookoor, **Timothy W. Hnat**, Kamin Whitehouse. *Demo Abstract: Programming Cyber-Physical Systems with MacroLab*. The 6th ACM Conference on Embedded Network Sensor Systems (SenSys), Raleigh, NC, Nov. 2008
- R. Dickerson, J. Lu, B. Chantree, **Timothy W. Hnat**, J. Lu, J. Stankovic, K. Whitehouse, *MetroNet: Case Study for Collaborative Data Sharing on the World Wide Web*. Information Processing and Sensor Networks, April 2008

## PROFESSIONAL EXPERIENCE

**YUM! Brands, Inc.**, Louisville, Kentucky USA

*Software Developer Intern*

**January 2003 to August 2004**

- Software development and support of in-store systems for KFC restaurants.
- Designed and started the development of a plugin-based architecture to replace the aging computer interface in the stores.

TECHNICAL SKILLS Wireless Sensor Networks: TinyOS, Contiki, Cooja, NesC, Xbow, Sentilla (Moteiv)

MATLAB experience: embedded matlab, compiler design, statistics, visualization

Instrumentation and Control: Simulink, Tektronix, National Instruments data acquisition hardware and software

Programming: C, C++, Java, Matlab, NesC, Perl, PHP, Python, UNIX shell scripting, SQL, SVN, and others

Applications: T<sub>E</sub>X, L<sup>A</sup>T<sub>E</sub>X, B<sub>I</sub>B<sub>T</sub>E<sub>X</sub>, Microsoft Office, and other common productivity packages for Windows, OS X, and Linux platforms

Operating Systems: Linux, Apple OS X, Microsoft Windows

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