Shwetak N. Patel, Ph.D

Computer Science & Engineering
Electrical Engineering
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EDUCATION

Georgia Institute of Technology **8/2003 – 8/2008**
Ph.D., Computer Science
Area: Human-Computer Interaction, Mobile and Ubiquitous Computing
Thesis Title: *Infrastructure Mediated Sensing (Nominated for ACM Dissertation Award)*
Advisor: Dr. Gregory D. Abowd

Georgia Institute of Technology **8/2000 – 5/2003**
Bachelors of Computer Science
Area: Human-Computer Interaction, Mobile and Ubiquitous Computing
Advisor: Dr. Gregory D. Abowd

Jefferson County International Baccalaureate High School, Alabama **8/1996 – 5/2000**
International Baccalaureate Diploma

HONORS AND AWARDS

- ACM Fellow (2016)
- Microsoft Research Outstanding Collaborator Award (2016)
- Presidential Early Career Awards for Scientists and Engineers (PECASE) Award (2016)
- National Academy of Engineering (NAE) Gilbreth Award (2016)
- Presidential Entrepreneurial Faculty Fellow (2015)
- World Economic Forum Young Global Scientist Award (2013)
- NSF Career Award (2013)
- Sloan Fellowship (2012)
- MacArthur Fellowship (2011)
- Microsoft Research Faculty Fellowship (2011)
- College of Engineering Community of Innovators Junior Faculty Innovator Award (2011)
- India Abroad Innovator of the Year (2011)
- Outstanding Research Advisor Award in Electrical Engineering (2011, 2012, 2013, 2014, 2016)
- Outstanding Teaching Award Finalist in Electrical Engineering (2011, 2012, 2013)
- Seattle Magazine Most Influential (2011)
- Wired Magazine Cover Story – July (2011)
- Newsmakers of the Year by TechFlash and Seattle Business Journal (2010)
- Top Innovator by Seattle Business Magazine – Featured on Magazine Cover (2010)
- Outstanding Research Advisor Award Finalist in Electrical Engineering (2010)
- MIT TR-35 Award: MIT Technology Review's Top Young Innovator under the age of 35 (2009)
- HydroSense: Best Clean-Tech Idea at 2009 Washington BPC (2009)
- Nominated by Georgia Tech for the ACM doctoral dissertation award (2008)
- College of Computing Top Graduate Research Assistant Award (2007)

- Georgia Tech Graduate Symposium, College Top Award (2007)
- Top Technology Idea from New York Times Magazine, awarded to Capture Resistant Environment (2005)
- National Science Foundation Graduate Research Fellowship (2004-2007)
- National Science Foundation East Asia Pacific Summer Program Fellowship (2005)
- Georgia Tech Presidential Award and Fellowship Recipient (2003-2007)
- Finalist for Undergraduate Research Award at Georgia Tech (2003)
- Faculty Honors and Dean's List at Georgia Tech (2000-2003)
- Intel/Westinghouse National Science Award Finalist (2000)

PAPER AND CONFERENCE AWARDS

1. 10 Year Impact Award at ACM International Conference on Ubiquitous Computing (2018)
2. Best Paper Award Honorable Mention at the ACM Conference on Human Factors in Computing Systems (CHI) 2018.
3. 10 Year Impact Award at ACM International Conference on Ubiquitous Computing (2017)
4. Best Paper Award at the ACM International Conference on Ubiquitous Computing (2016).
5. Best Paper Award at the International Conference on Wearable Computing (2016).
6. Best Paper Award Honorable Mention at the ACM Conference on Human Factors in Computing Systems (CHI) 2016.
7. Best Paper Award Honorable Mention (a 2nd paper) at the ACM Conference on Human Factors in Computing Systems (CHI) 2016.
8. Best Paper Award Honorable Mention at the ACM International Conference on Ubiquitous Computing (2015).
9. Best Paper Award Honorable Mention (a 2nd paper) at the ACM International Conference on Ubiquitous Computing (2015).
10. Best Paper Award Honorable Mention at the ACM Conference on Human Factors in Computing Systems (CHI) 2015.
11. Best Paper Award Nomination at the IEEE Pervasive Computing and Communications (PERCOM) 2015 Conference (2015).
12. Best Paper Award Honorable Mention at the ACM International Conference on Ubiquitous Computing (2014).
13. Best Paper Award Honorable Mention (a 2nd paper) at the ACM International Conference on Ubiquitous Computing (2014).
14. Best Paper Award at the ACM International Conference on Mobile Computing and Networking (2013).
15. Best Paper Award at the ACM International Conference on Ubiquitous Computing (2012).
16. Best Paper Award Honorable Mention (a 2nd paper) at the ACM International Conference on Ubiquitous Computing (2012).
17. Best Paper Award Honorable Mention (a 3nd paper) at the ACM International Conference on Ubiquitous Computing (2012).
18. Best Paper Award Honorable Mention at the ACM Conference on Human Factors in Computing Systems (CHI) 2012.
19. Best Paper Award Honorable Mention (a 2nd paper) at the ACM Conference on Human Factors in Computing Systems (CHI) 2012.
20. Best Paper Award Honorable Mention at the ACM International Conference on Ubiquitous Computing (2011).
21. Best Paper Award at the ACM Conference on Human Factors in Computing Systems (CHI) 2011.
22. Best Paper Award (a 2nd paper) at the ACM Conference on Human Factors in Computing Systems (CHI) 2011.
23. Best Paper Award Honorable Mention (a 3rd paper) at the ACM Conference on Human Factors in Computing Systems (CHI) 2011.
24. Best Paper Award at the ACM International Conference on Ubiquitous Computing (2010).
25. Best Paper Award Honorable Mention (a 2nd paper) at the ACM International Conference on Ubiquitous Computing (2010).
26. Best Paper Award Honorable Mention at the ACM Conference on Human Factors in Computing Systems (CHI) 2010.
27. Best Paper Award at the International Conference on Pervasive Computing Technologies for Healthcare 2010.
28. Best Paper Award Nomination at the International Conference on Ubiquitous Computing (2009)
29. Best Paper Award at the International Conference on Pervasive Computing (2008)
30. Best Paper Award at the International Conference on Ubiquitous Computing (2007)

31. Best Presentation Award at the International Conference on Ubiquitous Computing (2007)
32. Best Paper Award Nomination at the International Conference on Pervasive Computing (2006)

CURRENT APPOINTMENT

Washington Research Foundation Entrepreneurship Endowed Professor (Full Professor), University of Washington
School of Computer Science & Engineering and Department of Electrical Engineering
Seattle, WA

RESEARCH AND CONSULTING APPOINTMENTS

Washington Research Foundation Entrepreneurship Endowed Professor (Full Professor),
University of Washington **9/2014 - Present**
Research in the areas of Human-Computer Interaction, Ubiquitous Computing, Sensor-enabled Embedded Systems, and User Interface Software and Technology. Particular focus in developing new sensing technologies with an emphasis on energy monitoring and health applications for the home. Director of the Ubicomp Research Lab at the University of Washington.

Associate Professor, University of Washington **6/2013 – 9/2014**
Research in the areas of Human-Computer Interaction, Ubiquitous Computing, Sensor-enabled Embedded Systems, and User Interface Software and Technology. Particular focus in developing new sensing technologies with an emphasis on energy monitoring and health applications for the home. Director of the Ubicomp Research Lab at the University of Washington.

Assistant Professor, University of Washington **9/2008 – 6/2013**
Research in the areas of Human-Computer Interaction, Ubiquitous Computing, Sensor-enabled Embedded Systems, and User Interface Software and Technology. Particular focus in developing new sensing technologies with an emphasis on energy monitoring and health applications for the home. Director of the Ubicomp Research Lab at the University of Washington.

Director and CTO of the Global Innovation Exchange,
University of Washington **9/2015 - Present**
The Global Innovation Exchange (GIX) is a global partnership between major research universities and innovative corporations to develop leaders in innovation.

Consultant, Bill & Melinda Gates Foundation **8/2014 – 9/2015**
Working with Tuberculosis team on using mobile phone as health sensors.

Co-Founder and CEO, Senosis Health, Inc. **10/2015 – Present**
Mobile health diagnostics company that spun out of research lab.

Co-Founder, SNUPI Technologies, Inc. **8/2012 – 9/2015**
Direct advanced development of SNUPI Technologies' low-power wireless sensing platform for the home and the WallyHome product. Company spun out of research lab. Acquired by Sears Holding Inc.

Chief Scientist, Belkin International, Inc. **1/2010 – Present**
Direct research and development for the energy/water sensing and home automation products (WeMo) at Bekin Inc. Belkin acquired company that spun out of research lab.

Visiting Researcher and Consultant, Microsoft Research **9/2009 – 9/2015**
Help direct the development of wearable and on-body sensing technologies.

Graduate Research Assistant, Georgia Institute of Technology **8/2003 – 8/2008**
Advisor: Dr. Gregory D. Abowd

Research in cost-effective and easy-to-deploy sensing technologies in the home for supporting studies in natural settings. Research in context-aware mobile computing and exploring compelling applications that extend beyond normal telephony on the mobile phone platform. Research in systems that facilitate the automated tagging of large quantities of videos using both predictive models and real world sensing technologies.

Graduate Research Intern, Sony Computer Science Laboratory, Japan 6/2005 – 8/2005
Advisor: Dr. Jun Rekimoto
Research in developing sensing systems and augmented reality techniques for interacting with the physical environment.

Graduate Research Intern, Intel Research Berkeley 5/2004 – 8/2004
Advisor: Dr. Anind K. Dey
Research in developing technologies for smart homes. Designed and implemented data, programming, and technology architectures for the Digital Home Project at Intel.

Undergraduate Research, Georgia Institute of Technology 1/2002 – 8/2003
Advisor: Dr. Gregory D. Abowd
Performed research in home automation infrastructures for the Aware Home at Georgia Tech. Also researched context awareness using mobile devices for the home, such as universal remotes.

Research Intern, Southern Research Institute, Birmingham AL 8/1999 – 5/2000
Supervisor/Manager: James Tucker
Designed and developed a computerized digital microscopy system that can automatically perform various material analyses like fiber and porosity counts. The R&D departments at Mercedes Benz and Boeing have used this system to perform a variety of their material analyses.

Research Intern, University of Alabama at Birmingham, Birmingham AL 6/1999 – 8/2000
Supervisor: Dr. David Green
Developed a high-level automated website generator called GenPage.

ACADEMIC TEACHING EXPERIENCE

University of Washington 9/2008 – Present

Course: CSE 590P (SP2015): Advanced Topics in Ubiquitous Computing PMP (top rated class in the COE)
IAS Scores (out of 5.0): Course as a whole: 4.7, Combined: 4.7, Instructor's contribution: 4.8, Teaching effectiveness 4.8, Instructor's enthusiasm: 5.0

Course: CSE/EE 475 (SP2017): Embedded Systems Capstone
IAS Scores (out of 5.0): Course as a whole: 4.7, Combined: 4.8, Instructor's contribution: 4.8, Teaching effectiveness 4.9, Instructor's enthusiasm: 5.0

Course: CSE 477 (SP2014): Hardware Capstone
IAS Scores (out of 5.0): Course as a whole: 4.8, Combined: 4.8, Instructor's contribution: 4.8, Teaching effectiveness 4.9, Instructor's enthusiasm: 5.0
Course: CSE 477 (SP2013): Hardware Capstone
IAS Scores (out of 5.0): Course as a whole: 4.8, Combined: 4.8, Instructor's contribution: 4.8, Teaching effectiveness 4.9, Instructor's enthusiasm: 5.0
Course: CSE 477 (SP2012): Hardware Capstone
IAS Scores (out of 5.0): Course as a whole: 4.8, Combined: 4.8, Instructor's contribution: 4.8, Teaching effectiveness 4.9, Instructor's enthusiasm: 5.0
Course: CSE 477 (SP2011): Hardware Capstone (top rated class in the COE)
IAS Scores (out of 5.0): Course as a whole: 4.8, Combined: 4.8, Instructor's contribution: 4.8, Teaching effectiveness 4.9, Instructor's enthusiasm: 5.0
Course: CSE 477 (SP2010): Hardware Capstone (nominated for ACM teaching award
IAS Scores (out of 5.0): Course as a whole: 3.5, Combined: 3.6, Instructor's contribution: 3.8, Teaching effectiveness 3.6, Instructor's enthusiasm: 4.6

Course: CSE 599U (WI2012): Advanced Topics in Ubiquitous Computing (top rated class in the COE)
IAS Scores (out of 5.0): Course as a whole: 5.0, Combined: 4.9, Instructor's contribution: 4.9, Teaching effectiveness 4.9, Instructor's enthusiasm: 4.9
Course: CSE 599U (AU2010): Advanced Topics in Ubiquitous Computing (top rated class in the COE)
IAS Scores (out of 5.0): Course as a whole: 4.8, Combined: 4.8, Instructor's contribution: 4.9, Teaching effectiveness 4.9, Instructor's enthusiasm: 5.0
Course: CSE 599U (WI2010): Advanced Topics in Ubiquitous Computing (top rated class in the COE)
IAS Scores (out of 5.0): Course as a whole: 4.5, Combined: 4.6, Instructor's contribution: 4.3, Teaching effectiveness 4.7, Instructor's enthusiasm: 4.8
Course: CSE 599U (WI2009): Advanced Topics in Ubiquitous Computing
IAS Scores (out of 5.0): Course as a whole: 3.8, Combined: 3.8, Instructor's contribution: 4.1, Teaching effectiveness 3.8, Instructor's enthusiasm: 4.8

Course: EE 472 (AU2011): Embedded Systems (top rated class in the COE)

IAS Scores (out of 5.0): Course as a whole: 4.8, Combined: 4.8, Instructor's contribution: 4.9, Teaching effectiveness 4.8, Instructor's enthusiasm: 4.9
Course: EE 472 (WI2011): Embedded Systems (top rated class in the COE)
IAS Scores (out of 5.0): Course as a whole: 4.8, Combined: 4.9, Instructor's contribution: 5.0, Teaching effectiveness 4.9, Instructor's enthusiasm: 5.0
Course: EE 472 (AU2010): Embedded Systems
IAS Scores (out of 5.0): Course as a whole: 3.4, Combined: 3.5, Instructor's contribution: 3.4, Teaching effectiveness 3.8, Instructor's enthusiasm: 4.2
Course: EE 472 (SP2009): Embedded Systems
IAS Scores (out of 5.0): Course as a whole: 4.0, Combined: 4.1, Instructor's contribution: 4.4, Teaching effectiveness 4.2, Instructor's enthusiasm: 4.7

Seminar: CSE 590U (WI2009): Readings in Ubiquitous Computing
Seminar: CSE 590U (AU2009): Readings in Ubiquitous Computing

Co-Instructor, Georgia Institute of Technology **8/2007 – 12/2007**
Co-Instructor: Dr. W. Keith Edwards
Course: CS6456, Principles of UI Software

Co-Instructor, Georgia Institute of Technology **8/2004 – 12/2004**
Course: CS4801, Building Ubiquitous Computing Software and Systems

Teaching Assistant, Georgia Institute of Technology **1/2002 – 5/2002**
Supervisor: Bill Leahy
Course: CS1322, Object Oriented Programming and Software Data Structur*es*

STUDENTS ADVISED

Graduate Research Advisor (Ph.D.), University of Washington **9/2008 – Present**
- Jon Froehlich (now an Associate Professor at University of Washington)
- Eric Larson (now an Assistant Professor at Southern Methodist University)
- Sidhant Gupta (now at Microsoft Research)
- Gabe Cohn (now at Microsoft Research)
- Ke-Yu Chen (now at Google)
- Mayank Goel (now an Assistant Professor at Carnegie Mellon University)
- Matthew Kay (now an Assistant Professor at University of Michigan)
- Tien Lee (now at Google)
- Hanchuan Li (now at Microsoft Research)
- Elliot Saba (now at Julia Computing)
- Lilian de Greef (graduating Spring 2019)
- Edward Wang (graduating Spring 2019)
- Ruth Ravichandran (graduating Spring 2019)
- Alex Mariakakis (graduating Spring 2019)
- Eric Whitmire (graduating Spring 2019)
- Mohit Jain (graduating Spring 2019)
- Josh Fromm
- Morelle Arian
- Farshid Parizi
- Chunjong Park
- Manuja Sharma
- Xin Liu
- Matt Whitehill
- Alex Ching
- Nicholas Becker

Undergraduate Research Advisor, University of Washington **9/2008 – Present**
- Julia Schwarz
- Sunil Garg
- Clint Tseng

- Erik Turnquist
- Milda Zizyte
- Tim Campbell
- Alex Horton
- Michael Chou
- Tom Sommerville
- Stefan Kristjansson
- Jonas Michel
- Ramses Alcaide
- Rajas Agashe
- Megan Banks
- Steven Benaloh
- Yuxiang Chen
- Matt Dorsett
- Michael Fadaie
- Ka Ho Guh
- Siyu Jiang
- Brandon Johanson
- Michael Johnson
- Mayank Kathuria
- Aishwarya Mandyam
- Vardhman Mehta
- Cameron Pickett
- Ryan Smoots
- Ying Wang
- Meiling Wu
- Samuel Yisrael
- William Li
- Junyi Zhu
- Varun Viswanath
- Parker Ruth

Graduate Research Supervisor, Georgia Institute of Technology 8/2005 – 8/2008

- Moritz Köhler
- Mayank Goel (now a PhD student at University of Washington)

Undergraduate Research Supervisor, Georgia Institute of Technology 9/2003 – 8/2007

- John A. Bunch
- Kyle D. Forkner
- Logan W. Johnson
- Tiffany M. Johnson
- Michael N. Rosack
- Rob Farmer
- Trevor Bentley
- Tejesh Patel

Awards and Honors Received by Supervised Students

- Heidelberg Laureate Fellow – Edward Wang (2018)
- Adobe Fellowship - Eric Whitmire (2017)
- Heidelberg Laureate Fellow – Mohit Jain (2017)
- Qualcomm Innovation Fellowship – Hanchuan Li and Alex Mariakakis (2016)

- NSF Graduate Research Fellowship – Alex Mariakakis (2015)
- Microsoft Graduate Research Fellowship – Lilian de Greef (2015)
- WAGS/UMI Innovation in Technology Award – Sidhant Gupta (2015)
- Microsoft Graduate Research Fellowship – Mayank Goel (2014)
- NSF Graduate Research Fellowship – Edward Wang (2014)
- NSF Graduate Research Fellowship – Lilian de Greef (2013)
- Microsoft Women's Graduate Fellowship – Lilian de Greef (2013)
- Yang Award (Outstanding Graduate Student) in Electrical Engineering – Gabe Cohn (2013)
- Top Research Prize from Madrona Venture Group – Eric Larson and Mayank Goel (2012)
- UW Dissertation Award - Jon Froehlich (2012)
- Microsoft Graduate Research Fellowship – Gabe Cohn (2012)
- NSF Graduate Research Fellowship – Milda Zizyte (2012)
- UW College of Engineering Top Student Innovator Award – Eric Larson (2012)
- Forbes Magazine Top 30 Innovators under 30 – Sidhant Gupta (2012)
- College of Engineering's Kumar and Robert A. Bhasin Endowed Fellowship – Sidhant Gupta (2011)
- Top Research Prize from Madrona Venture Group – Gabe Cohn (2011)
- Top Research Assistant Award Finalist in Electrical Engineering – Gabe Cohn (2011)
- Madrona Venture Group Research Prize Runner Up – Gabe Cohn (2010)
- UW College of Engineering Top Student Innovator Award - Jon Froehlich (2010)
- Yang Award (Outstanding Graduate Student) finalist in Electrical Engineering – Eric Larson (2010)
- NSF Graduate Research Fellowship – Gabe Cohn (2010)
- Outstanding Member of UW Community by the UW College of Engineering - Jon Froehlich (2009)
- Top Research Prize from Madrona Venture Group – Jon Froehlich, Eric Larson, Sidhant Gupta, Gabe Cohn (2009)
- Washington Research Foundation Fellowships for Advanced Undergraduates – Tim Campbell (2009)
- Ronald E.McNair Scholar – Ramses Alcaide (2009)
- Precourt Center Fellow at the Behavior, Energy and Climate Change Conference - Jon Froehlich (2009)
- Selected as Outstanding Member of UW Community by the UW College of Engineering - Jon Froehlich (2009)
- 1st Place (Grand Prize) in the 2009 UW Environmental Innovation Challenge - Jon Froehlich (2009)
- 3rd Place, University of Washington Business Plan Competition - Jon Froehlich (2009)
- NSF Graduate Research Fellowship – Julia Schwarz (2009)

BOOK CHAPTERS (Peer-reviewed)

[B.5] Larson, E.C., Saba, E., Kaiser, S., Goel, M., Patel, S.N. Pulmonary Monitoring Using Smartphones. Mobile Health - Sensors, Analytic Methods, and Applications 2017: 239-264.

[B.4] Voida, S., Patterson, D., and Patel, S.N. Sensor Streams. Ways of Knowing in HCI. Ed. Wendy Kellogg and Judy Olson. Springer. ISBN: 978-1-4939-0378-8. 2013.

[B.3] Varshavsky, A and Patel, S.N.. Location Systems. Ubiquitous Computing Fundamentals. Ed. Krumm, J. CRC Press. ISBN: 1420093606. pp. 286-319. 2009.

[B.2] Patel, S.N., Summet, J.W., Truong, K.N. BlindSpot: Creating Capture-Resistant Spaces. Protecting Privacy in Video Surveillance. Ed. Andrew Senior. 2009.

[B.1] Patel, S.N., Truong, K.N., Hayes, G.R., Iachello, G., Kientz, J.A., Abowd, G.D. The Personal Audio Loop: A Ubiquitous Audio-Based Memory Aid. Handbook of Research on User Interface Design and Evaluation for Mobile Technology. 2008.

JOURNAL ARTICLES (Peer-reviewed)

[J.13] James A. Taylor, James W. Stout, Lilian de Greef, Mayank Goel, Shwetak Patel, Esther K. Chung,

Aruna Koduri, Shawn McMahon, Jane Dickerson, Elizabeth A. Simpson, Eric C. Larson. Use of a Smartphone App to Assess Neonatal Jaundice. Pediatrics Sep 2017, 140 (3) e20170312; DOI: 10.1542/peds.2017-0312

[J.12] Patel, S.N., Smith, J.R. Powering Pervasive Computing Systems. IEEE Pervasive Computing 16(3): 32-38 (2017).

[J.11] Vardoulis, O., Saponas, T.S., Morris, D., Villar, N., Smith, G., Patel, S. N. and Tan, D., 2016. In vivo evaluation of a novel, wrist-mounted arterial pressure sensing device versus the traditional hand-held tonometer. Medical Engineering & Physics.

[J.10] Pu, Q., Gupta, S., Gollakota, S., Patel, S.N. Gesture Recognition Using Wireless Signals. ACM SIGMOBILE: Mobile Computing and Communications. 18(4). pp. 15-18. 2014.

[J.9] Chen, K., Harniss, M., Patel, S.N., and Johnson, K. Implementing technology-based embedded assessment in the home and community life of individuals aging with disabilities: A participatory research and development study. Disability and Rehabilitation: Assistive Technology. 2013.

[J.8] Everitt, K., Oven, P., Patel, S.N., Landay, J.A. GroupEnergyTable: Reducing Consumption through Shared Tabletops. IEEE Pervasive Computing, IEEE Press. IEEE Pervasive Computing 11(3): 46-53 (2012). 2012.

[J.7] Larson, E., Froehlich, J., Campbell, T., Haggerty, C., Fogarty, J., and Patel, S. N. HydroSense: Disaggregated Water Usage Sensing from a Single, Non-Intrusive Sensor. The Pervasive and Mobile Computing (PMC) Journal. 2012.

[J.6] Yun, J., Patel, S.N., Reynolds, M.S., Abowd, G.D. Design and Performance of an Optimal Inertial Power Harvester for Human-powered Devices. IEEE Transactions on Mobile Computing. 10(5). pp. 669-684. May 2011.

[J.5] Thielke, S., Harniss, M., Thompson, H., Patel, S.N., Demiris, G., Johnson, K. Maslow's Hierarchy of Human Needs and the Adoption 4 of Health-Related Technologies for Older Adults. Ageing International Journal. 2011.

[J.4] Froehlich, J., Larson, E., Gupta, S., Cohn, G., Reynolds, M.S., Patel, S.N. Disaggregated End-Use Energy Data for the Smart Grid. IEEE Pervasive Computing, 10(1). IEEE Press. pp. 28-39. 2011.

[J.3] Huang, E. M., Yatani, K., Truong, K.N., Kientz, J,A., Patel, S.N. Understanding Mobile Phone Situated Sustainability: The Influence of Local Constraints and Practices on Transferability. IEEE Pervasive Computing, 8(1), IEEE Press. pp.46-53. 2009.

[J.2] Hayes, G.R., Shehan, E., Iachello, G., Patel, S.N., Grimes, A., Abowd, G.D., and Truong, K.N. Physical, Social, and Experiential Knowledge of Privacy and Security in a Pervasive Computing Environment. IEEE Pervasive Computing, Oct-Dec 2007, IEEE Press. 2007.

[J.1] Abowd, G.D., Hayes, G.R., Iachello, G., Kientz, J.A., Patel, S.N., Stevens, M., Truong, K.N. Prototypes and Paratypes: Mixed Methods for Designing Mobile and Ubiquitous Computing Applications, IEEE Pervasive Computing, 4(4), IEEE Press, 67-73. 2007.

MAJOR CONFERENCE PUBLICATIONS (Peer-reviewed and Journal Quality)

[C. 96] Gulati, M., Parizi, F., Whitmire, E., Gupta, S., Ram, S., Singh, A., Patel, S.N.: CapHarvester: A Stick-on Capacitive Energy Harvester Using Stray Electric Field from AC Power Lines. IMWUT 2(3): 110:1-110:20 (Ubicomp 2018). 2018.

[C. 95] Wang, E.J., Sharma, M., Zhao, Y., Patel, S.N.: CASPER: capacitive serendipitous power transfer for through-body charging of multiple wearable devices. UbiComp 2018: 188-195.

[C. 94] Jain, M., Kumar, P., Kota, R., Patel, S.N.: Evaluating and Informing the Design of Chatbots. Conference on Designing Interactive Systems 2018: 895-906. 2018.

[C. 93] Mariakakis, A., Parsi, S., Patel, S.N., Wobbrock, J.O.: Drunk User Interfaces: Determining Blood Alcohol Level through Everyday Smartphone Tasks. CHI 2018: 234.

[C. 92] Wang, E.J., Zhu, J., Jain, M., Lee, T., Saba, E., Nachman, L., Patel, S.N.: Seismo: Blood Pressure Monitoring using Built-in Smartphone Accelerometer and Camera. CHI 2018: 425.

[C. 91] Jain, M., Kumar, P., Kota, R., Patel, S.N.: Convey: Exploring the Use of a Context View for Chatbots.

CHI 2018: 468.

[C. 90] Sharma, M., Carson, M.D., Graham, J.Y., Nelson, L.Y., Patel, S.N., Seibel, E.J.: Dental pH Opti-Wand (DpOW): measuring oral acidity to guide enamel preservation. EMBC 2018: 3738-3741

[C. 89] Viswanath, V., Garrison, J., Patel, S.N.: SpiroConfidence: Determining the Validity of Smartphone Based Spirometry Using Machine Learning. EMBC 2018: 5499-5502

[C. 88] Agarwal, A., Jain, M., Kumar, P., Patel, S.N. Opportunistic Sensing with MIC Arrays on Smart Speakers for Distal Interaction and Exercise Tracking. ICASSP 2018: 6403-6407.

[C. 87] Parizi, F.S., Fromm, J., Deshpande, S., Patel, S.N.: RoyalFlush: non-invasive water level monitor to prevent toilet overflows. IOT 2018: 10:1-10:8. 2018.

[C. 86] Fromm, J., Patel, S.N., Philipose, M.: Heterogeneous Bitwidth Binarization in Convolutional Neural Networks. NeurIPS 2018: 4010-4019

[C. 85] Mariakakis, A., Banks, M., Phillipi, L., Yu, L., Taylor, J., Patel, S.N. BiliScreen: Smartphone-Based Scleral Jaundice Monitoring for Liver and Pancreatic Disorders. IMWUT 1(2): 20:1-20:26. (Ubicomp 2017). 2017.

[C. 84] Mariakakis, A., Baudin, J., Whitmire, E., Mehta, V., Banks, M., Law, A., Mcgrath, L., Patel, S.N. PupilScreen: Using Smartphones to Assess Traumatic Brain Injury. IMWUT 1(3): 81:1-81:27. (Ubicomp 2017). 2017.

[C. 83] Whitmire, E., Jain, M., Jain, D., Nelson, G., Karkar, R., Patel, S.N., Goel, M. DigiTouch: Reconfigurable Thumb-to-Finger Input and Text Entry on Head-mounted Displays. IMWUT 1(3): 113:1-113:21. (Ubicomp 2017). 2017.

[C. 82] Ravichandran, R., Sien, S., Patel, S.N., Kientz, J.A., Pina, L. Making Sense of Sleep Sensors: How Sleep Sensing Technologies Support and Undermine Sleep Health. In the proceedings of CHI 2017: 6864-6875.

[C. 81] Wang, E., Li, W., Zhu, J., Rana, R., Patel, S.N. Noninvasive hemoglobin measurement using unmodified smartphone camera and white flash. EMBC 2017: 2333-2336.

[C. 80] Luo, A., Whitmire, E., Stout, J.W., Martenson, D., Patel, S.N. Automatic characterization of user errors in spirometry. EMBC 2017: 4239-4242.

[C. 79] Wang, E., Garrison, J., Whitmire, E., Goel, M., Patel, S.N. Carpacio: Repurposing Capacitive Sensors to Distinguish Driver and Passenger Touches on In-Vehicle Screens. In the proceedings of UIST 2017: 49-55.

[C. 78] Wang, E.J., Li, W., Hawkins, D., Grenheimer, T., Norby-Slycord, C., Patel, S.N., HemaApp: Noninvasive Blood Screening of Hemoglobin using Smartphone Cameras**.** Proceedings of the ACM International Conference on Ubiquitous Computing (Ubicomp 2016). pp. 593-604. 2016. (Acceptance Rate: 24%) **(Best Paper Award)**

[C. 77] Hiniker, A., Patel, S.N., Kohno, T., Kientz, J.A., Why Would You Do That? Predicting the Uses and Gratifications Behind Smartphone-Usage Behaviors**.** Proceedings of the ACM International Conference on Ubiquitous Computing (Ubicomp 2016).). pp. 634-645. 2016. (Acceptance Rate: 24%)

[C. 76] Whitmire, E., Trutoiu, L., Cavin, R., Perek, D., Scally, B., Philips, J.O., Patel, S.N. EyeContact: Scleral Coil Eye Tracking for Virtual Reality. Proceedings on the International Symposium on Wearable Computers (ISWC 2016). pp. 184-191. 2016. (Acceptance Rate: 14%) **(Best Paper Award)**

[C. 75] Chen, K., Patel, S.N., Keller, S., Finexus: Tracking Precise Motions of Multiple Fingertips Using Magnetic Sensing. Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2016). pp. 1504-1514. 2016. (Acceptance Rate: 23**%) (Best Paper Award Honorable Mention).**

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[P.22] Patel, S.N., Robertson, T.M., Abowd, G.D. and Reynolds, M.S., Georgia Tech Research Corporation, 2012. Detecting actuation of electrical devices using electrical noise over a power line. U.S. Patent 9,250,275.

[P.21] Patel, S.N., Fogarty, J.A., Froehlich, J.E. and Larson, E.C., University Of Washington, 2016. Sensing events affecting liquid flow in a liquid distribution system. U.S. Patent 9,250,105.

[P.20] Patel, S.N., Cohn, G.A. and Reynolds, M.S., University Of Washington Through Its Center For Commercialization, 2016. Receiver, apparatus, and methods for wirelessly receiving data from a power infrastructure. U.S. Patent 9,240,823.

[P.19] Patel, S.N., Gupta, S. and Reynolds, M.S., Belkin International, Inc., 2015.Apparatus configured to detect gas usage, method of providing same, and method of detecting gas usage. U.S. Patent 9,222,816.

[P.18] Patel, S.N., Cohn, G.A. and Reynolds, M.S., University Of Washington Through Its Center For Commercialization, 2015. Sensor nodes, apparatuses, and methods for wirelessly transmitting data to a power infrastructure. U.S. Patent 9,218,736.

[P.17] Patel, S.N., Campbell, T.B., Larson, E.C. and Cohn, G.A., University Of Washington Through Its Center For Commercialization, 2015. Automatic valve shutoff device and methods. U.S. Patent 9,151,022.

[P.16] Patel, S.N., Cohn, G.A. and Reynolds, M.S., University Of Washington Through Its Center For Commercialization, 2015. Receiver, apparatus, and methods for wirelessly receiving data from a power infrastructure. U.S. Patent 9,064,396.

[P.15] Yogeeswaran, K., Kelly, F.M., Patel, S.N., Gupta, S. and Reynolds, M.S., Belkin International, Inc., 2015. System for monitoring electrical power usage of a structure and method of same. U.S. Patent 8,972,211.

[P.14] Patel, S.N., Reynolds, M.S. and Abowd, G.D., Georgia Tech Research Corporation, 2015. Motion detecting device, method of providing the same, and method of detecting movement. U.S. Patent 8,938,367.

[P.13] Patel, S.N. and Reynolds, M.S., University Of Washington, 2015. Whole structure contactless power consumption sensing. U.S. Patent 8,930,152.

[P.12] Yogeeswaran, K., Maguire, Y., Gillen-O'Neel, C., Joshi, A.V., Tantum, S., Reynolds, M.S. and Patel, S.N., Belkin International, Inc., 2014. Systems and methods for data compression and feature extraction for the purpose of disaggregating loads on an electrical network. U.S. Patent 8,924,604.

[P.11] Patel, S.N., Reynolds, M.S. and Abowd, G.D., Georgia Tech Research Corporation, 2014. Motion detecting method and device. U.S. Patent 8,886,489.

[P.10] Patel, S.N., Gupta, S., Reynolds, M.S. and Yogeeswaran, K., Belkin International, Inc., 2014. Systems and methods for measuring electrical power usage in a structure and systems and methods of calibrating the same. U.S. Patent 8,805,628.

[P.9] Stuntebeck, E.P., Robertson, T., Abowd, G.D. and Patel, S.N., Georgia Tech Research Corporation and University Of Washington, 2014. Method and apparatus for using in-home power lines to support low power wireless sensors and to extend the range of low-power wireless devices. U.S. Patent 8,788,191.

[P.8] Tan, D.S., Patel, S., Morris, D.S. and Gupta, S., Microsoft Corporation, 2014.User control gesture detection. U.S. Patent 8,749,485.

[P.7] Patel, S.N., Reynolds, M.S., Gupta, S. and Yogeeswaran, K., Belkin International, Inc., 2014. Electrical event detection device and method of detecting and classifying electrical power usage. U.S. Patent 8,712,732.

[P.6] Tan, D.S., Morris, D.S., Cohn, G.A. and Patel, S.N., Microsoft Corporation, 2014. Sensing user input using the body as an antenna. U.S. Patent 8,665,210.

[P.5] Patel, S.N., Abowd, G.D., Reynolds, M.S., Robertson, T. and Stuntebeck, E., Georgia Tech Research Corporation, 2013. Sub room level indoor location system using wideband power line positioning. U.S. Patent 8,494,762.

[P.4] Patel, S.N., Fogarty, J.A., Froehlich, J.E. and Larson, E.C., University Of Washington, 2013. Sensing events affecting liquid flow in a liquid distribution system. U.S. Patent 8,457,908.

[P.3] Patel, S.N., Truong, K.N., Abowd, G.D., Robertson, T. and Reynolds, M.S., Georgia Tech Research Corporation, 2013. Sub-room-level indoor location system using power line positioning. U.S. Patent 8,392,107.

[P.2] Patel, S.N., Robertson, T.M., Abowd, G.D. and Reynolds, M.S., Belkin International Inc., 2012. Detecting actuation of electrical devices using electrical noise over a power line. U.S. Patent 8,334,784.

[P.1] Patel, S.N., Robertson, T.M., Abowd, G.D. and Reynolds, M.S., Belkin International Inc., 2012. Detecting actuation of electrical devices using electrical noise over a power line. U.S. Patent 8,094,034.

Pending Applications

1. 20160202340: SYSTEM AND METHOD FOR MONITORING ELECTRICAL POWER USAGE IN AN ELECTRICAL POWER INFRASTRUCTURE OF A BUILDING
2. 20160154043: DETECTING ACTUATION OF ELECTRICAL DEVICES USING ELECTRICAL NOISE OVER A POWER LINE
3. 20160146648: SENSING EVENTS AFFECTING LIQUID FLOW IN A LIQUID DISTRIBUTION SYSTEM
4. 20160138824: SENSORS FOR DETECTING PRESENCE, OCCUPANCY, AND/OR MOTION AND RELATED SYSTEMS AND METHODS
5. 20160123834: WATER SENSORS WITH MULTI-VALUE OUTPUTS AND ASSOCIATED SYSTEMS AND METHODS
6. 20160109271: APPARATUS CONFIGURED TO DETECT GAS USAGE, METHOD OF PROVIDING SAME, AND METHOD OF DETECTING GAS USAGE
7. 20160089081: WEARABLE SENSING BAND
8. 20160089042: WEARABLE PULSE PRESSURE WAVE SENSING DEVICE
9. 20160089033: DETERMINING TIMING AND CONTEXT FOR CARDIOVASCULAR MEASUREMENTS
10. 20160054804: DEVICES, SYSTEMS, AND METHODS FOR DETECTING GESTURES USING WIRELESS COMMUNICATION SIGNALS
11. 20150376875: AUTOMATIC VALVE SHUTOFF DEVICE AND METHODS
12. 20150359459: SYSTEMS, DEVICES, AND METHODS FOR ESTIMATING BILIRUBIN LEVELS
13. 20150326280: RECEIVER, APPARATUS, AND METHODS FOR WIRELESSLY RECEIVING DATA FROM A POWER INFRASTRUCTURE
14. 20150317076: USE OF HAND POSTURE TO IMPROVE TEXT ENTRY
15. 20150233998: SYSTEMS AND METHODS FOR SENSING ENVIRONMENTAL CHANGES USING EMI SIGNAL SOURCES AS SENSORS
16. 20150168464: SYSTEM FOR MONITORING ELECTRICAL POWER USAGE OF A STRUCTURE AND METHOD OF SAME
17. 20150126888: SOUND-BASED SPIROMETRIC DEVICES, SYSTEMS AND METHODS
18. 20150099463: METHOD AND APPARATUS FOR USING IN-HOME POWER LINES TO SUPPORT LOW POWER WIRELESS SENSORS AND TO EXTEND THE RANGE OF LOW-POWER WIRELESS DEVICES
19. 20150013772: AUTOMATIC VALVE SHUTOFF DEVICE AND METHODS
20. 20150002137: SELF-CALIBRATING CONTACTLESS POWER CONSUMPTION SENSING
21. 20140375352: SYSTEMS AND METHODS FOR SENSING ENVIRONMENTAL CHANGES USING LIGHT SOURCES AS SENSORS
22. 20140347039: SYSTEMS AND METHODS FOR MEASURING ELECTRICAL POWER USAGE IN A STRUCTURE AND SYSTEMS AND METHODS OF CALIBRATING THE SAME
23. 20140336537: COUGH DETECTING METHODS AND DEVICES FOR DETECTING COUGHS
24. 20140072060: RECEIVER, APPARATUS, AND METHODS FOR WIRELESSLY RECEIVING DATA FROM A POWER INFRASTRUCTURE
25. 20140070940: SENSOR NODES, APPARATUSES, AND METHODS FOR WIRELESSLY TRANSMITTING DATA TO A POWER INFRASTRUCTURE

26. 20140026644: Sensing Events Affecting Liquid Flow in a Liquid Distribution System
27. 20130289930: Motion Detecting Device, Method Of Providing The Same, And Method Of Detecting Movement
28. 20130201033: SENSOR SYSTEMS WIRELESSLY UTILIZING POWER INFRASTRUCTURES AND ASSOCIATED SYSTEMS AND METHODS
29. 20130179124: ELECTRICAL EVENT DETECTION DEVICE AND METHOD OF DETECTING AND CLASSIFYING ELECTRICAL POWER USAGE
30. 20130154919: USER CONTROL GESTURE DETECTION
31. 20130124123: Detecting Actuation of Electrical Devices Using Electrical Noise Over a Power Line
32. 20120162057: SENSING USER INPUT USING THE BODY AS AN ANTENNA
33. 20120092142: Detecting Actuation of Electrical Devices Using Electrical Noise Over a Power Line
34. 20120072143: System for Monitoring Electrical Power Usage of a Structure and Method of Same
35. 20120068692: Systems and Methods for Measuring Electrical Power Usage in a Structure and Systems and Methods of Calibrating the Same
36. 20110282596: Apparatus Configured to Detect Gas Usage, Method of Providing Same, and Method of Detecting Gas Usage
37. 20110074382: WHOLE STRUCTURE CONTACTLESS POWER CONSUMPTION SENSING
38. 20110028093: Bluetooth Proximity Detection System and Method of Interacting With One or More Bluetooth Devices
39. 20100313958: SENSING EVENTS AFFECTING LIQUID FLOW IN A LIQUID DISTRIBUTION SYSTEM
40. 20100288468: Motion Detecting Device, Method of Providing the Same, and Method of Detecting Movement
41. 20100109842: SUB ROOM LEVEL INDOOR LOCATION SYSTEM USING WIDEBAND POWER LINE POSITIONING
42. 20090072985: Detecting actuation of electrical devices using electrical noise over a power line
43. 20080091345: Sub-room-level indoor location system using power line positioning
44. 20070103552: Systems and methods for disabling recording features of cameras

TECH TRANSFER AND COMMERCIALIZATION ACTIVITIES

Co-Founder of Usenso, Inc. aka Zensi, Inc. **4/2008 – 4/2010**

- Energy and water sensing company
- Acquired by Belkin™ International, Inc. in 2010
- Led to WeMo Labs in Seattle
- Licensed [P.2], [P.3], [P.4], [P.5], [C.24], [Shwetak Patel's Ph.D. Thesis]
- UW's current return of $1.5M in licensing fees and royalties.
- Top 10 Startup in 2010 by TechFlash

Co-Founder of SNUPI, Inc **8/2012 – 10/2015**

- Low-power wireless sensor company
- Licensed [C.29]
- Technology Alliance "Innovation Showcase Company of the Year"
- The 7 most useful smart home devices by Fortune Magazine
- Acquired by Sears Holding Company

Co-Founder and CEO of Senosis Health, Inc **10/2015 – current**

- Mobile health diagnostics company
- Licensed [C.36, 45, 50, 60, 74]

TECHNICAL REPORTS

[TR.2] Clarkson, E.C., Patel, S. N., Pierce, J.S., Abowd, G.D. *Exploring Continuous Pressure Input for Mobile Phones*. GVU Tech Report. GIT-GVU-06-20. 2006.

[TR.1] Patel, S. N., J.A. Kientz, J.P. Zagal. *LoCoL: Encouraging Social Interaction and Exploration Through a Distributed, Multi-Media, Location-Based Mobile Game*. GVU Tech Report. GIT-GVU-04-17. 2004.

SERVICE AND OUTREACH

Director Roles

- Director and CTO of the Global Innovation Exchange (GIX) (9/2015-current)
- Ubicomp Research Lab, University of Washington (9/2008-current)
- Assistant Director of the Aware Home Research Initiative at Georgia Tech (1/2007- 8/2008)

Editorial Roles and Boards

- IMWUT/Ubicomp Associate Editor (2016-current)
- Georgia Tech GVU Advisory Board (2014-current)
- IEEE Pervasive Computing Editorial Board (2014-current)
- Guest Editor for the Special Issue on Power Harvesting for IEEE Pervasive Computing (2015)

Program Committee Chair

- Ubicomp 2016 Program Committee Co-Chair, International Conference on Ubiquitous Computing

Program Committee Member

- Ubicomp 2015 Program Committee, International Conference on Ubiquitous Computing
- Ubicomp 2014 Program Committee, International Conference on Ubiquitous Computing
- Ubicomp 2013 Program Committee, International Conference on Ubiquitous Computing
- Pervasive 2012 Program Committee, International Conference on Pervasive Computing
- CHI 2012 Program Committee, ACM SIGCHI Conference on Human Factors in Computing Systems
- UIST 2011 Program Committee, ACM Symposium on User Interface Software and Technology
- Ubicomp 2011 Program Committee, International Conference on Ubiquitous Computing
- Pervasive 2011 Program Committee, International Conference on Pervasive Computing
- Ubicomp 2010 Program Committee, International Conference on Ubiquitous Computing
- Pervasive 2010 Program Committee, International Conference on Pervasive Computing
- IUI 2010 Program Committee, International Conference on Intelligent User Interfaces
- Ubicomp 2009 Program Committee, International Conference on Ubiquitous Computing
- Pervasive 2009 Program Committee, International Conference on Pervasive Computing
- IUI 2009 Program Committee, International Conference on Intelligent User Interfaces
- LoCA 2009 Program Committee, International Symposium on Location and Context-Awareness
- Ubicomp 2008 Program Committee, International Conference on Ubiquitous Computing
- LoCA 2007 Program Committee, International Symposium on Location and Context-Awareness
- Pervasive 2007 Video Program Committee, International Conference on Pervasive Computing
- UIST 2007 Poster Program Committee, ACM Symposium on User Interface Software and Technology

Conference Committee Member

- Ubicomp 2014 Doctoral School Co-Char
- ISWC 2007 Publications Chair, Eleventh International Symposium on Wearable Computers
- ISWC 2007 Print Proceedings and Videos Chair, Eleventh International Symposium on Wearable Computers

Workshop Organizer
- UW Microsoft Summer Institute 2017
- NSF Smart Health Workshop 2016.
- Pervasive @ Home, Pervasive 2008, Sixth International Conference on Pervasive Computing
- Ubicomp 2008 Doctoral Consortium
- Ubicomp 2010 Doctoral Consortium

Workshop Invitations
- Microsoft Research Faculty Summit – 2017
- Microsoft Research Faculty Summit – 2016
- NSF Visioning Workshop on Smart and Connected Communities - 2016
- Microsoft Research Faculty Summit – 2015
- Microsoft Research Faculty Summit – 2014
- Microsoft Research Faculty Summit – 2013
- CRA Computer Science Chairs/Deans Conference - 2012
- Microsoft Research Faculty Summit – 2012
- Microsoft Research Faculty Summit – 2011
- NSF Workshop on IT and Sustainability - 2011
- NSF Workshop on Pervasive Computing at Scale (PeCS) - Keynote – 2011
- CRA Computer Science Chairs/Deans Conference - 2010
- Microsoft Research Faculty Summit – 2010
- The National Academies Workshop on Innovation in Computing and Information Technology for Sustainability - 2010
- Microsoft Research Faculty Summit – 2009
- Microsoft/UW Summer Institute – 2009
- Workshop on Ubiquitous Computing Education: Ubicomp 2009 - 2009
- NSF Workshop on Sensor Networks – 2009

Reviewer
- ISCAS 2009
- CSCW 2008, 2009
- CHI 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017
- Pervasive 2006, 2007, 2008
- Ubicomp 2005, 2006, 2007, 2012, 2013, 2014, 2015
- UIST 2006, 2007, 2008, 2009, 2010, 2012, 2013, 2014, 2015, 2016, 2017
- Mobisys 2004, 2012, 2013
- ISWC 2007, 2010
- Interact 2007
- TEI 2010
- IEEE Pervasive Computing 2005, 2007, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2017
- Smart Environments (SmartE) 2010
- IEEE Computer 2005, 2008, 2011
- Handbook of Research on User Interface Design and Evaluation for Mobile Technology 2006

University and Department Service
- Associate Director of Research and Innovation for the School of Computer Science & Engineering (2016 – current)
- UW Global Innovation Exchange (GIX) Director and CTO (2015-current)
- UW Global Innovation Exchange (GIX) Executive Committee (2014-current)
- UW Global Innovation Exchange (GIX) Curriculum Committee Chair (2014-current)
- UW Global Innovation Exchange (GIX) Program Committee (2013, 2014)
- UW CSE Commercialization Committee (2016)

- UW CSE PhD Admissions Committee (2014, 2015)
- UW CSE/EE ExCEL Faculty Search Committee (2014, 2015)
- UW Presidential Entrepreneurial Faculty Fellow (2014)
- UW CSE Graduate Student Recruiting Committee (2014)
- UW EE Faculty Search Committee (2013)
- UW EE Energy Search Committee (2012)
- UW CSE ACM Committee (2011)
- UW Green IT Certificate Program Advisory Board (2011)
- HKN EE/CSE Honor Society Advisor (2011, 2012)
- UW EE Undergraduate Research Committee (2009, 2010)
- Computer Science & Engineering Undergraduate Research Night (2009)
- Advisor for UW Smart Grid Initiative (2010)

Federal and State Government

- Computing Community Consortium (CCC) Council Member (2015-current)
- CRA Congressional Briefing (2015)
- IOT Caucus Briefing (2015)
- House Science Committee Briefing (2013)
- NITRD Invited Talk (2012)
- Briefed Secretary of Energy Steven Chu (2011)
- Briefed Department of Energy Agency Directors on Residential Energy Monitoring (2010-2011)
- Briefed and advised Chairman Jon Wellinghoff of the Federal Energy Regulatory Commission (August 2009)
- Briefed and advised Seattle City Light and Seattle Public Utilities on Clean Technology

K-12 Outreach

- Day of Exploring Ubiquitous Computing – 100 6-12th Grade Students (2017)
- Day of Exploring Ubiquitous Computing – 50 6-12th Grade Students (2016)
- Day of Exploring Ubiquitous Computing – 116 6-12th Grade Students (2015)
- Day of Exploring Ubiquitous Computing – 45 6-12th Grade Students (2014)
- Day of Exploring Ubiquitous Computing – 35 6-12th Grade Students (2013)
- Day of Exploring Ubiquitous Computing – 50 6-12th Grade Students (2012)
- Day of Exploring Ubiquitous Computing – 35 6-12th Grade Students (2011)
- Day of Exploring Computer Science – 24 6th Grade, University Prep, Seattle WA (2010)
- Day of Exploring Ubiquitous Computing – 25 8th Grade Students (2010)
- Washington Aerospace Scholars Host – 80 students (2009)
- Founded “Start Early” – Research Opportunities for High School Students – 21 students (2009-Present)

Graduate PhD Thesis Committees

- Jonathan Lester – UW EE Ph.D. Thesis Committee Member
- Kate Everitt – UW CSE Ph.D. Thesis Committee Member
- Erich Stuntebeck – Georgia Tech ECE External Ph.D. Thesis Committee Member
- Sidharth Nabar – UW EE Ph.D. Thesis Committee Member
- Alanson Sample - UW EE Ph.D. Thesis Committee Member
- Rohit Chaudhri - UW CSE Ph.D. Thesis Committee Member
- Miro Enev - UW CSE Ph.D. Thesis Committee Member
- Chun-Te Chu - UW EE Ph.D. Thesis Committee Member
- Tim Morrison - UW EE Ph.D. Thesis Committee Member
- Karl Koscher - UW CSE Ph.D. Thesis Committee Member
- Ben Waters - UW EE Ph.D. Thesis Committee Member
- Eve Zhao - UW EE Ph.D. Thesis Committee Member
- Temitope Oluwafemi - UW EE Ph.D. Thesis Committee Member

- Saman Naderiparizi - UW EE Ph.D. Thesis Committee Member

INVITED TALKS

- Distinguished Lecture. Harvey Mudd College. Claremont, CA., "Applications of Computing to Health and Sustainability." April 2016.
- Distinguished Lecture. Amgen, Los Angeles, C.A., "A New Look at Mobile Phone for Health." April 2016.
- AAA Presentation. Boston, MA., "Using Mobile Phones for Health Screening and Diagnostics." February 2017.
- NSF Distinguished Lecture. Washington, D.C., "The Emerging Role of Mobile Phones in Health." February 2017.
- Distinguished Lecture. Tsinghua University. Beijing., "Applications of Computing to Health and Energy." November 2016.
- Distinguished Lecture. Elon University. Elon, N.C., "Applications of Computing to Health and Energy." November 2016.
- TDN Health Meeting, Orlando, FL., Keynote. "A New Look at Mobile Phone for Health." October 2016.
- Seattle Children's CCTR Symposium, Seattle, WA., Keynote. "A New Look at Mobile Phone for Health." May 2016.
- Gates Foundation Aerobiology Summit, Cape Town South Africa, "Health Sensing using Acoustics." March 2016.
- National Academy of Engineering (NAE), Irvine, CA., Gilbreth Lecture., "New Approaches for Sensing in the Home." February 2016.
- NSF Visioning Workshop on Smart and Connected Communities, "Emerging Technologies for SCC." January 2016.
- Innovation Summit, Shanghai China, "Sensing for Health and Sustainability." November 2015.
- Cambia Grove, Seattle, WA., Leadership Series., "Health Sensing." June 2015.
- MSR Devices Summit, Paris France, "Wearable Healthy Monitoring." May 2015.
- Cornell University, Ithaca, NY., Distinguished Colloquium. "The answer is sometimes in the noise." January 2015.
- Cornell Tech, New York City, NY., Distinguished Colloquium. "The answer is sometimes in the noise." January 2015.
- HICCS Keynote. "New Approaches to Sensing in the Home." January 2015.
- National Academy of Engineering Frontiers of Engineering Symposium, Seattle, WA. "New Approaches to Sensing in the Home." November 2014.
- Georgia Institute of Technology, Atlanta, GA. GVU Distinguished Alum Colloquium. "The answer is sometimes in the noise." October 2014.
- Collision Conference, Invited Talk, "Making the connected home a reality" May 2014.
- University of Michigan, John Seely Brown Distinguished Colloquium, "Your Noise is My Signal" October 2013.
- House Science Committee Briefing, Washington, D.C., "Making the Smart Home a Reality." May 2013.
- University of Toronto, Distinguished Lecture Series. "Applications of Computing To Energy and Health." January 2013.
- CRA Computer Science Chairs/Deans Conference, Snowbird, UT. "Your Noise is My Signal" July 2012.
- ARPA-E Summit. Washington, D.C. A Revolution in Information Technology and Energy. February 2012.
- Federal Networking and Information Technology Research and Development (NITRD) Symposium. Washington, D.C. "The Role of Sensors in Our Daily Lives." February 2012.
- Google Distinguished Lecture Series. Seattle, WA. (Broadcasted to 11 Google Sites) "Your Noise is My Signal" November 2011.
- Pacific Northwest Sustainability Conference. Seattle, WA. "Energy and Water Sensing in the Home" May 2011.
- Washington State University. Pullman, WA. NSF Distinguished Speaker Series. "Energy Monitoring and Low-Power Sensing in the Home" April 2011.

- Case Western Reserve University, Cleveland, OH. Computer Science Colloquium. "Energy Monitoring and Low-Power Sensing in the Home" February 2011.
- Innovation Showcase. Seattle, WA. "Low-Power Sensing in the Home." February 2011.
- Carnegie Mellon University, Pittsburg, PA. Computer Science Series. "Energy Monitoring and Low-Power Sensing in the Home" January 2011.
- NSF Workshop – Pervasive Computing at Scale, Seattle, WA. Keynote. "Energy Monitoring and Low-Power Sensing in the Home" January 2011.
- Technology Alliance, Seattle, WA. Science and Technology Discovery Series "Energy Monitoring and Low-Power Sensing in the Home" November 2010.
- The College of William and Mary, Williamsburg, VA. Computer Science Colloquium "Energy Monitoring and Low-Power Sensing in the Home" November 2010.
- The College of William and Mary, Williamsburg, VA. Dean of Arts and Science Lecture Series Campus Wide Talk. "Sustainability Sensing" November 2010.
- Department of Energy, Washington D.C. "Methods for Easy-to-Deploy Energy Disaggregation in the Home" September 2010.
- CRA Computer Science Chairs/Deans Conference, Snowbird, UT. "Residential Energy Monitoring and Sensing" July 2010.
- The National Academies Workshop on Innovation in Computing and Information Technology for Sustainability, Washington, DC. "Residential Energy Monitoring and Sensing" May 2010.
- UW Board of Regents Meeting, Seattle, WA. "Sustainability Sensing" May 2010.
- MS Rehabilitation Research and Training Center Advisory Board Meeting. Seattle, WA. "Applications of Infrastructure-Mediated Sensing to Health" April 2010.
- The Northwest Energy System Symposium, Seattle, WA. "Smart Home Sensing" February 2010.
- Seattle City Light, Seattle, WA. "Sustainability Sensing" January 2010.
- Stanford University, Stanford, CA. "Enabling Practical Ubiquity of Sustainability Sensing." November 2009.
- University of Washington, Seattle, WA. College of Engineering Campus Wide Lecture. "Energy Crisis, Smart Solutions." November 2009.
- Harvard, Cambridge, MA. (also with MIT). "Enabling Practical Ubiquity of Sustainability Sensing" October 2009.
- Microsoft, Seattle, WA. "Practical Ubiquity: Bringing Sensing to the Masses" June 2009.
- Intel Research, Seattle, WA. "Practical Ubiquity: Bringing Sensing to the Masses" June 2009.
- University of Washington, Seattle, WA. Dub Seminar. "Practical Ubiquity: Bringing Sensing to the Masses" January 2009.
- Northeastern University, Boston, MA. Computer Science Colloquium. "An Exploration in Infrastructure-Mediated Sensing." May 2008.
- Intel Research, Seattle, WA. "An Exploration in Infrastructure-Mediated Sensing." April 2008.
- University of Calgary, Calgary, Alberta. Computer Science Colloquium. "An Exploration in Infrastructure-Mediated Sensing." April 2008.
- University of Washington, Seattle, WA. Computer Science Colloquium. "An Exploration in Infrastructure-Mediated Sensing." April 2008.
- PARC, Palo Alto, CA. "An Exploration in Infrastructure-Mediated Sensing." April 2008.
- Georgia Institute of Technology, Atlanta, GA. "An Exploration in Infrastructure-Mediated Sensing." April 2008.
- University of Wisconsin-Madison, Madison, WI. Computer Science Colloquium. . "An Exploration in Infrastructure-Mediated Sensing." March 2008.
- Sony Computer Science Laboratory, Tokyo, Japan. "An Exploration in Infrastructure-Mediated Sensing." November 2007.
- LG Electronics, Seoul, South Korea. "An Exploration in Infrastructure-Mediated Sensing." November 2007
- Korea Advanced Institute of Science and Technology (KAIST), Computer Science Seminar, Daejeon, South Korea. "An Exploration in Infrastructure-Mediated Sensing." November 2007.
- Korea Advanced Institute of Science and Technology (KAIST), Computer Science Seminar, Daejeon, South Korea. "Introduction to Human-Computer Interaction." November 2007.
- International Future Design Conference on Global Innovations in Marco- and Micro-Environments for the Future, Seoul, South Korea. "Research at the Aware Home." October 2007.

- GVU Seminar, Georgia Institute of Technology, "PowerLine Positioning: A Practical Sub-Room-Level Indoor Location System for Domestic Use." September 2006.

SELECT MEDIA AND PRESS

[M.171] Intelligent water: New $40M Phyn joint venture taps UW tech expertise with Seattle R&D lab. Geekwire. Todd Bishop. May 26, 2016. http://www.geekwire.com/2016/intelligent-water-new-40m-phyn-joint-venture-taps-uw-sensor-expertise-seattle-lab/

[M.170] Belkin's $40M smart-home venture launches Seattle office. Seattle Times. Rachel Lerman. May 26, 2016. http://www.seattletimes.com/business/technology/belkin-joint-venture-launches-seattle-office-with-help-from-uw-researchers/

[M.169] Belkin launches $40M joint venture to bring water conservation tech to smart homes. Venture Beat. Paul Sawers. May 25, 2016. http://venturebeat.com/2016/05/25/belkin-launches-40m-joint-venture-to-bring-water-conservation-tech-to-smart-homes/

[M.168] Paper gets 'smart' with drawn-on, stenciled sensor tags. UW Today. Michelle Ma. May 11, 2016. http://www.washington.edu/news/2016/05/11/paper-gets-smart-with-drawn-on-stenciled-sensor-tags/

[M.167] University of Washington partners with Disney to develop cheap touch-sensitive paper. Geekwire. James Risley. May 11, 2016. http://www.geekwire.com/2016/university-of-washington-disney-develop-cheap-touch-sensitive-paper/

[M.166] President Obama honors early career scientists with top White House award. NSF. May 9, 2016. http://www.nsf.gov/news/news_summ.jsp?cntn_id=137709

[M.165] SpiroCall System Measures Lung Health With Just One Phone Call. Tech Times. Khmer Casino. May 6, 2016. http://www.techtimes.com/articles/156567/20160506/spirocall-system-measures-lung-health-one-phone-call.htm

[M.164] SpiroCall measures lung health over any phone — no app necessary. Tech Crunch. Kevin Coldewey. May 4, 2016. https://techcrunch.com/2016/05/04/spirocall-measures-lung-health-over-any-phone-no-app-necessary/

[M.163] Just breathe: Doctors using phones to detect lung disease. Komo News. Matt Malkovich. May 3, 2016. http://komonews.com/news/local/just-breathe-doctors-using-phones-to-detect-lung-disease

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