

# Wendi B. Heinzelman

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## RESEARCH INTERESTS

- Wireless Communication and Networking
- Mobile-Cloud Computing
- Multimedia Communication

## EDUCATION

- 2/97 – 6/00 **Ph.D., Electrical Engineering and Computer Science**  
Massachusetts Institute of Technology, Cambridge, MA  
Dissertation: “Application-Specific Protocol Architectures for Wireless Networks”  
Advisors: Professor Anantha Chandrakasan and Professor Hari Balakrishnan
- 9/95 – 2/97 **M.S., Electrical Engineering and Computer Science**  
Massachusetts Institute of Technology, Cambridge, MA  
Dissertation: “Network-Driven Motion Estimation for Wireless Video Terminals”  
Advisor: Professor Anantha Chandrakasan
- 9/91 – 5/95 **B.S., Electrical Engineering**  
Cornell University, Ithaca, NY

## PROFESSIONAL EXPERIENCE

- 7/08–Present **Dean of Graduate Studies for Arts, Sciences and Engineering**  
*University of Rochester, Rochester, NY*
- 4/12–Present **Professor of Electrical and Computer Engineering**  
**Professor of Computer Science**  
*University of Rochester, Rochester, NY*
- 5/06–4/12 **Associate Professor of Electrical and Computer Engineering**  
**Associate Professor of Computer Science**  
*University of Rochester, Rochester, NY*
- 2/08 – 5/08 **Visiting Erskine Fellow**  
**Department of Computer Science and Software Engineering**  
*University of Canterbury, Christchurch, New Zealand*
- 1/01 – 5/06 **Assistant Professor of Electrical and Computer Engineering**  
**Assistant Professor of Computer Science**  
*University of Rochester, Rochester, NY*
- 6/00 – 8/00 **Consultant, Eastman Kodak Company, Rochester, NY**  
Looked into new uses for image and video cameras in wireless sensor networks.

- 9/95 – 6/00 **Research and Teaching Assistant**, *EECS Department, MIT*, Cambridge, MA  
 Researched low power protocols for sensor and multimedia communication networks. Assisted in teaching Digital Signal Processing course.
- 6/98 – 8/98 **Research Intern**, *Media Tech. Laboratory, Texas Instruments Inc.*, Dallas, TX  
 Researched the use of unequal error protection for MPEG-4 compressed video sent over a GSM channel. Used rate-compatible punctured convolutional codes to achieve different error correction capabilities with minimal overhead complexity.
- 6/97 – 8/97 **Research Intern**, *Video Research Group, PictureTel Corporation*, Andover, MA  
 Developed low computation face-tracking algorithms to enhance LimeLight audio-tracking camera system for a video teleconferencing application.
- 6/95 – 8/95 **Research Intern**, *Signal Proc. Research Group, AT&T Bell Labs*, Murray Hill, NJ  
 Worked on motion-adaptive modeling of scene content for very low bit rate coding of video. Developed advanced algorithms for tracking faces/people in video sequences. These algorithms were used as a pre-processor for a model-assisted video coder.

#### **COURSES DEVELOPED**

- Wireless Communications, ECE 245/445, University of Rochester (senior/graduate) S06 (9 students), S07 (25 students), F11 (9 students), F12 (21 students), F13 (16 students), F14 (14 students), F15 (18 students)
- Wireless Sensor Networks, ECE 448 (was 492A), University of Rochester (graduate) F09 (16 students), F10 (4 students)
- Wireless Sensor Networks, University of Canterbury (graduate) S08 (4 students)
- Advanced Topics in Wireless Networking, ECE 595, University of Rochester (graduate) S05 (9 students)
- Digital Signal Processing, ECE 246/446, University of Rochester (senior/graduate) F01 (27 students), F02 (23 students), F03 (40 students), F04 (28 students), F06 (48 students), F07 (35 students)
- Wireless Communications, ECE 237/437, University of Rochester (senior/graduate) S01 (10 students), S02 (15 students), S03 (20 students), S04 (24 students)

#### **HONORS AND AWARDS**

- Elected to IEEE Fellow (2016)
- Best paper award, IEEE International Conference on Communications (2013)
- Named ACM Distinguished Scientist (2012)
- Outstanding contribution to the University of Rochester Center for Emerging and Innovative Sciences New York State Economic Impact for 2010-2011
- Elected to ACM Senior Member (2009)
- Visiting Erskine Fellowship, University of Canterbury, Christchurch, NZ (2008)
- Elected to IEEE Senior Member (2006)
- NSF CAREER award (2005)
- ONR Young Investigator award (2005)
- G. Graydon Curtis '58 and Jane W. Curtis Award for Excellence in Teaching for a Nontenured Member of the Faculty (2003)

- Best paper award, 6<sup>th</sup> ACM International Workshop on Modeling, Analysis and Simulation of Wireless and Mobile Systems (2003)
- Eastman Kodak Company Fellow (1998-2000)
- National Science Foundation Fellow (1995-1998)
- Sigma Xi Scientific Research Society (inducted in 1997)
- Merrill Presidential Scholar, Cornell University (1995)
- Tau Beta Pi Honor Society (inducted in 1994)
- Eta Kappa Nu Honor Society (inducted in 1994)
- John McMullen Dean's Scholar, Cornell University (1991)

## FUNDING HISTORY

- *Support for Distributed Computing and Network Management in Mobile Ad Hoc Networks*  
PI: Wendi Heinzelman (UR)  
Harris Corporation/NYSTAR, \$65,056, 7/1/14–6/30/16
- *The CIRTl Network: 25 Research Universities Preparing a National Faculty to Advance STEM Undergraduate Learning*  
PI: Robert Mathieu (U. Wisconsin)  
Subcontract to UR  
NSF, \$53,725, 08/15/13 – 07/31/16
- *The CIRTl Network Great Lakes*  
PI: Robert Mathieu (U. Wisconsin)  
Subcontract to UR  
Great Lakes Consortium Foundation, \$86,200, 09/01/14 – 08/31/16
- *CPS: Synergy: Self-Sustainable Data-Driven Systems In the Field*  
PI: Kai Shen (UR)  
Co-PIs: Wendi Heinzelman (UR), Gaurav Sharma (UR), Tolga Soyata (UR)  
NSF CCF, \$800,000, 9/1/12–8/31/16
- *GENIUS: Green sEnsor Networks for air qUality Support*  
PI: Kaushik Chowdry (Northeastern University)  
Co-PI: Wendi Heinzelman (UR), Stefano Basagni (Northeastern University)  
NSF CISE, \$299,995, 01/01/12 – 04/30/15  
NSF CISE, \$35,000 supplemental funding
  - REU Supplement, \$7,500, 6/1/13–8/31/13
  - REU Supplement, \$6,000, 6/1/14-8/31/14
- *Emotional Processes in Families: New Methods Capturing Multiple Levels of Analysis*  
PI: Melissa Sturge-Apple (UR), Mark Bocko (UR), Patrick Davies (UR), Wendi Heinzelman (UR), Zeljko Ignjatovic (UR), Spenser Rosario (UR Medical Center)  
NIH, \$2,476,879, 7/1/10 – 6/30/15
- *Distributed-Cloud Computing to Support Computationally Complex Bio-Applications and Application of Communication Theories in Protein Structure Prediction*  
PI: Wendi Heinzelman (UR)  
UCB Corporation, \$70,000, 7/1/13–6/30/15
- *Support for Distributed Computing and Network Management in Mobile Ad Hoc Networks using a Cloudlet Approach*  
PI: Wendi Heinzelman (UR)  
Harris Corporation/NYSTAR, \$65,241, 7/1/13–6/30/14

- *Application of Communication Theories in Protein Structure Prediction*  
PI: Wendi Heinzelman (UR)  
UCB Corporation/NYSTAR, \$187,604, 10/1/11–6/30/13
- *Distributed-Cloud Computing to Support Computationally Complex Bio-Applications*  
PI: Wendi Heinzelman (UR)  
UCB Corporation/NYSTAR, \$90,680, 7/1/12–6/30/13
- *Protocol Architectures for Multimedia Radios*  
PI: Wendi Heinzelman (UR)  
Harris Corporation/NYSTAR, \$601,253, 3/1/02–6/30/13
- *Dynamical Systems Tools: Modeling Multi-level Processes in Parent-child Relations*  
PI: Melissa Sturge-Apple (UR)  
Co-PIs: Wendi Heinzelman (UR), Zeljko Ignjatovic (UR), Fred Rogosch (UR)  
NIH Applications, \$1,190,373, 9/1/07–8/31/12
- *RFID Systems for Inventory Management*  
PI: Wendi Heinzelman (UR)  
Omni-ID Corporation/NYSTAR, \$94,611, 1/1/11–12/31/11
- *CAREER: Cross-layer Design for Sensor Management in Wireless Sensor Networks*  
PI: Wendi Heinzelman (UR)  
NSF CISE, \$401,486, 2/1/05–1/31/11
  - REU Supplement, \$12,000, 6/1/07–8/31/07
  - REU Supplement, \$6,000, 6/1/10–8/31/10
- *“Being There”: User-centric Wireless Image-based Sensor Networks*  
PI: Wendi Heinzelman (UR)  
Co-PIs: Mark Bocko (UR), Zeljko Ignjatovic (UR), Gaurav Sharma (UR)  
NSF ECCS SENSORS Program, \$1.2M, 9/1/04–8/31/10
  - REU Supplement, \$6000, 6/1/07–8/31/07
- *Balancing Resource Utilization in Wireless Sensor Networks*  
PI: Wendi Heinzelman (UR)  
ONR Young Investigator Program, \$308,088, 6/1/05-9/1/09
- *Smart Document Systems*  
PI: Wendi Heinzelman (UR)  
Xerox Corporation/NYSTAR, \$60,000, 7/1/04–6/30/06
- *Architecture for a Smart Medical Home Sensor / Actuator Network*  
PI: Wendi Heinzelman (UR)  
Co-PI: Amy Murphy (UR, currently at the Bruno Kessler Foundation, Trento, Italy)  
Center for Future Health, \$30,000, 3/15/02–9/30/03
- *Resource Sharing in a Mobile Ad-Hoc Network*  
PI: Wendi Heinzelman (UR)  
Xerox Corporation/NYSTAR, \$56,317, 7/1/02–6/30/03
- *Energy-Efficient Computation and Communication in Wireless Devices*  
PI: David Albonesi (UR, currently at Cornell)  
Co-PIs: Sandhya Dwarkadas (UR), Wendi Heinzelman (UR)  
DARPA, \$2,699,845, 3/1/02–12/31/02

- *Pictosophy: Research on Interconnected Sensors and Multimedia (PRISM)*  
PI: Wendi Heinzelman (UR)  
Eastman Kodak Company/NYSTAR, \$51,000, 6/1/01–5/31/02

## INVITED PRESENTATIONS

- “Reducing the Energy Footprint for Wireless and Mobile Communication Systems,” Department of Computer Science, University of Ghana, Accra, Ghana, March 2015.
- “Reducing the Energy Footprint for Wireless and Mobile Communication Systems,” University of Rochester Laboratory for Laser Energetics (LLE), September 2014.
- “Sleeping Techniques for Lifetime Extension in Wireless Sensor Networks,” Winter 2013 CIS-ECE Distinguished Lecture Series, University of Michigan-Dearborn, March 2013.
- “The Evolution of Clustering Protocols for Mobile Ad Hoc and Wireless Sensor Networks,” Universitat Politecnica de Catalunya, Barcelona, Spain, October 2012.
- “Realizing the Potential of Wireless Sensor Networks Through Improved Energy Management,” *RIT Dean’s Lecture Series*, Rochester Institute of Technology, October 2011.
- “Efficiency in Future Heterogeneous Wireless Networks,” US-Indo PC3 Workshop, New Delhi, India, March 2011.
- “Architectural and Protocol Design for Future Communication Networks,” Hofstra University, New York, NY, October 2010.
- “Adaptability in Wireless Sensor Networks,” University of Buffalo, Buffalo, NY, March 2010.
- “Recent Results and Current Challenges in Wireless Sensor Networks,” *University of Oulu Short Course*, University of Oulu, Oulu, Finland, February 2010.
- “Adaptability in Wireless Sensor Networks,” *Computer Science Colloquium*, ETH Zürich, Zürich, Switzerland, October 2009.
- “Supporting Proactive Application Event Notification to Improve Sensor Network Performance,” *AdHocNets 2009*, September 2009.
- “Wireless Sensor Networks: Connecting the Physical and Virtual Worlds,” *Phelps Colloquium Series*, University of Rochester, March 2009.
- “Wireless Sensor Networks: Past, Present and Future,” *RIT Distinguished Lecture Series*, Rochester Institute of Technology, December 2008.
- “Cross-layer Information Sharing Architectures to Support Adaptive Security,” *3<sup>rd</sup> Annual Women’s Institute in Summer Enrichment (WISE)*, Team for Ubiquitous Secure Technology (TRUST), Cornell University, June 2008.
- “Securing Sensor Networks,” *3<sup>rd</sup> Annual Women’s Institute in Summer Enrichment (WISE)*, Team for Ubiquitous Secure Technology (TRUST), Cornell University, June 2008.
- “Application and Network Aware Wireless Sensor Networks,” *Computer Science/Information Science Seminar*, University of Otago, Dunedin, New Zealand, May 2008.
- “Introduction to Wireless Sensor Networks,” *Wireless Networking Course*, University of Otago, Dunedin, New Zealand, May 2008.
- “Wireless Sensor Networks,” *Computer Science and Software Engineering Seminar Series*, University of Canterbury, Christchurch, New Zealand, May 2008.
- “Wireless Sensor Networks: Past, Present and Future,” *IEEE NZ Communications Society Chapter Sponsored Lecture*, Christchurch, New Zealand, April 2008.

- “Wireless Sensor Networks: Key Concepts and Innovations, Practical Implementation Issues,” *Electronics South and NZi3 Sensor Network Workshop*, Christchurch, New Zealand, April 2008.
- “Application- and Network-aware Architectures for Wireless Sensor Networks,” *Toronto Networking Seminar Series*, University of Toronto, March 2007.
- “Application- and Network-aware Architectures for Wireless Sensor Networks,” *ECE Colloquium*, Syracuse University, January 2007.
- “Wireless Sensor Networks: an Overview,” *MITACS Summer School in Wireless Sensor Networks, associated with the 5th International Conference on Ad-Hoc Networks and Wireless*, August 2006.
- “Managing Resource Utilization in Wireless Sensor Networks,” *IEEE Joint Chapters Meeting*, Communications and Aerospace Society, March 2006.
- “Cross-layer Techniques for Sensor Management in Wireless Sensor Networks,” *ECE Seminar*, Boston University, Nov. 2004.
- “Cross-layer Techniques for Sensor Management in Wireless Sensor Networks,” *ECE Seminar*, University of California, Davis, Oct. 2004.
- “Quality of Service for Ad Hoc and Sensor Networks,” *ASWN '04 Panel: Advances in Wireless Networks, Applications and Services: Current Status, Future Trends and Challenges*, Aug. 2004.
- “Providing Application QoS through Intelligent Network Management,” *ECE Seminar*, Carnegie-Mellon University, Jan. 2003.
- “Protocols for Local Data Delivery in Wireless Microsensor Networks,” *Midwest Symposium on Circuits and Systems (MWSCAS 2002)*, Tulsa, OK, Aug. 2002.
- “Protocol Architectures for Low Power Ad Hoc Sensor Networks,” *ECE Colloquium*, Syracuse University, April 2002.
- “Enabling Technologies for a Smart Medical Home,” *IEEE Joint Chapters Meeting*, Biomedical Engineering Society, April 2002
- “Protocol Architectures for Low Power Ad Hoc Sensor Networks,” *ECE Colloquium*, Notre Dame, Jan. 2002
- “Protocol Architectures for Low Power Ad Hoc Sensor Networks,” *RIT Colloquium*, Rochester Institute of Technology, Jan. 2002.

## PATENTS

- B. Tavli and W. Heinzelman, “TRACE: Time Reservations Using Adaptive Control for Energy Efficiency,” US Patent Number 7,764,706 B2, July 2010.
- B. Tavli and W. Heinzelman, “Multi-Hop Time Reservation Using Adaptive Control for Energy Efficiency,” US Patent Number 7,411,919 B2, August 2008.
- B. Tavli and W. Heinzelman, “Multi-Hop Time Reservation Using Adaptive Control for Energy Efficiency,” British Patent Number 2,416,096, October 2006.
- H. Balakrishnan, A. Chandrakasan and W. Heinzelman, “Method for Low-Energy Adaptive Clustering Hierarchy,” US Patent Number 7,035,240, April 2006.
- W. Heinzelman, R. Talluri and M. Budagavi, “Error Protection for Compressed Video,” US Patent Number 6,754,277, June 2004.
- S. Potts, H. Wang, W. Rabiner and P. Chu, “Locating an Audio Source,” US Patent Number 6,593,956, July 2003.
- A. Jacquin and W. Rabiner, “Motion-Adaptive Modeling of Scene Content for Very Low Bit Rate Model-Assisted Coding of Video Sequences,” US Patent Number 5,764,803, June 1998.

## BOOKS AND BOOK CHAPTERS

1. "Volunteer Computing on Mobile Devices: State of the Art and Future Research Directions," by C. Tapparello, C. Funai, S. Hijazi, A. Aquino, B. Karaoglu, H. Ba, W. Heinzelman and J. Shi. In *Enabling Real-Time Mobile Cloud Computing through Emerging Technologies*, IGI Global, 2015.
2. "Energy Efficient Real-time Distributed Communication Architectures for Military Tactical Communication Systems," by B. Karaoglu, T. Numanoglu, B. Tavli and W. Heinzelman. In *Enabling Real-Time Mobile Cloud Computing through Emerging Technologies*, IGI Global, 2015.
3. "Accelerating Mobile-Cloud Computing: A Survey," by T. Soyata, H. Ba, W. Heinzelman, M. Kwon, and Jiye Shi. In *Communication Infrastructures for Cloud Computing: Design and Applications*, IGI Global, 2013.
4. "Sleeping Techniques for Reducing Energy Dissipation," by R. Muraleedharan, H. Ba, S. Ray, O. Yang, I. Demirkol and W. Heinzelman. In *The Art of Wireless Sensor Networks*, Springer Publishers, 2013.
5. "Passive RFID-based Wake-up Radios for Wireless Sensor Networks," by H. Ba, J. Parvin, L. Soto, I. Demirkol, and W. Heinzelman. In *Wirelessly powered sensor networks and computational RFID*, Springer Publishers, 2013.
6. *Resource Management Policies for Wireless and Visual Sensor Networks*, S. Soro and W. Heinzelman, VDM Publishing House, 2008.
7. *Protocols for Supporting QoS in Mobile Ad Hoc Networks*, L. Chen and W. Heinzelman, VDM Publishing House, 2008.
8. *Mobile Ad Hoc Networks: Energy-Efficient Real-Time Data Communications*, B. Tavli and W. Heinzelman, Springer Publishers, 2006.
9. "Storage Management in Wireless Sensor Networks" by S. Tilak, N. Abu-Ghazaleh and W. Heinzelman. In *Mobile, Wireless and Sensor Networks: Technology, Applications, and Future Directions*, Wiley Publishers, 2006.
10. "Wireless Sensor Network Protocols" by M. Perillo and W. Heinzelman. In *Fundamental Algorithms and Protocols for Wireless and Mobile Networks*, CRC Hall, 2005.
11. "Data- and Event-Centric Communication" by W. Heinzelman, A. Murphy and M. Perillo. In *Wireless Sensor Networks: A Systems Perspective*, Artech House, 2005.
12. "Sensor Management" by M. Perillo and W. Heinzelman. In *Wireless Sensor Networks*, Kluwer Academic Publishers, 2004.
13. "Future Directions in Energy Efficient Computing" by A. Chandrakasan, R. Amirtharajah, A. Dancy, J. Goodman, W. Rabiner and T. Xanthopoulos. In *Low-Power, High-Speed ULSI Circuits and Technology*, Realize Inc., Japan, 1998.

## JOURNAL PUBLICATIONS

1. T. Soyata, L. Copeland and W. Heinzelman, "RF Energy Harvesting for Embedded Systems: A Survey of Tradeoffs and Methodology," accepted for publication in *IEEE Circuits and Systems Magazine*.
2. D. Mishra, S. De, S. Jana, S. Basagni, K. Chowdhury, and W. Heinzelman, "Smart RF Energy Harvesting Communications: Challenges and Opportunities," accepted for publication in *IEEE Communications Magazine*.
3. L. Chen, W. Heinzelman, J. Warner, P. L. Yung, D. Zhou, I. Demirkol, U. Muncuk, K. Chowdhury, and S. Basagni, "REACH2-Mote: A Range Extending Passive Wake-up Wireless Sensor Node," *ACM Transactions on Sensor Networks*, Vol. 11, Number 4, November 2015.
4. B. Karaoglu and W. Heinzelman, "Cooperative Load Balancing and Dynamic Channel Allocation for Cluster-based Mobile Ad Hoc Networks," *IEEE Transactions on Mobile Computing*, Volume 14, Issue 5, May 2015.
5. N. Yang, H. Ba, W. Cai, I. Demirkol and W. Heinzelman, "BaNa: A Noise Resilient Fundamental Frequency Detection Algorithm for Speech and Music," *IEEE Transactions on Audio, Speech and Language Processing*, Vol 22, Issue 12, Dec. 2014, pp. 1833 - 1848
6. L. Chen, I. Demirkol and W. Heinzelman, "Token-MAC: Supporting Fair Access in Passive RFID Systems," *IEEE Transactions on Mobile Computing*, Volume 13 Issue 6, June 2014.
7. H. Ba, I. Demirkol, and W. Heinzelman, "Passive Wake-up Radios: From Devices To Applications," *Elsevier Ad Hoc Networks*, Volume 11 Issue 8, November, 2013, pages 2605-2621.
8. O. Yang and W. Heinzelman, "An Adaptive Sensor Sleeping Solution Based on Sleeping Multipath Routing and Duty-cycled MAC Protocols," *ACM Transactions on Sensor Networks*, Volume 10 Issue 1, November 2013.
9. S. Ray, I. Demirkol and W. Heinzelman, "ATMA: MAC Protocol for Energy-efficient Support of Bursty Traffic," *Elsevier Ad Hoc Networks*, Volume 11 Issue 3, May, 2013, pp. 959-974.
10. T. Wang, A. Seyedi, A. Vosoughi and W. Heinzelman, "Optimal Rate Allocation for Distributed Source Coding over Gaussian Multiple Access Channels," *IEEE Transactions on Wireless Communication*, Vol. 12, No. 5, pp. 2002-2013, May 2013.
11. C.-H. Feng, I. Demirkol and W. Heinzelman, "UPS: Universal Protocol Stack for Emerging Wireless Networks," *Elsevier Ad Hoc Networks Special Issue on Cross-layer Design in Ad Hoc and Sensor Networks*, Vol. 11, 2013, pp. 687-700.  
<http://dx.doi.org/10.1016/j.adhoc.2011.07.013>
12. O. Yang and W. Heinzelman, "Modeling and Performance Analysis for Duty-cycled MAC Protocols in Wireless Sensor Networks," *IEEE Transactions on Mobile Computing*, Vol. 11, No. 6, June 2012.



13. T. Wang, W. Heinzelman and A. Seyedi, "Link Energy Minimization for Wireless Sensor Networks," *Elsevier Ad Hoc Networks*, Vol. 10, No. 3, pp. 569-585, May 2012.
14. R. Cheng, W. Heinzelman, M. Sturge-Apple, and Z. Ignjatovic, "A Motion-Tracking Ultrasonic Sensor Array for Behavioral Monitoring," *IEEE Sensors Journal*, vol. 12, No. 3, pp. 707-712, March 2012. [11<sup>th</sup> most downloaded paper for IEEE Sensors Journal, Sept. 2012]
15. T. Wang, W. Heinzelman, A. Seyedi and A. Vosoughi, "Maximizing Gathered Samples in Wireless Sensor Networks with Slepian-Wolf Coding," *IEEE Transactions on Wireless Communication*, Vol. 11, No. 2, pp. 751-761, Feb. 2012.
16. C.-H. Feng, Y. Zhang, I. Demirkol and W. Heinzelman, "Stateless Multicast Protocol for Ad Hoc Networks," *IEEE Transactions on Mobile Computing*, Vol. 11, No. 2, pp. 240-253, Feb. 2012.
17. M. Sturge-Apple, M. Skibo, F. Rogosch, Z. Ignjatovic, and W. Heinzelman, "The Impact of Allostatic Load on Maternal Sympathovagal Functioning in Stressful Child Contexts: Implications for Maladaptive Parenting," *Development and Psychopathology*, Vol. 23, No. 3, pp. 831-844, 2011.
18. M. Holland, T. Wang, B. Tavli, A. Seyedi and W. Heinzelman, "Optimizing Physical Layer Parameters for Wireless Sensor Networks," *ACM Transactions on Sensor Networks*, Vol. 7, No. 4, Nov. 2011.
19. S. Ray, I. Demirkol and W. Heinzelman, "ADV-MAC: Analysis and Optimization of Energy Efficiency through Advertisements for Wireless Sensor Networks," *Elsevier Ad Hoc Networks Journal*, Vol. 9, No. 5, July 2011, pp. 876-892.
20. B. Karaoglu, T. Numanoglu and W. Heinzelman, "Analytical Performance of Soft Clustering Protocols," *Elsevier Ad Hoc Networks Special Issue on Multimedia Ad Hoc and Sensor Networks*, Vol. 9, No. 4, June 2011, pp. 635-651.
21. B. Tavli and W. Heinzelman, "Energy-efficient Real-time Multicast Routing in Mobile Ad Hoc Networks," *IEEE Transactions on Computers*, Vol. 60, No. 5, pp. 707 – 722, May 2011.
22. C. Merlin and W. Heinzelman, "Duty Cycle Control for Low-Power-Listening MAC Protocols," *IEEE Transactions on Mobile Computing*, Vol. 9, No. 11, Nov. 2010, pp. 1508-1521.
23. T. Wang, W. Heinzelman and A. Seyedi, "Link Energy Minimization in IR-UWB based Wireless Sensor Networks," *IEEE Transactions on Wireless Communication*, Vol. 9, No. 9, Sept. 2010, pp. 2800-2811.
24. C. Merlin and W. Heinzelman, "Schedule Adaptation of Low-Power-Listening Protocols for Wireless Sensor Networks," *IEEE Transactions on Mobile Computing*, Vol. 9, No. 5, May 2010.
25. C. Merlin, C.-H. Feng and W. Heinzelman, "Information-sharing Architectures for Sensor Networks: the State of the Art," *ACM Mobile Computing and Communications Review (MC2R)*, Vol. 13, No. 4, Oct. 2009, pp. 26-38.

26. S. Soro and W. Heinzelman, "A Survey of Visual Sensor Networks," *Advances in Multimedia*, Vol. 2009, Article ID 640386, 2009.
27. S. Soro and W. Heinzelman, "Cluster Head Election Techniques for Coverage Preservation in Wireless Sensor Networks," *Elsevier Ad Hoc Networks Journal*, Vol. 7, No. 5, July, 2009, pp. 955-972.
28. M. Perillo and W. Heinzelman, "Closing the Gap in Sensor Network Lifetimes Through an Integrated Approach to Sensor Role Selection," *IEEE Transactions on Mobile Computing*, Vol. 8, No. 5, May, 2009, pp. 709-720.
29. Z. Cheng and W. Heinzelman, "Discovering Long Lifetime Routes in Mobile Ad Hoc Networks," *Elsevier Ad Hoc Networks Journal*, Vol. 6, No. 5, July, 2008, pp. 661-674.
30. Z. Cheng, M. Perillo and W. Heinzelman, "General Network Lifetime and Cost Models for Evaluating Sensor Network Deployment Strategies," *IEEE Transactions on Mobile Computing*, Vol. 7, No. 4, April 2008.
31. B. Tavli and W. Heinzelman, "QoS and Energy Efficiency in Network Wide Broadcasting: A MAC Layer Perspective," *Elsevier Computer Communications Journal*, Vol. 30, No. 18, December 2007.
32. L. Chen and W. Heinzelman, "A Survey of Routing Protocols that Support QoS in Mobile Ad Hoc Networks," *IEEE Network Magazine*, Vol. 21, No. 6, November 2007.
33. Z. Cheng and W. Heinzelman, "Searching Strategies for Target Discovery in Wireless Networks," *Elsevier Ad Hoc Networks Journal*, Vol. 5, No. 4, May 2007.
34. G. Caner, G. Sharma, M. Tekalp and W. Heinzelman, "Local Image Registration by Adaptive Filtering," *Transactions on Image Processing*, Vol. 15, No. 10, Oct. 2006.
35. T. Numanoglu, B. Tavli and W. Heinzelman, "Energy Efficiency and Error Resilience in Coordinated and Non-coordinated MAC Protocols," *Elsevier Computer Communications Journal Special Issue*, Vol. 29, No. 17, November 2006.
36. B. Tavli and W. Heinzelman, "Energy and Spatial Reuse Efficient Network Wide Real-Time Data Broadcasting in Mobile Ad Hoc Networks," *IEEE Transactions on Mobile Computing*, Vol. 5, No. 10, Oct. 2006.
37. Z. Cheng and W. Heinzelman, "Adaptive Local Searching and Caching Strategies for On-demand Routing Protocols in Ad Hoc Networks," *Mobile and Wireless Networking of International Journal of High Performance Computing and Networking (IJHPCN)*, Vol 4, No. 1/2, 2006.
38. S. Tilak, N. Abu-Ghazaleh and W. Heinzelman, "Collaborative Storage in Wireless Sensor Networks," *International Journal of Ad Hoc and Ubiquitous Computing*, Vol. 1, No. 1/2, 2005.
39. J. Deng, Y. Han, W. Heinzelman and P. Varshney, "Balanced-energy Sleep Scheduling in High Density Cluster-based Sensor Networks," *Elsevier's Computer Communications*, Vol. 28, 2005, pp. 1631-1642.
40. J. Deng, Y. Han, W. Heinzelman and P. Varshney, "Scheduling Sleeping Nodes in High Density Cluster-based Sensor Networks," *ACM/Kluwer MONET Special Issue on Energy*

*Constraints and Lifetime Performance in Wireless Sensor Networks*, Vol. 10, No. 6, pp. 825-35, Dec. 2005.

41. Z. Cheng and W. Heinzelman, "Flooding Strategy for Target Discovery in Wireless Networks," *ACM/Baltzer Wireless Networks*, Vol. 11, No. 5, Sept. 2005.
42. L. Chen and W. Heinzelman, "QoS-aware Routing Based on Bandwidth Estimation for Mobile Ad Hoc Networks," *IEEE Journal on Selected Areas of Communication, Special Issue on Wireless Ad Hoc Networks*, Vol. 23, No. 3, March 2005.
43. B. Tavli and W. Heinzelman, "MH-TRACE: Multi-Hop Time Reservation using Adaptive Control for Energy Efficiency," *IEEE Journal on Selected Areas of Communication*, Vol. 22, No. 5, 2004.
44. W. Heinzelman, A. Murphy, H. Carvalho and M. Perillo, "Middleware to Support Sensor Network Applications," *IEEE Network Magazine Special Issue*, Vol. 18, No. 1, pp. 6-14, Jan. 2004.
45. B. Tavli and W. Heinzelman, "TRACE: Time Reservation using Adaptive Control for Energy Efficiency," *IEEE Journal on Selected Areas of Communication*, Vol. 21, No. 10, 2003.
46. M. Perillo and W. Heinzelman, "Sensor Management Policies to Provide Application QoS," *Elsevier AdHoc Networks Journal*, Vol. 1, No. 2-3, 2003, pp. 235-246.
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- He Ba, Ph.D., University of Rochester, 2015  
Thesis: “Enabling Energy Efficient Sensing and Computing Systems”  
Current position: Software Engineer in Big Data, KPMG, New York, NY
- Bora Karaoglu, Ph.D., University of Rochester, 2014  
Thesis: “Efficient Use of Resources in Mobile Ad Hoc Networks”  
Current position: Wireless Networking Researcher, Samraksh Company, Leesburg, VA
- Surjya Ray, Ph.D., University of Rochester, 2013  
Thesis: “Advertisement-Based Energy Efficient Medium Access Protocols for Wireless Sensor Networks”  
Current position: Autonomous Driving and Tools Engineer, Ford Palo Alto Research and Innovation Center, Palo Alto, CA  
Past position: Chief Software Developer, Overlays, Buffalo, NY  
Past position: Post-doctoral Researcher, RIT, Rochester, NY
- Chen-Hsiang Feng, Ph.D., University of Rochester, 2013  
Thesis: “Stack Architectures and Protocols for Emerging Wireless Networks “  
Current position: Staff Engineer, MAC/Networking Design, Silicon Image, Sunnyvale, CA  
Past position: Research Scientist, Mimoso Networks, San Jose, CA  
Past position: Research Scientist, Intel Corporation, San Jose, CA
- Tianqi Wang, Ph.D., University of Rochester, 2012  
Thesis: “Cross-Layer Design and Optimization of Short Range Wireless Networks“  
Current position: Senior System Engineer, Qualcomm, Atheros Division, San Jose, CA
- Ou Yang, Ph.D., University of Rochester, 2011  
Thesis: “Sleeping Strategies for Wireless Sensor Networks”  
Current position: Staff Engineer, MAC/Networking Design, Silicon Image, Sunnyvale, CA  
Past position: Senior Systems Engineer, Assia, Inc, Redwood City, CA

- Tolga Numanoglu, Ph.D., University of Rochester, 2009  
Thesis: “Improving Reliability and Performance of Real-Time Communications in Mobile Ad Hoc Networks”  
Current position: Research Scientist, Aselsan, Ankara, Turkey
- Christophe Merlin, Ph.D., University of Rochester, 2009  
Thesis: “Adaptability in Wireless Sensor Networks Through Cross-Layer Protocols and Architectures”  
Current position: Research Scientist, BBN Corporation, Waltham, MA  
Past position: Research Scientist, Sentilla Corporation, Redwood City, CA
- Stanislava Soro, Ph.D., University of Rochester, 2008  
Thesis: “Application-aware Resource Management in Wireless and Visual Sensor Networks”  
Current position: Communications Researcher, GE Global Research Center, Niskayuna, NY  
Past position: Senior Engineer, Advis Corporation, Rochester, NY
- Mark Perillo, Ph.D., University of Rochester, 2008  
Thesis: “Role Assignment in Wireless Sensor Networks: Energy-Efficient Strategies and Algorithms”  
Current position: Technical Area Manager, Syracuse Research Corporation, Syracuse, NY  
Past positions: Research Engineer, Syracuse Research Corporation, Syracuse, NY and Adjunct Lecturer, University of Rochester, Rochester, NY
- Lei Chen, Ph.D., University of Rochester, 2007  
Thesis: “Protocols for Supporting Quality of Service in Mobile Ad Hoc Networks”  
Past position: Senior Software Engineer, Motorola, Schaumburg, IL
- Zhao Cheng, Ph.D., University of Rochester, 2006  
Thesis: “Efficient Information Discovery and Retrieval in Wireless Ad Hoc Networks”  
Current position: Chief Financial Officer and Chief Operating Officer, Fisonic Energy Corporation, New York, NY  
Past position: AVP, Barclays Capital, New York, NY
- Gulcin Caner, Ph.D., University of Rochester, 2006  
Thesis: “Multi-camera Image Processing for Video Surveillance”  
Current position: Research Scientist, Polar Rain, Inc., Sunnyvale, CA
- Sameer Tilak, Ph.D., Binghamton University, 2005  
Thesis: “Towards a Holistic Approach for Protocol Development in Sensor Networks”  
Current Position: Research Scientist, San Diego Supercomputer Center, UCSD
- Bulent Tavli, Ph.D., University of Rochester, 2005  
Thesis: “Protocol Architectures for Real-Time Data Communication in Mobile Ad Hoc Networks”  
Current position: Associate Professor, Computer Engineering Department, TOBB Economy and Technology University, Turkey  
Past position: Assistant Professor, Computer Engineering Department, TOBB Economy and Technology University, Turkey
- Hervaldo Carvalho, Ph.D., Federal University of Minas Gerais, 2005  
Thesis: “Data Fusion Implementation in Sensor Networks Applied to Health Monitoring”

Current position: Professor, Department of Cardiology and Department of Biomedical Information, University of Brasilia, Brazil

#### **PAST M.S. THESIS STUDENTS**

- Weiyang Cai, M.S., University of Rochester, 2013  
Thesis: "Analysis of Acoustic Feature Extraction Algorithms in Noisy Environments"
- Zuochao Duo, M.S., University of Rochester, 2013  
Thesis: "Benefits of Utilizing an Edge Server (Cloudlet) in the MOCHA Architecture"
- Yuqun Zhang, M.S., University of Rochester, 2010  
Thesis: "Receiver-based Protocol Enhancements for Wireless Ad-Hoc and Sensor Networks"
- Matthew Holland, M.S., University of Rochester, 2007  
Thesis: "Optimizing Physical Layer Parameters for Wireless Sensor Networks"
- Colin Goldsmith, M.S., University of Rochester, 2004  
Thesis: "Wireless Local Area Networking for Device Monitoring"
- Owen Zacharias, M.S., University of Rochester, 2004  
Thesis: "Wireless Wide Area Networking for Device Monitoring"
- Edward Woodrow, M.S., University of Rochester, 2002  
Thesis: "Data-centric Routing for Ad Hoc Networks"

#### **PAST B.S. AND M.S. RESEARCH STUDENTS**

- Megha Modak, M.S., University of Rochester, expected 2016
- Abdulwahab Alhaji, B.S., University of Rochester, expected 2017
- Jean Chakmakas, B.S. Data Science, University of Rochester, expected 2017
- Yizhe Cheng, B.S., University of Rochester, expected 2017
- Greg Hunkins, B.S., University of Rochester, expected 2017
- Carmen Cortez, M.S., University of Rochester, expected 2016
- Jon Aho, B.S., University of Rochester, expected 2017
- Shibi Liu, B.S. student, B.S., University of Rochester, expected 2017
- Nancy Vargas, B.S., University of Rochester, expected 2017
- Kenneth Imade, B.S., University of Rochester, expected 2016
- Abner Aquino, B.S., University of Rochester, expected 2016
- Shurouq Hijazi, B.S., University of Rochester, expected 2016
- Mohammed Ahmed, B.S., University of Rochester, 2015
- Lucian Copeland, B.S., University of Rochester, 2015
- Louise Yi Lu, B.S., CS University of Rochester, 2015
- Kate Zeng Zhiming, B.S., CS University of Rochester, 2015
- Chelsea Vargas, Xerox Fellow, Summer 2013 (B.S., U. of Rochester, expected 2016)
- Jeremy Warner, B.S., University of Rochester, 2015
- Da Wan, M.S., University of Rochester, 2015
- Fei Xu, M.S., University of Rochester, 2015
- Jingwei Guo, M.S., University of Rochester, 2014
- Binyu Hu, M.S., University of Rochester, 2014
- Wei Liu, M.S., University of Rochester, 2014
- Jianbo Yuan, M.S., University of Rochester, 2014

- Pak Lam (Jack) Yung, M.S., University of Rochester, 2014
- Dawei Zhou, M.S., University of Rochester, 2014
- Yun Zhou, M.S., University of Rochester, 2014
- Michael Nolan, M.S., University of Rochester, 2014
- Kavan Pandya, M.S., University of Rochester, 2014
- Vikram Raghu, M.S., University of Rochester, 2014
- Jeremy Warner, REU, Summer 2011 (B.S., University of Rochester, 2015)
- Thomas Horta, Visiting Undergraduate Student from Brazil
- Mathew Hershfield, B.S., University of Rochester, expected 2015
- Stephen Cool, B.S., University of Rochester, expected 2014
- Jinnan Hussain, B.S., University of Rochester, 2013
- JoHannah Kohl, B.S., University of Rochester, 2013
- Andrew Song, B.S., University of Rochester, 2013
- Sara Lickers, B.S., University of Rochester (CS), 2013
- Jeff Kabel, B.S., University of Rochester, 2012
- Colin Funai, Xerox Fellow, Summer 2011 (B.S., University of Rochester, 2012)
- Luis Soto, Xerox Fellow, Summer 2010 (B.S., University of Rochester, 2011)
- Jeff Pravin, REU, Summer 2010 (B.S., University of Pittsburgh, 2011)
- Paul Molta, M.S., University of Rochester, 2010
- Naoum Katsianis, M.S., University of Rochester, 2008
- Sarah Rosenstein, REU, Summer 2007 (B.S., University of Rochester, 2009)
- Jian (Johnny) Chen, Summer 2007 (B.S., University of Rochester, 2008)
- Kyle Aures, REU, Summer 2007, Spring 2009 (B.S./M.S., University of Rochester, 2008/2009)
- Steven Wik, REU, Summer 2007, Spring 2009 (B.S./M.S., University of Rochester, 2008/2009)
- Ryan Aures, M.S., University of Rochester, 2007
- Matjaz Kranz, M.S., University of Rochester, 2006
- Michael Borden, M.S., University of Rochester, 2006

#### **INTERNATIONAL THESIS REVIEWS**

- David Benedetti, Ph.D., Department of Computer Science, University of Rome "La Sapienza," 2015  
Thesis: "RFID Tag Identification in Harsh Environments"
- Dora Spenza, Ph.D., Department of Computer Science, University of Rome "La Sapienza," 2013  
Thesis: "Towards Self-Powered Wireless Sensor Networks"
- Ugo Colesanti, Ph.D., Dipartimento di Informatica e Sistemistica of the University of Rome "La Sapienza," 2011  
Thesis: "Information Gathering in Resource Constrained Wireless Networks"
- Jussi-Pekka Haapola, Ph.D., University of Oulu, Oulu, Finland, 2010  
Thesis: "Evaluating Medium Access Control Protocols for Wireless Sensor Networks"
- Anuradha Vaidyanathan, Ph.D., U. of Canterbury, Christchurch, New Zealand, 2010  
Thesis: "Manikarnika, A framework for Emergency Management"
- Silvia Santini, Ph.D., ETH Zurich, Zurich, Switzerland, 2009  
Thesis: "Adaptive Sensor Selection Algorithms for Wireless Sensor Networks"



- Michele Mastrogiovanni, Ph.D., Rome University, La Sapienza, Italy, 2008  
Thesis: “Toward Complete Solutions for Terrestrial and Underwater Wireless Sensor Networks”
- Weibo Li, M.S., University of Canterbury, Christchurch, NZ, 2008  
Thesis: “An Address-Based Routing Scheme for Static Applications of Wireless Sensor Networks”

## PROFESSIONAL ACTIVITIES

- Fellow, IEEE, IEEE Signal Processing Society, IEEE Communications Society
- Distinguished Scientist, ACM, ACM Sigmobile
- Member, Society of Women Engineers (SWE)
- Co-founder and current co-leader, N<sup>2</sup> Women (Networking Networking Women), a discipline-specific community supported by ACM, IEEE, Microsoft Research and HP Labs, 2006 – Present
- Steering Committee, IEEE Transactions on Mobile Computing, IEEE Communications Society Representative, 2013 – Present
- Information Director, *ACM Transactions on Sensor Networks*, 2012 – Present
- Steering Committee, IEEE Transactions on Mobile Computing, IEEE Signal Processing Society Representative, 2010 – 2012
- Editorships
  - Associate Editor, *Elsevier Ad Hoc Networks Journal*, 2010 – Present
  - Associate Editor, *IEEE Transactions on Mobile Computing*, 2008 – 2013
  - Associate Editor, *ACM Transactions on Sensor Networks*, 2009 – 2012
  - Area Editor, *Mobile Computing and Communications Review (MC2R)*, 2005 – 2010
  - Guest editor, *Elsevier Ad Hoc Networks Journal Special Issue on Wireless Communication and Networking in Challenged Environments*, 2011.
  - Guest editor, *IEEE Transactions on Image Processing (TIP) Special Issue on Distributed Camera Networks: Sensing, Processing, Communication and Computing*, 2010
  - Guest editor, *IEEE Journal on Selected Areas of Communication (JSAC) Special Issue on Simple Wireless Sensor Networking Solutions*, 2010
  - Guest editor, *EURASIP Journal of Wireless Communications and Networking Special Issue on Wireless Sensor Networks*, 2005
- IEEE Committees
  - Key Member, Interest Group on Distributed and Sensor Networks for Mobile Media Computing and Applications of the IEEE Multimedia Communication Technical Committee, 2010-2012
  - Elected member, Design and Implementation of Signal Processing Systems (DISPS) subcommittee of the IEEE Signal Processing Technical Committee, 2001–2004
  - IEEE Signal Processing Society Rochester Chapter (Chair, 2004, Steering Committee, 2002 – 2004)
  - IEEE Communications Society Rochester Chapter (Co-chair, 2004)

- IEEE Rochester Section Nominating Committee (2014)
- Advisory Committees
  - University of Rochester David T. Kearns Center for Leadership and Diversity in Arts, Sciences and Engineering, 2009 - Present
  - International Conference on Advances and Emerging Trends in Computing Technologies, SRM University, Chennai, India, 2010
- Invited Workshops
  - NSF Broader Impacts for Research and Discovery Summit, June 2010
  - NSF Workshop on Future Directions in Networked Sensing, Nov. 2009
- Conference Organizing Committees
  - First international summer school of Green Communications and Networking (GreenComNet), Co-organizer, Summer 2013
  - SuMo-CPS (International Workshop on Sustainable Monitoring through Cyber-Physical Systems)
    - Co-Chair, 2013
  - EWSN (European Conference on Wireless Sensor Networks)
    - Publicity Co-chair, 2014
    - Technical Program Committee Co-chair, 2012
  - IEEE INFOCOM (International Conference on Computer Communications)
    - Publicity Chair, 2010
  - IEEE DCOSS (Intl. Conference on Distributed Computing in Sensor Systems)
    - Vice TPC Chair for Systems and Applications Track, 2009
    - Poster Session Co-chair, 2007
    - Publicity Chair, 2006
    - Publicity Chair, 2005
  - IEEE SECON
    - General Vice Chair, 2007
    - Publicity Chair, 2006
  - IEEE ICIP (International Conference on Image Processing)
    - Exhibits Chair, 2002
  - ACM MobiCom (Intl. Conference on Mobile Computing and Networking)
    - Publicity Co-chair, 2005
  - ACM SenSys (Intl. Conference on Embedded Networked Sensor Systems)
    - Publications Chair, 2013
    - Publicity Co-chair, 2005
    - Poster session co-chair, 2004
  - ACM MobiHoc (Intl. Symposium on Mobile Ad Hoc Networking and Computing)
    - Poster Session Co-chair, 2006
  - ACM EmNetS (Workshop on Embedded Networked Sensors)
    - Publicity Advisor, 2005
  - IEEE/CreateNet BaseNets (Intl. Work on Broadband Advanced Sensor Networks)
    - Steering Committee, 2006
    - Steering Committee, 2005
    - Co-chair, 2004
  - IEEE/CreateNet BroadNets (Intl. Conference on Broadband Communications, Networks and Systems)
    - Workshop Co-chair, 2005

- HealthNet (Intl. Workshop on Systems and Networking Support for Healthcare and Assisted Living Environments)
  - Demo Session Co-Chair, 2008
- Upstate NY Workshop on Communications, Sensors and Networking
  - TPC Co-chair, 2006
  - TPC co-chair, 2003
  - Co-chair, 2002
- Technical Program Committees
  - IEEE INFOCOM (Conference on Computer Communications)
  - IEEE SECON (International Conference on Sensors and Ad Hoc Communications and Networks)
  - IEEE MASS (Intl. Conference on Mobile Ad-Hoc and Sensor Systems)
  - IEEE DCOSS (International Conference on Distributed Computing in Sensor Systems)
  - IEEE ICDCS (International Conference on Distributed Computing Systems)
  - IEEE/ACM MSWiM (Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems)
  - IEEE ICC (International Conference on Communications)
  - IEEE Globecom
  - IEEE SenseApp (International Workshop on Practical Issues in Building Sensor Network Applications)
  - IEEE PerSeNS (International Workshop on Sensor Networks and Systems for Pervasive Computing)
  - IEEE ICIP (International Conference on Image Processing)
  - IEEE WMAN (International Workshop on Algorithms for Wireless, Mobile, Ad Hoc and Sensor Networks)
  - IEEE SiPS (Workshop on Signal Processing Systems)
  - IEEE ISSNIP (The Fifth International IEEE Conference on Intelligent Sensors, Sensor Networks and Information Processing)
  - ACM/IEEE IPSN (Intl. Conference on Info. Processing in Sensor Networks)
  - ACM MobiHoc (Intl. Symp. on Mobile Ad Hoc Networking and Computing)
  - ACM EmNets (International Workshop on Embedded Networked Sensors)
  - ACM MobiCom Student Poster Research Competition
  - ACM MobiWac (Intl. Workshop on Mobility Management and Wireless Access Protocols)
  - ACM SenSys Workshop BuildSys
  - EWSN (European Work. on Wireless Sensor Networks)
  - ICST AdHocNets (First International Conference on Ad Hoc Networks)
  - AlogSensors (Work. on Algorithmic Aspects of Wireless Sensor Networks)
  - MidSense (Middleware for Sensor Networks)
  - IWIoT (International Workshop on the Internet of Things, in conjunction with ChinaCom)
  - HealthNet (International Workshop on System and Networking Support for Healthcare and Assisted Living Environments)
  - SANPA (Intl. Work. on Sensor and Actuator Network Protocols and Apps.)
  - ISCN (International Symposium on Computer Networks)
  - IFIP MedHocNet (Annual Mediterranean Ad Hoc Networking Workshop)
  - Grace Hopper Celebration of Women in Computing Scholarship Reviewer
  - ATNAC (Australasian Telecom. Networks and Applications Conf.)

- NetCri (International Workshop on Next Generation Networks for First Responders and Critical Infrastructures)
- DSS (International Workshop on Distributed Sensor Systems)
- ASWN (Work. on Apps. and Services in Wireless Nets.)
- Work. on Next Generation Wireless Networks, co-located with IEEE HiPC
- ITCC Wireless Ad-Hoc/Sensor Networks and Network Security Track
- BroadWISE (Broadband Wireless Services and Applications Workshop)
- MWN (ICPP Workshop on Mobile and Wireless Networking)
- MCM (ICDCS Workshop on Mobile Computing Middleware)
- Funding reviews
  - NSF proposal reviewer/panel member, Dec. 2001, June 2002, May 2004, June 2004, Nov. 2005, Feb. 2006, April 2006, May 2008 (CISE/NeTS), July 2008 (CISE/CSR), March 2009 (CISE/NetSE), Jan. 2010 (EFRI-SEED), Oct. 2010 (CISE/NeTS/CAREER), April 2014 (CIF)
  - AFRL proposal reviewer (June 2008)
  - ARO proposal reviewer (Dec. 2004)
- Journal reviews
  - IEEE Transactions on Mobile Computing
  - IEEE Transactions on Wireless Communication
  - IEEE Transactions on Parallel and Distributed Systems
  - IEEE Journal on Selected Areas of Communication
  - IEEE Transactions on Networking
  - IEEE Transactions on VLSI
  - IEEE Transactions on Image Processing
  - IEEE Transactions on Circuits and Systems
  - IEEE Transactions on Circuits and Systems for Video Technology
  - IEEE Transactions on Signal Processing
  - IEEE Network Magazine
  - IEEE Communications Magazine
  - Proceedings of the IEEE
  - ACM Transactions on Sensor Networks
  - ACM Mobile Computing and Communications Review (MC2R)
  - ACM/Kluwer MONET
  - Elsevier Ad Hoc Networks Journal
  - Computer Networks Journal
  - EURASIP Journal on Wireless Communications and Networking
  - Image Communication Journal
  - SPS Letters

#### **PROFESSIONAL TRAINING**

- CRA-W Advanced Career Mentoring Workshop (CAPP), November 15-15, 2008
- MIT Professional Institute Leadership Workshop for Engineering and Science Faculty, July 16-17, 2007
- CRA Academic Careers and Effective Teaching Workshop, February 4-6, 2001

#### **UNIVERSITY OF ROCHESTER SERVICE**

- School of Arts & Sciences Dean search committee (2014-2015)
- Steering Committee Member, Institute for Data Science (2014 – Present)
- ECE BS student advisor (class of 2010, 2006 – 2010)
- ECE BS student advisor (class of 2005, 2001 – 2005)
- ECE MS student advisor (2012, 2013, 2014)
- ECE faculty recruiting committee (2001 – 2002, 2002 – 2003, 2003 – 2004, 2005 – 2006, 2013, 2014 (chair))
- Tau Beta Pi (TBP) faculty advisor (2015 – present)
- IEEE faculty advisor (2013 – present)
- SWE faculty advisor (2005 – present)
- Guest lecturer in CSC 200/200H Undergraduate Problem Seminar (February 2015)
- Guest lecturer in ECE 477 Computer Audition (October 2014)
- Guest lecturer in CSC Networking course (March 2013, December 2013, October 2014)
- Guest lecturer in Women’s Studies 100, “One Eye Open”: Feminism, Women, and Scientific Knowing (February 2013)
- ECE Undergraduate committee (2004 – 2011)
- Faculty Senate (2006 – 2008)
- College Educational Policy (2006 – 2008)
- SEAS Dean search committee (2007)
- Faculty working group, undergraduate business degree exploration (2007)
- Take 5 selection committee (2006)
- Vice Provost and Dean of the Faculty of Arts, Sciences and Engineering search committee (2005)
- College faculty council (2003 – 2005)
- ECE graduate admissions committee (2002 – 2003)

#### **OTHER SERVICE**

- Rochester Engineering Society Scholarship Selection Committee, 2015
- IEEE Rochester Section ExCom Nomination Committee, 2014