

Kamin Whitehouse

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UVA PROFESSIONAL APPOINTMENTS

Commonwealth Associate Professor of Computer Science	2013 to present
Associate Professor of Computer Science	2012 to 2013
Assistant Professor of Computer Science	2006 to 2012

EDUCATION

UC Berkeley	2000–2006
Ph.D. Computer Science, 2006	
M.S. Computer Science, 2003	
Rutgers University	1995-1999
B.S. Electrical Engineering, 1999	
B.A. Cognitive Science and Philosophy, 1999	

ADVISERS

Ph.D. Adviser	
Prof. David Culler – Professor of Computer Science, University of California, Berkeley	
Undergraduate Research Adviser	
Prof. Suzanne Stevenson – Professor of Computer Science, University of Toronto	

SUBSTANTIAL HONORS AND AWARDS

BuildSys'16 Audience Choice Award	Nov 2016
BuildSys'16 Best Paper Runner Up	Nov 2016
BuildSys'16 Best Demo Award	Nov 2016
BuildSys'16 Best Presentation Award	Nov 2016
MobiSys'16 Best Paper Award	Jun 2016
BuildSys'15 Best Paper Runner Up	Nov 2015

BuildSys'15 Best Paper Runner Up	Nov 2015
BuildSys'14 Best Talk Award	Nov 2014
Commonwealth Endowed Chair	Aug 2013
IPSN'13 Best Paper Runner Up	Apr 2013
NSF CAREER Award	Jan 2008
UVA Excellence in Diversity fellowship award	Sep 2006
Siebel fellowship award	Sep 2005
GOF two-year fellowship award	Sep 2003
NSF three-year fellowship (monetary award not accepted)	Sep 2000
NDSEG three-year fellowship award	Sep 2000

INVITED TALKS

Keynote Talk at the Conference on Energy Informatics	Oct 2017
Link Lab Overview, SEAS Retreat	Dec 2016
Launching the Link Lab, SEAS Trustees	Oct 2016
Link Lab Investment Proposal, UVa Board of Visitors	Sept 2016
Invited Seminar Series, Clemson University	Oct 2015
Keynote Talk at IEEE SenseApp 2015	Oct 2015
Embedded Sensing Workshop, Oxford University	May 2015
Distinguished Lecture Series, Indiana University	May 2015
Keynote Talk at EWSN 2015	Feb 2015
MIT Technology Review Digital Summit	Jun 2014
Microsoft Faculty Summit	Jul 2013
Microsoft Research	Jun 2013
BuildSoft Workshop	Mar 2013
Dept of Comp Science, Rutgers University	Oct 2012
Keynote speaker at the ACM HomeSys workshop	Sep 2012
Keynote speaker at the CPS Week CONET workshop	Apr 2012
Dept of Comp Science, Brown University	Jul 2011
Dept of Comp Science, Washington and Lee University	Mar 2011
CONET SENIOT Summer School, Bertinoro Italy	Jul 2009

Berlusconi Invited Workshop, Bertinoro Italy	Jul 2009
Center for Embedded Networked Sensing (CENS), UCLA	Jan 2009
Dept of Comp Science, USC	Jan 2009

INVITED PANELS

UVa Sustainability Day	Nov 2014
NSF Workshop on the Future Directions of Wireless Networks	Nov 2013
The Intellectual Core of Sensor Networks panel at IPSN	Apr 2013
Smart Cities panel at the CPS Week CONET workshop	Apr 2012
NSF Workshop on Future of Networked Sensing Systems	Nov 2009
HotEmNets panel on the Future of WSNs	Jun 2008
Experimental Research panel at USC TPWN workshop	May 2008
ACM Sensys Doctoral Colloquium Panel	Nov 2007
DoD ISAT Study on Engineering Ensemble Effects (E3)	Oct 2007
Darden Business Forum Panel on "Tomorrow's Technology"	Sep 2007

PROFESSIONAL SERVICE

General Chair	2017
4 th ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys)	
Journal Editorial Board	2016 -- present
Proceedings of the ACM (PACM) on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)	
Journal Editorial Board	2008 -- present
ACM Transactions on Sensor Networks (TOSN) (Impact Factor=2.282)	
Advisory Board Member	2016 -- present
BeaconGrid, Washington, DC	
Wireless asset tracking and presence detection	
Advisory Board Member	2007 -- present
Fruition Sciences, San Francisco, CA	
Sensor-based precision agriculture in vineyards	
TPC Member	2007, 2009, 2010, 2011, 2012, 2013, 2015, 2016, 2017
Information Processing in Sensor Networks (IPSN)	

TPC Member 2017
3rd ACM Workshop on Micro Aerial Vehicle Networks, Systems, and Applications (DroNet)

Steering Committee (committee chair 2014-2016) 2013 -- 2016
ACM Conference on Embedded Network Sensor Systems (SenSys)

Advisory Committee Member 2015-2016
NSF Workshop on Implications of Occupant Behavior for Building Design and Operation: Now and the Future. Vienna, Austria, Apr 2016

Advisory Committee Member 2015
International Workshop on Internet of Things towards Applications (IoT-App 2015), held in conjunction with ACM SenSys. Seoul, Korea, Nov 2015

Steering Committee (committee chair 2011-2012) 2011 -- 2015
ACM Conference on Embedded Systems For Energy-Efficient Built Environments (BuildSys)

TPC Member 2013, 2015, 2016
ACM Conference on Mobile Systems, Applications and Services (MobiSys)

TPC Member 2010, 2011, 2012, 2015
ACM Conference on Embedded Systems For Energy-Efficient Built Environments (BuildSys)

TPC Member 2013, 2015
ACM Conference on Pervasive and Ubiquitous Computing (UbiComp)

TPC Member 2013, 2015
ACM Conference on Future Energy Systems (e-Energy)

TPC Member 2008, 2010, 2012, 2012, 2013, 2015
ACM Conference on Embedded Networked Sensor Systems (SenSys)

TPC Member 2008, 2015
Distributed Computing in Sensor Systems (DCOSS)

Journal Reviewer 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015
ACM Transactions on Sensor Networks

TPC Co-Chair 2013
ACM Conference on Embedded Networked Sensor Systems (SenSys)

Poster Chair 2013
ACM Conference on Pervasive and Ubiquitous Computing (UbiComp)

TPC Member 2013
International Green Computing Conference (IGCC)

TPC Member 2009, 2011, 2013
IEEE Real-Time Applications Symposium (RTAS)

TPC Member 2010, 2011, 2012, 2013
Workshop on Networks of Cooperating Objects (CONET)

Journal Reviewer IEEE Transactions on Mobile Computing	2007, 2008, 2009, 2010, 2011, 2012, 2013
Steering Committee Chair ACM Conference on Embedded Systems For Energy-Efficient Built Environments (BuildSys)	2011-12
TPC Co-Chair ACM/IEEE Information Processing in Sensor Networks (IPSN)	2012
TPC Member European Conference on Wireless Sensor Networks (EWSN)	2010, 2011, 2012
TPC Member ACM International Conference on Embedded Software (EMSOFT)	2012
TPC Member Workshop on Software Engineering for Sensor Nets (SESENA)	2010, 2011, 2012
Journal Reviewer IEEE Transactions on Parallel and Distributed Systems	2007, 2008, 2009, 2012
Journal Reviewer Elsevier Ad Hoc Networks	2008, 2011, 2012
Journal Reviewer Journal of Computing in Civil Engineering	2012
TPC Co-Chair ACM Workshop on Energy-Efficiency in Buildings (BuildSys)	2011
TPC Co-Chair European Conference on Wireless Sensor Networks (EWSN)	2011
Workshop Chair ACM Embedded Networked Sensor Systems (SenSys)	2011
Demo Chair ACM/IEEE Information Processing in Sensor Networks (IPSN)	2011
Journal Reviewer Computer Communications Review	2010, 2011
Journal Reviewer IEEE Pervasive	2011
Journal Reviewer IEEE Security and Privacy	2011
TPC Member Conference on Networked Sensing Systems (INSS)	2008, 2010, 2011
TPC Member IEEE Conference on Distributed Computing Systems (ICDCS)	2010, 2011

TPC Member Workshop on Embedded Networked Systems (HotEmNets)	2008, 2010
Journal Reviewer ACM Transactions on Embedded Computing Systems	2010
Journal Reviewer IEEE Transactions on Computers	2010
TPC Member IEEE Sensor Nets, Ubiquitous, and Trustworthy Computing (SUTC)	2010
Finance Chair ACM Embedded Networked Sensor Systems (SenSys)	2009
Registration Chair ACM Embedded Networked Sensor Systems (SenSys)	2009
General Vice-Chair ACM/IEEE RoboComm	2009
Competition Chair ACM/IEEE Information Processing in Sensor Networks (IPSN)	2009
Publication Chair ACM/IEEE RoboComm	2009
Journal Reviewer Springer Journal of Real-time Systems	2009
TPC Member Conference on Robot Comm. and Coordination (Robocomm)	2009
TPC Member Conference On Principle Of Distributed Systems (OPODIS)	2009
TPC Member IEEE Sensor, Mesh & Ad Hoc Comm and Networks (SECON)	2009
Demo Chair ACM Embedded Networked Sensor Systems (SenSys)	2008
Competition Chair ACM/IEEE Information Processing in Sensor Networks (IPSN)	2008
Local Chair Workshop on Embedded Networked Systems (HotEmNets)	2008
TPC Member IEEE International Conference on Communications (ICC)	2008
TPC Member International Conference on the Internet of Things (IOT)	2008

TPC Member Sensor Technologies and Applications (SENSORCOMM)	2007, 2008
Competition Chair ACM/IEEE Information Processing in Sensor Networks (IPSN)	2007
TPC Member Workshop on Wireless Sensor Network Architecture (WWSNA)	2007
TPC Member Wireless Sensor and Actuator Networks (WSAN)	2007
Grant Proposal Reviewer NSF Review Panels, over 8 times (years and panel names withheld)	

ARCHIVAL PEER-REVIEWED JOURNAL ARTICLES

1. Behnam Dezfouli, Marjan Radi, Kamin Whitehouse, Shukor Abd Razak, and Tan Hwee-Pink. **DICSA: Distributed and concurrent link scheduling algorithm for data gathering in wireless sensor networks**. Elsevier, Ad Hoc Networks 25 (2015): 54-71.
Impact Factor: 1.530
2. Shan Lin, Gang Zhou, Mo'taz Al-Hami, Kamin Whitehouse, Yafeng Wu, John A. Stankovic, Tian He, Xiaobing Wu, and Hengchang Liu. **Toward Stable Network Performance in Wireless Sensor Networks: A Multilevel Perspective**. ACM Transactions on Sensor Networks (TOSN) 11, no. 3 (2015): 42.
Impact Factor: 2.282
3. Blaine Reeder and Kamin Whitehouse. **Sensor-based detection of gait speed in older adults: an integrative review**. Research in Gerontological Nursing 8, no. 1 (2015): 12-27.
4. Behnam Dezfouli, Marjan Radi, Kamin Whitehouse, Shukor Abd Razak, Kamalrulnizam Abu Bakar, and Tan Hwee-Pink. **CAMA: Efficient Modeling of the Capture Effect for Low-Power Wireless Networks**. ACM Transactions on Sensor Networks (TOSN), 2014.
Impact Factor: 2.282
5. Behnam Dezfouli, Marjan Radi, Shukor Abd Razak, Kamin Whitehouse, Kamalrulnizam Abu Bakar, and Tan Hwee-Pink. **Improving Broadcast Reliability for Neighbor Discovery, Link Estimation and Collection Tree Construction in Wireless Sensor Networks**. Computer Networks 62, pp.101-121 (2014), Elsevier.
Impact Factor: 1.282
6. Jiakang Lu, Yamina Taskin Shams, Kamin Whitehouse. **Smart Blueprints: Automatically Generated Maps of Homes and the Devices within Them**. To appear in ACM Transactions on Sensor Networks, 2014.
Impact Factor: 2.282

7. Hengchang Liu, Zhiheng Xie, JingyuanLi, Shan Lin, David Siu, Pan Hui, Kamin Whitehouse, John A. Stankovic. **An Automatic, Robust, and Efficient Multi-User Breadcrumb System for Emergency Response Applications.** IEEE Transactions on Mobile Computing, 2013.
Impact Factor: 4.13
8. Tamim Sookoor, Brian Holben and Kamin Whitehouse. **Feasibility of Retrofitting Centralized HVAC Systems for Room-Level Zoning.** Elsevier Journal on Sustainable Computing, Informatics and Systems, 2013.
9. Virginia Smith, Tamim Sookoor, and Kamin Whitehouse. **Modeling Building Thermal Response to HVAC Zoning.** ACM SIGBED Review, Special Issue on Networks of Cooperating Objects. September, 2012.
10. Kamin Whitehouse, Juhi Ranjan, Jiakang Lu, Tamim Sookoor, Mehdi Saadat, Carrie Burke, Galen Staengle Canfora, and Hossein Haj-Hariri. **Towards Occupancy-driven Heating and Cooling.** IEEE Design & Test, Special Issue on Green Computing. Jul/Aug 2012.
11. Benton H. Calhoun, John Lach, John Stankovic, David D. Wentzloff, Kamin Whitehouse, Adam T. Barth, Jonathan K. Brown, Qiang Li, Seunghyun Oh, Nathan E. Roberts, Yanqing Zhang. **Body Sensor Networks: A Holistic Approach from Silicon to Users.** Proceedings of the IEEE, 2011.
Impact Factor: 5.096
12. Kamin Whitehouse, Chris Karlof, David Culler. **A Practical Evaluation of Radio Signal Strength for Ranging-based Localization.** ACM Mobile Computing and Communications Review (MC2R), Special Issue on Localization. 2006.
(150+ citations)
13. Kamin Whitehouse, David Culler. **Macro-calibration in Sensor/Actuator Networks.** Mobile Networks and Applications Journal (MONET), Special Issue on Wireless Sensor Networks. June, 2003. ACM Press.
(50+ citations)
Impact Factor: 1.496

ARCHIVAL PEER-REVIEWED CONFERENCE PAPERS

1. Dezhi Hong, Quanquan Gu and Kamin Whitehouse. **High-dimensional Time Series Clustering via Cross-Predictability.** The 20th International Conference on Artificial Intelligence and Statistics (AISTATS'17). Apr 20-22, 2017. Fort Lauderdale, Florida, USA
2. Erin Griffiths and Kamin Whitehouse. **ThermalThrift: Cost Effective Thermal Energy Storage for Load Shifting with Water Heaters.** In Proceedings of the International Conference on Embedded Wireless Systems and Networks (EWSN'17). Uppsala, Sweden. February 20-22, 2017.
3. Nipun Batra, Hongning Wang, Amarjeet Singh, Kamin Whitehouse. **Matrix Factorisation for Scalable Energy Breakdown.** In Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI'17). San Francisco, California, USA. February 4-9, 2017.

4. Bharathan Balaji, Arka Bhattacharya, Gabriel Fierro, Jingkun Gao, Joshua Gluck, Dezhi Hong, Aslak Johansen, Jason Koh, Joern Ploennigs, Yuvraj Agarwal, Mario Berges, David Culler, Rajesh Gupta, Mikkel Baun Kjærgaard, Mani Srivastava, Kamin Whitehouse. **Brick: Towards a Unified Metadata Schema for Buildings**. Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys), 2016.
Audience Choice Award
Best Paper Runner-Up
5. Elahe Soltanaghaei, Kamin Whitehouse. **WalkSense: Classifying Home Occupancy States Using Walkway Sensing**. Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys), 2016.
Best Presentation Award
6. Rayoung Yang, Devika Pisharoty, Soodeh Montazeri, Kamin Whitehouse, Mark W. Newman. **How does eco-coaching help to save energy? assessing a recommendation system for energy-efficient thermostat scheduling**. Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2016.
7. Kalyanaraman, Avinash, Erin Griffiths, and Kamin Whitehouse. **TransTrack: Tracking Multiple Targets by Sensing Their Zone Transitions**. In the Proceedings of the 13th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 2016). Washington, DC. June 5-7, 2016.
8. Nipun Batra, Amarjeet Singh, Kamin Whitehouse. **Gemello: Creating a Detailed Energy Breakdown from Just the Monthly Electricity Bill**. The 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2016.
9. Endri Bregu, Nicola Casamassima, Daniel Cantoni, Luca Mottola, Kamin Whitehouse. **Reactive Control of Autonomous Drones**. The 14th Annual International Conference on Mobile Systems, Applications, and Services (MobiSys), 2016.
Best Paper Award.
10. Devika, Pisharoty, Rayoung Yang, Mark Newman, Kamin Whitehouse. **ThermoCoach: Reducing Home Energy Consumption with Personalized Thermostat Recommendations**. The 2nd ACM International Conference on Embedded Systems For Energy-Efficient Built Environments. November 4-5, 2015. Seoul, South Korea.
11. Nipun Batra, Amarjeet Singh, Kamin Whitehouse. **If You Measure It, Can You Improve It? Exploring The Value of Energy Disaggregation**. The 2nd ACM International Conference on Embedded Systems For Energy-Efficient Built Environments. November 4-5, 2015. Seoul, South Korea.
12. Dezhi Hong, Hongning Wang, Kamin Whitehouse. **The Building Adapter: Towards Quickly Applying Building Analytics at Scale**. The 2nd ACM International Conference on Embedded Systems For Energy-Efficient Built Environments. November 4-5, 2015. Seoul, South Korea.
Best Paper Runner-up.

13. Arka Bhattacharya, David Culler, Jorge Ortiz, Dezhi Hong, Kamin Whitehouse, Eugene Wu. **Automated Metadata Construction to support Portable Building Applications.** The 2nd ACM International Conference on Embedded Systems For Energy-Efficient Built Environments. November 4-5, 2015. Seoul, South Korea.
Best Paper Runner-up.
14. Dezhi Hong, Hongning Wang, Kamin Whitehouse. **Clustering-based Active Learning on Sensor Type Classification in Buildings.** The 24th ACM International Conference on Information and Knowledge Management (CIKM'15). October 19-23, 2015. Melbourne, Australia.
15. Juhi Ranjan, Kamin Whitehouse. **Object Hallmarks: Identifying Object Users using Wearable Wrist Sensors.** The 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp'15). September 7-11, 2015. Osaka, Japan.
16. Yong Sun, Anindya Proadhan, Erin Griffiths, and Kamin Whitehouse. **How Hot is Piping Hot? Lower Energy Consumption with Smarter Hot Water Delivery.** The 14th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN'15). April 13-17, 2015, Seattle, WA.
17. Juhi Ranjan, Erin Griffiths, and Kamin Whitehouse. **Discerning Electrical and Water Fixture Usage by Individuals in Homes.** In the Proceedings of the 1st ACM Conference On Embedded Systems For Energy-Efficient Building (BuildSys'14). November 5-6, 2014. Memphis, USA.
18. John Feminella, Devika Pisharoty, and Kamin Whitehouse. **Piloteur: A Lightweight Platform for Pilot Studies of Smart Homes.** In the Proceedings of the 1st ACM Conference On Embedded Systems For Energy-Efficient Building (BuildSys'14). November 5-6, 2014. Memphis, USA.
Best Talk Award
19. Luca Mottola, Mattia Moretta, Kamin Whitehouse, and Carlo Ghezzi. **Team-level Programming of Drone Sensor Networks.** In the Proceedings of the 12th ACM Conference on Embedded Networked Sensor Systems (SenSys 2014). November 3-5, 2014. Memphis, USA.
20. Jiakang Lu and Kamin Whitehouse. **PhyTraces: Simulating new RF Environments with Physical Layer Traces.** In the Proceedings of the 10th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 2014). May 26-28, 2014. Marina Del Rey, USA.
21. Juhi Ranjan and Kamin Whitehouse. **An RF Doormat for Tracking People's Room Locations.** To Appear in The 2013 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp). September 8-12, 2013. Zurich, Switzerland.
(18% acceptance rate)
22. Vijay Srinivasan, Jack Stankovic, Kamin Whitehouse. **FixtureFinder: Discovering the Existence of Electrical and Water Fixtures.** To Appear in The 12th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN'13). April 8-11, 2013, Philadelphia, PA.
(21% acceptance rate; **Best paper runner up**)
23. Tamim Sookoor and Kamin Whitehouse. **RoomZoner: Occupancy-based Room-Level Zoning of a Centralized HVAC System.** To Appear in The 4th International Conference on Cyber-Physical Systems (ICCPs'13). April 8-11, 2013, Philadelphia, PA.
(23% acceptance rate)

24. Timothy Hnat, Erin Griffiths, Raymond Dawson, and Kamin Whitehouse. **Doorjamb: Unobtrusive Room-level Tracking of People in Homes using Doorway Sensors.** The 10th ACM Conference on Embedded Networked Sensing Systems (SenSys'12). November 7-9, 2012, Toronto, Canada. (19% acceptance rate)
25. Krasimira Kapitanova, Enamul Hoque, John A. Stankovic, Sang H. Son, and Kamin Whitehouse. **Being SMART About Failures: Assessing Repairs in Smart Homes.** The 14th ACM International Conference on Ubiquitous Computing (UbiComp'12). September 5-8, 2012, Pittsburgh, PA. (19% acceptance rate)
26. Jiakang Lu and Kamin Whitehouse. **Smart Blueprints: Automatically Generated Maps of Homes and the Devices within Them.** To appear in The 10th Conference on Pervasive Computing (Pervasive'12). June 18-22, 2012, Newcastle, UK. (ppt) (20% acceptance rate)
27. Tamim Sookoor, Brian Holben and Kamin Whitehouse. **Feasibility of Retrofitting Centralized HVAC Systems for Room-Level Zoning.** The Third International Green Computing Conference (IGCC'12). June 5-8, 2012 in San Jose, CA.
28. Jiakang Lu and Kamin Whitehouse. **SunCast: Fine-grained Prediction of Natural Sunlight Levels for Improved Daylight Harvesting.** The 11th ACM Conference on Information Processing in Sensor Networks (IPSN'12). April 17-19, 2012, Beijing, China. (15% acceptance rate)
29. Timothy Hnat, Vijay Srinivasan, Jiakang Lu, Tamim Sookoor, Raymond Dawson, John Stankovic, Kamin Whitehouse. **The Hitchhiker's Guide to Successful Residential Sensing Deployments.** The 9th ACM Conference on Embedded Networked Sensing Systems (SenSys). November 2-4, 2011, Seattle, WA. (19.5% acceptance rate)
30. Hengchang Liu, Zhiheng Xie, Jingyuan Li, Kamin Whitehouse, and John Stankovic, Shan Lin, David Siu. **Efficient and Reliable Breadcrumb Systems via Coordination among Multiple First Responders.** The 22nd Annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC). September 11-14, 2011. Toronto, Canada.
31. Jiakang Lu, Tamim Sookoor, Vijay Srinivasan, Gao Ge, Brian Holben, John Stankovic, Eric Field, Kamin Whitehouse. **The Smart Thermostat: Using Occupancy Sensors to Save Energy in Homes.** The 8th ACM Conference on Embedded Networked Sensing Systems (SenSys). November 3-5, 2010, Zurich, Switzerland. (17% acceptance rate, 50+ citations)
32. Hengchang Liu, Jingyuan Li, Zhiheng Xie, Shan Lin, Kamin Whitehouse, John A. Stankovic, David Siu. **Automatic and Robust Breadcrumb System Deployment for Indoor Firefighter Applications.** The 8th Annual International Conference on Mobile Systems, Applications and Services (MobiSys). June 15-18, 2010, San Francisco, CA, USA. (20% acceptance rate, 25+ citations)

33. Timothy Hnat and Kamin Whitehouse. **A Relaxed Synchronization Primitive for Macroprogramming Systems**. The Seventh International Conference on Networked Sensing Systems. June 15 - 18, 2010, Kassel, Germany.
(23% acceptance rate)
34. S. M. Shahriar Nirjon, John A. Stankovic and Kamin Whitehouse. **IAA: Interference Aware Anticipatory Algorithm for Scheduling and Routing Periodic Real-time Streams in Wireless Sensor Networks**. The Seventh International Conference on Networked Sensing Systems. June 15 - 18, 2010, Kassel, Germany.
(23% acceptance rate)
35. Jared Alexander, Matthew Bocknek, and Kamin Whitehouse. **QueueTrak: Automated Line Length Detection using a Wireless Sensor Network**. The Seventh International Conference on Networked Sensing Systems. June 15 - 18, 2010, Kassel, Germany.
(23% acceptance rate)
36. Hengchang Liu, Aravind Srinivasan, Kamin Whitehouse, and John A. Stankovic. **M'elange: Supporting Heterogeneous QoS Requirements in Delay Tolerant Sensor Networks**. The Seventh International Conference on Networked Sensing Systems. June 15 - 18, 2010, Kassel, Germany.
37. Yafeng Wu, Krasimira Kapitanova, Jingyuan Li, John A. Stankovic, Sang H. Son, and Kamin Whitehouse. **Run Time Assurance of Application-level Requirements in Wireless Sensor Networks**. The 9th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN '10). Stockholm, Sweden, April 12-16, 2010.
(18% acceptance rate)
38. Sirajum Munir, Shan Lin, Enamul Hoque, S. M. Shahriar Nirjon, John A. Stankovic, and Kamin Whitehouse. **Addressing Burstiness for Reliable Communication and Latency Bound Generation in Wireless Sensor Networks**. The 9th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN '10). Stockholm, Sweden, April 12-16, 2010.
(18% acceptance rate, 25+ citations)
39. Vijay Srinivasan, John Stankovic and Kamin Whitehouse. **Using Height Sensors for Biometric Identification in Multi-resident Homes**. In Proceedings of the 8th International Conference on Pervasive Computing (Pervasive). Helsinki, Finland, May 17-20, 2010.
(23% acceptance rate)
40. Shan Lin, Gang Zhou, Kamin Whitehouse, Yafeng Wu, John A. Stankovic, and Tian He. **Towards Stable Network Performance in Wireless Sensor Networks**. In the 30th IEEE Real-Time Systems Symposium (RTSS 2009). Washington, DC, December, 2009.
(21% acceptance rate)
41. Tamim Sookoor, Timothy Hnat, Pieter Hooimeijer, Westley Weimer, and Kamin Whitehouse. **Macrodebugging: Global Views of Distributed Program Execution**. The 7th ACM Conference on Embedded Networked Sensor Systems (SenSys 2009). Berkeley, CA, Nov. 2009.
(17.6% acceptance rate, 25+ citations)

42. Nithya Ramanathan, Tom Schoellhammer, Eddie Kohler, Kamin Whitehouse, Thomas Harmon, and Deborah Estrin. **Suelo: Human-assisted Sensing for Exploratory Soil Monitoring Studies**. The 7th ACM Conference on Embedded Networked Sensor Systems (SenSys 2009). Berkeley, CA, Nov. 2009.
(17.6% acceptance rate)
43. Jiakang Lu and Kamin Whitehouse. **Flash Flooding: Exploiting the Capture Effect for Rapid Flooding in Wireless Sensor Networks**. The 28th Conference on Computer Communications (INFOCOM 2009). Rio de Janeiro, Brazil, Apr. 2009.
(19.6% acceptance rate)
44. Timothy Hnat, Tamim Sookoor, Pieter Hooimeijer, Westley Weimer, and Kamin Whitehouse. **MacroLab: A Vector-based Macroprogramming Framework for Cyber-Physical Systems**. The 6th ACM Conference on Embedded Networked Sensor Systems (SenSys). Raleigh, NC, Nov. 2008.
(16% acceptance rate, 25+ citations)
45. Qing Cao, Tarek Abdelzaher, John Stankovic, Kamin Whitehouse, and Liqian Luo. **Declarative Tracepoints: A Programmable and Application Independent Debugging System for Wireless Sensor Networks**. The 6th ACM Conference on Embedded Networked Sensor Systems (SenSys). Raleigh, NC, Nov. 2008.
(16% acceptance rate, 50+ citations)
46. Vijay Srinivasan, Jack Stankovic, Kamin Whitehouse. **Protecting your Daily In-home Activity Information from a Wireless Snooping Attack**. In Proceedings of the Tenth International Conference on Ubiquitous Computing (UbiComp). Seoul, Korea, September 2008.
(19% acceptance rate, 25+ citations)
47. Jingbin Zhang, Gang Zhou, Sang H. Son, John A. Stankovic and Kamin Whitehouse. **Performance Analysis of Group Based Detection for Sparse Sensor Networks**. The 28th IEEE International Conference on Distributed Computing Systems (ICDCS). Beijing, China, June 2008.
(16% acceptance rate)
48. Robert Dickerson, Jiakang Lu, Jian Lu, and Kamin Whitehouse. **Stream Feeds: An Abstraction for the World Wide Sensor Web**. The International Conference on the Internet of Things (IOT). Zurich, Switzerland, March 26-28, 2008.
(25% acceptance rate, 25+ citations)
49. Jing Yang, Mary Lou Soffa, Leo Selavo, and Kamin Whitehouse. **Clairvoyant: A Comprehensive Source-level Debugger for Wireless Sensor Networks**. The 5th ACM Conference on Embedded Networked Sensor Systems (SenSys). Sydney, Australia, Nov 6-9, 2007.
(17% acceptance rate, 100+ citations)
50. Phoebus Chen, Songhwa Oh, Michael Manzo, Bruno Sinopoli, Cory Sharp, Kamin Whitehouse, Gilman Tolle, Jaemin Jeong, Prabal Dutta, Jonathan Hui, Shawn Shaffert, Sukun Kim, Jay Taneja, Bonnie Zhu, Tanya Roosta, Mike Howard, David Culler, Shankar Sastry. **Instrumenting Wireless Sensor Networks for Real-Time Surveillance**. Proceedings of the International Conference on Robotics and Automation (ICRA '06). May 15-19, 2006.
(50+ citations)

51. Kamin Whitehouse, David Culler. **A Robustness Analysis of Multi-hop Ranging-based Localization Approximations.** The Fifth International Conference on Information Processing in Sensor Networks (IPSN '06). Nashville, TN, April 19-21, 2006.
(25% acceptance rate, 25+ citations)
52. Kamin Whitehouse, Gilman Tolle, Jay Taneja, Cory Sharp, Sukun Kim, Jaein Jong, Jonathan Hui, Prabal Dutta, and David Culler. **Marionette: Providing an Interactive Environment for Wireless Debugging and Development.** The Fifth International Conference on Information Processing in Sensor Networks (IPSN '06). Nashville, TN, April 19-21, 2006.
(25% acceptance rate, 100+ citations)
53. Prabal Dutta, Jonathan Hui, Jaein Jeong, Sukun Kim, Cory Sharp, Jay Taneja, Gilman Tolle, Kamin Whitehouse, and David Culler. **Trio: Enabling Sustainable and Scalable Outdoor Wireless Sensor Network Deployments.** The Fifth International Conference on Information Processing in Sensor Networks (IPSN '06). Nashville, TN, April 19-21, 2006.
(25% acceptance rate, 200+ citations)
54. Kamin Whitehouse, Jie Liu, Feng Zhao. **Semantic Streams: a Framework for Composable Inference over Sensor Data.** The Third European Conference on Wireless Sensor Networks (EWSN). Zurich, Switzerland. February 13-15, 2006.
(16% acceptance rate, 150+ citations)
55. Kamin Whitehouse, Chris Karlof, Alec Woo, Fred Jiang, David Culler. **The Effects of Ranging Noise on Multihop Localization: an Empirical Study.** The Fourth International Conference on Information Processing in Sensor Networks (IPSN '05). Los Angeles, California. April 25-27, 2005.
(21% acceptance rate, 150+ citations)
56. Kamin Whitehouse, Cory Sharp, Eric Brewer, David Culler. **Hood: a Neighborhood Abstraction for Sensor Networks.** The Second ACM International Conference on Mobile Systems, Applications, and Services (MobiSys '04). Boston, MA, June, 2004. ACM Press.
(14% acceptance rate, 300+ citations)
57. Michael Tadross, Kamin Whitehouse, Melissa Hornstein, Vicky Eng, Evangelia Micheli-Tzanakou. **A Three-Dimensional Physiologically Realistic Model of the Retina.** The Twelfth International Joint Conference on Neural Networks (IJCNN'00). Como, Italy, July 2000. IEEE Press.

BOOK CHAPTERS

58. **TinyOS: An Operating System for Wireless Sensor Networks.** Philip Levis, Sam Madden, Joseph Polastre, Robert Szewczyk, Kamin Whitehouse, Alec Woo, David Gay, Jason Hill, Matt Welsh, Eric Brewer, and David Culler. Ambient Intelligence. W. Weber, J. Rabaey, and E. Aarts (Eds.), Springer-Verlag, 2004.
(1000+ citations)

1. Juhi Ranjan, Kamin Whitehouse. **Towards recognizing person-object interactions using a single wrist wearable device.** Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp): Adjunct, 4th International Workshop on Human Activity Sensing Corpus and Application: Towards Open-Ended Context Awareness (HASCA), 2016.
2. Nipun Batra, Amarjeet Singh, Kamin Whitehouse. **Creating a Detailed Energy Breakdown from just the Monthly Electricity Bill.** 3rd International Workshop on Non-Intrusive Load Monitoring (NILM), Vancouver, Canada, May 14-15, 2016
3. Nipun Batra, Amarjeet Singh, Kamin Whitehouse. **Exploring The Value of Energy Disaggregation Through Actionable Feedback.** 3rd International Workshop on Non-Intrusive Load Monitoring (NILM), Vancouver, Canada, May 14-15, 2016
4. Juhi Ranjan, Kamin Whitehouse. **Rethinking the Fusion of Technology and Clinical Practices in Functional Behavior Analysis for the Elderly.** The 6th International Workshop on Human Behavior Understanding (HBU'15), held in conjunction with the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2015). September 2015. Osaka, Japan.
5. Avinash Kalyanaraman, Kamin Whitehouse. **An Event-Based Data Fusion Algorithm for Smart Cities.** The First International Workshop on Smart Cities: People, Technology and Data (SmartCities'15), held in conjunction with the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2015). September 2015. Osaka, Japan.
6. Andrew Frye, Michel Goraczko, Jie Liu, Anindya Prodhan, and Kamin Whitehouse. **Circulo: Saving Energy with Just-In-Time Hot Water Recirculation.** To appear in The 5th ACM Workshop on Embedded Systems for Energy-Efficient Building (BuildSys'13), held in conjunction with ACM SenSys. November 13-14, 2013. Rome, Italy.
7. Dezhi Hong, Jorge Ortiz, Kamin Whitehouse, David Culler. **Towards Automatic Spatial Verification of Sensor Placement in Buildings.** To appear in The 5th ACM Workshop on Embedded Systems for Energy-Efficient Building (BuildSys'13), held in conjunction with ACM SenSys. November 13-14, 2013. Rome, Italy.
8. Dezhi Hong and Kamin Whitehouse. **A Feasibility Study: Mining Daily GPS Traces for Home Heating Control.** Mobile Sensing 2013: The Future, Brought to You by Big Sensor Data. Philadelphia, PA. April 8, 2013.
9. Anindya Prodhan and Kamin Whitehouse. **Hot Water DJ: Saving Energy by Pre-mixing Hot Water.** To appear in the 4th ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings (BuildSys'12). Toronto, Canada. November 6, 2012.
10. Ginger Smith, Tamim Sookoor, and Kamin Whitehouse. **Modeling Building Thermal Response to HVAC Zoning.** The Third International Workshop on Networks of Cooperating Objects (CONET'12). Co-located with the CPS Week 2012. April 16th, 2012. Beijing, China.

11. Jing Yang, Kevin Skadron, Mary Lou Soffa, and Kamin Whitehouse. **Potential of Dynamic Binary Parallelizations.** The 7th International Workshop on Unique Chips and Systems (UCAS'12). February 26, 2012, New Orleans, Louisiana, USA.
12. Vijay Srinivasan, John Stankovic, Kamin Whitehouse. **WaterSense: Water Flow Disaggregation using Motion Sensors.** The 3rd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings (BuildSys), in conjunction with ACM SenSys. 2011.
13. Jie Liu, Michel Goraczko, Sean James, Christian Belady, Jiakang Lu, Kamin Whitehouse. **The Data Furnace: Heating up with Cloud Computing.** The 3rd USENIX Workshop on Hot Topics in Cloud Computing (HotCloud'11). June 14-15, 2011. Portland, OR.
14. Wei Le, Jing Yang, Mary Lou Soffa and Kamin Whitehouse. **Lazy Preemption to Enable Path-Based Analysis of Interrupt-Driven Code.** The 2nd Workshop on Software Engineering for Sensor Network Applications (SESENA), in conjunction with ACM/IEEE Intl. Conference on Software Engineering (ICSE). May 22, 2011, Honolulu, Hawaii.
15. Jing Yang, Kevin Skadron, Mary Lou Soffa, and Kamin Whitehouse. **Feasibility of Dynamic Binary Parallelization.** The 3rd USENIX Workshop on Hot Topics in Parallelism (HotPar'11). May 26-27, 2011 Berkeley, CA.
16. Wei Le, Jing Yang, Mary Lou Soffa and Kamin Whitehouse. **Lazy Preemption to Enable Path-Based Analysis of Interrupt-Driven Code.** The 2nd Workshop on Software Engineering for Sensor Network Applications (SESENA), in conjunction with ACM/IEEE Intl. Conference on Software Engineering (ICSE). May 22, 2011, Honolulu, Hawaii.
17. Krasimira Kapitanova, Enamul Hoque, Jingyuan Li, Daniele Alessandrelli, John Stankovic, Sang H Son, and Kamin Whitehouse. **Repair Assessment of Sensor Node Failures for Activity Detection.** The Second International Workshop on Networks of Cooperating Objects (CONET 2011). April 11.
18. Jiakang Lu, Dagnachew Birru, Kamin Whitehouse. **Using Simple Light Sensors to Achieve Smart Daylight Harvesting.** The 2nd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings (BuildSys), held in conjunction with ACM SenSys. November 2, 2010, Zurich, Switzerland.
19. Timothy Hnat, Tamim Sookoor, Pieter Hooimeijer, Westley Weimer, and Kamin Whitehouse. **A Modular and Extensible Macroprogramming Compiler.** Workshop on Software Engineering for Sensor Network Applications (SESENA), in conjunction with ACM/IEEE Intl. Conference on Software Engineering (ICSE). May 2-8, 2010, Cape Town, South Africa.
20. Michael Okola and Kamin Whitehouse. **Unit Testing for Wireless Sensor Networks.** Workshop on Software Engineering for Sensor Network Applications (SESENA), in conjunction with ACM/IEEE Intl. Conference on Software Engineering (ICSE). May 2-8, 2010, Cape Town, South Africa.
21. Michael Okola and Kamin Whitehouse. **Automatically Exporting TinyOS Modules as Web Services.** The First International Workshop on Networks of Cooperating Objects (CONET). April 12th, 2010, Stockholm, Sweden.

22. Ge Gao and Kamin Whitehouse. **The Self-Programming Thermostat: Optimizing Setback Schedules based on Home Occupancy Patterns.** First ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings (BuildSys '09), held in conjunction with ACM SenSys. Berkeley, CA, Nov. 2009.
(25+ citations)
23. Kamin Whitehouse, Alec Woo, Fred Jiang, Joseph Polastre, David Culler. **Exploiting the Capture Effect for Collision Detection and Recovery.** The Second IEEE Workshop on Embedded Networked Sensors (EmNetS-II). Sydney, Australia. May 30-31, 2005.
(40% acceptance rate, 175+ citations)
24. Kamin Whitehouse, David Culler. **Calibration as Parameter Estimation in Sensor Networks.** The First ACM International Workshop on Wireless Sensor Networks and Applications (WSNA'02). Atlanta, GA, September, 2002.
(25% acceptance rate, 300+ citations)
25. Suzanne Stevenson, Paola Merlo, Natalia Karieava, Kamin Whitehouse. **Supervised Learning of Lexical Semantic Verb Classes Using Frequency Distributions.** ACL SigLex '99. College Park, MD, June 1999.

THESES

26. Kamin Whitehouse. **Understanding the Prediction Gap in Multi-hop Localization.** Doctoral Dissertation, University of California at Berkeley, 2006.
27. Kamin Whitehouse. **The Design of Calamari: an Ad-hoc Localization System for Sensor Networks.** Master's Thesis, University of California at Berkeley, 2002.
(150+ citations)

NON-PEER REVIEWED ARTICLES

28. Kamin Whitehouse. **The Rise of the Intelligent Building.** IQT Quarterly. Volume 4, Number 3. Pages 5-8. Winter 2013. (Invited Paper)
29. Kamin Whitehouse, Fred Jiang, Alec Woo, Chris Karlof, David Culler. **Sensor Field Localization: a deployment and empirical analysis.** UC Berkeley Technical Report UCB//CSD-04-1349, April 9, 2004.
(25+ citations)

CONFERENCE POSTER PAPERS

1. Bharathan Balaji, Arka Bhattacharya, Gabe Fierro, Jingkun Gao, Joshua Gluck, Dezhi Hong, Aslak Johansen, Jason Koh, Joern Ploennigs, Yuvraj Agarwal, Mario Berges, David Culler, Rajesh Gupta, Mikkel Baun Kjærgaard, Mani Srivastava, Kamin Whitehouse. **Portable Queries Using the Brick Schema for Building Applications: Demo Abstract**. BuildSys '16 Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments, 2016.
Best Demo Award
2. Juhi Ranjan, Kamin Whitehouse. **Automatic authentication of smartphone touch interactions using smartwatch**. The 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2016.
3. Avinash Kalyanaraman, Juhi Ranjan, Kamin Whitehouse. **Poster Abstract: Automatic rock climbing route inference using wearables**. The 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp'15). September 7, 2015. Osaka, Japan.
4. Avinash Kalyanaraman, Kamin Whitehouse. **Automatic Rock Climbing Route Inference using Wearables**. The 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2015). September 2015. Osaka, Japan.
5. Nipun Batra, Manoj Gulati, Puneet Jain, Kamin Whitehouse, Amarjeet Singh, Shobha Sundar Ram. **Poster Abstract: Bits and Watts: Improving Energy Disaggregation Performance Using Power Line Communication Modems**. In the Proceedings of the 1st ACM Conference On Embedded Systems For Energy-Efficient Building (BuildSys'14). November 5-6, 2014. Memphis, USA.
6. Juhi Ranjan and Kamin Whitehouse. **Poster Abstract: Generating Home Energy Footprint by Assigning Fixture Usage to Individuals in Homes**. In the Proceedings of the 1st ACM Conference On Embedded Systems For Energy-Efficient Building (BuildSys'14). November 5-6, 2014. Memphis, USA.
7. Arka Bhattacharya, David Culler, Dezhi Hong, Kamin Whitehouse and Jorge Ortiz. **Poster Abstract: Automated Metadata Transformation for A-Priori Deployed Sensor Networks**. In the Proceedings of the 12th ACM Conference on Embedded Networked Sensor Systems (SenSys 2014). November 3-5, 2014. Memphis, USA.
8. Luca Mottola, Kamin Whitehouse, Carlo Ghezzi. **Poster Abstract: Towards Spatial Macroprogramming for Sensing and Actuating Robot Swarms**. To appear in The 11th ACM Conference on Embedded Networked Sensor Systems (SenSys'13). November 13-14, 2013. Rome, Italy.
9. Timothy W. Hnat, Tamim I. Sookoor, and Kamin Whitehouse, **Demo Abstract: Macrodebugging with MDB**. The 7th ACM Conference on Embedded Networked Sensor Systems (SenSys 2009). Berkeley, CA, Nov. 2009.
10. Jiakang Lu, and Kamin Whitehouse. **Poster Abstract: Exploiting the capture effect for low-latency flooding in wireless sensor networks**. The 6th ACM Conference on Embedded Networked Sensor Systems (SenSys). Raleigh, NC, Nov. 2008.

11. Tamim I. Sookoor, Timothy W. Hnat, and Kamin Whitehouse. **Demo Abstract: Programming Cyber-Physical Systems with MacroLab.** The 6th ACM Conference on Embedded Networked Sensor Systems (SenSys). Raleigh, NC, Nov. 2008.
12. Robert F. Dickerson, Jiakang Lu, Jingyuan Li, Billy Chantree, Jian Lu, John A. Stankovic, Kamin Whitehouse. **MetroNet: Case Study for Collaborative Data Sharing on the World Wide Web.** The Seventh International Conference on Information Processing in Sensor Networks, 2007 (IPSN '07).
13. Kamin Whitehouse, Feng Zhao, Jie Liu. **Automatic Programming with Semantic Streams.** SenSys, November 2-4 2005.

PATENTS PENDING AND INVENTION DISCLOSURES

Anindya Prodhan and Kamin Whitehouse. **Smart Water Heater System, Method and Computer Readable Media.** U. S. Provisional Patent Application No. 62/005,108, filed May 30, 2014.

Kamin Whitehouse. **Self-Programming Thermostat System, Method and Computer Program Product.** Publication US 2012/0165993 A1. Priority Date Oct 28, 2010.

Kamin Whitehouse, Jiakang Lu, Tamim Sookoor, Vijay Srinivasan, Jack Stankovic. **The Smart Thermostat.** U.S. Provisional Patent Application Submitted August, 2010.

Vijay Srinivasan, Kamin Whitehouse, Jack Stankovic. **Using Height for Weak Biometric Identification.** U.S. Provisional Patent Application Submitted May 2010.

Kamin Whitehouse, Feng Zhao, Jie Liu. **Automatic specification of semantic services in response to declarative queries of sensor networks.** Publication US 2007/0043803 A1. Priority date Jul 29, 2005.

PH.D. GRADUATES ADVISED

Nipun Batra, IIIT-D

Ph.D. defense

Mar 2017

Systems and Analytical Techniques Towards Practical Energy Breakdowns for Homes

First job: Post-doc

Juhi Ranjan

Ph.D. defense

Oct 2016

It Takes Two: Exploring Interactions between Smart Objects and Wearables to Implicitly Identify and Authenticate Object Users

First job: Pending

Jing Yang

Co-advised with Mary Lou Soffa

Ph.D. defense

Jun 2012

Trace-Based Dynamic Binary Parallelization

First job: Citadel

Vijay Srinivasan

Co-advised with Jack Stankovic

Ph.D. defense

Dec 2011

A Non-Invasive Sensor System for Activity Recognition in Smart Home Environments

First job: Samsung – ubiquitous mobile sensing group

Tamim Sookoor

Ph.D. defense

May 2012

Application Development for Cyber-Physical Systems: Programming Language Concepts and Case Studies

First job: US Army Research Lab

Jiakang Lu

Ph.D. defense

Nov 2011

SenHome: A Convenient and Inexpensive Sensing System for Improving the Energy Efficiency of Heating, Cooling, and Lighting in Homes

Current job: Nest Labs

Timothy Hnat

Ph.D. defense

Oct 2011

Architecture for Localization of People for Smarthome Applications

First job: Tenure-track faculty at U. Memphis

DEPARTMENTAL SERVICE

Departmental first-year graduate advising day	2007, 2014, 2015, 2017
CpE Qualls Committee	2007, 2008, 2009, 2010, 2011, 2012, 2015
Undergraduate Program Committee	2008, 2009, 2010, 2014
Faculty Recruiting Committee	2007, 2013, 2014

Undergraduate Program Committee	2008, 2009, 2010, 2014
Ad-hoc NTT Faculty Recruiting Committee	2013
Graduate Program Committee	2012
CpE Graduate Admissions Committee	2012
Diversity Committee	2006, 2007, 2011, 2012
Departmental open house demos	2007, 2010, 2011
Undergraduate Program Committee	2008, 2009, 2010
Building Committee	2008, 2009, 2010
Self-Study Research Committee	2008, 2009
Systems Staff interviewing panel	2008
Faculty advisor to UVa Extreme Sensing competition team	2007

SCHOOL AND UNIVERSITY SERVICE

Director of SEAS Link Lab	2016-present
Technology Entrepreneurship Fellows Program (co-Founder)	2014 -- present
SEAS Early-career Faculty Advocacy Committee (Chair)	2014 -- present
CPS Search Committee	2016
Director of SEAS Peer-mentoring group	2015
CPS Search Committee Chair	2015
Link Lab Director	2015
Grant Brew committee for Dan Weller	2015
Grant Brew committee for Matt Gerber	2014
SEAS Dean search committee	2014
Common Reading Experience	2011
SEAS open house demos	2007, 2010, 2011
Participated in SEAS first-year undergraduate advising day	2007
Guest lecture in the "Soft Surface Operations" course in the School of Architecture	2007, 2008

OUTREACH INITIATIVES

Mentor for the VA-NC Alliance program	2015
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Initiated the Sensing Thermostat Design Project at Tandem Friends High School in Charlottesville, VA,	2011-2012
Participated in the Tapestry Workshop for High School Teachers	2011
Participated in the PVCC Google-Rise camp	2010
Participated in the PVCC Middle School Career Academy	2009
Initiated the Extreme Sensing Competition, IPSN	2007, 2008, 2009
Graduate Student Professional Development Retreat Joint with Howard University & Penn State	2007

CURRICULUM DEVELOPMENT INITIATIVES

Developed Internet of Things course	2015
Developed multidisciplinary course in Intelligent Buildings, Milan IT	2014
Developed or heavily modified 4 new graduate courses in Sensing	2006, 2007, 2009, 2011
Developed the "Research Proposal" module for incoming grads: CS6190	2009, 2010, 2011
Developed 1 new undergraduate course in Computer Networking	2006

PRIOR EMPLOYMENT

Politecnico di Milano -- Milano, IT, Visiting Professor	2014
Microsoft Research -- Redmond, WA, Visiting Researcher	2013
Microsoft Research -- Redmond, WA, Published Semantic Streams automatic inference system at EWSN '06	2004
Palo Alto Research Center (PARC) -- Palo Alto, CA Designed Mutation Routing mobile-mobile routing algorithm	2003
Intel Research -- Berkeley, CA Published macro-calibration system in MONET '03	2002
Bell Communications Research (Bellcore) -- Piscataway, NJ Managed tasks and timetables for a software development team	1997–1998
AT&T Bell Labs -- Holmdel, NJ Designed and built a back-end system to detect ISDN usage trends	1995–1996
CECOM, US Army -- Ft. Monmouth, NJ Characterized networks for robustness/security on the battlefield	1994