

Thomas L. Martin

<http://www.faculty.ece.vt.edu/tlmartin/>

Education:

- 8/1992-8/1999 **Carnegie Mellon University** **GPA: 4.0/4.0**
Carnegie Institute of Technology, Pittsburgh, Pennsylvania
M.S. in Electrical and Computer Engineering, December 1994.
Ph.D. in Electrical and Computer Engineering, August 1999.
Advisor: Dr. Daniel P. Siewiorek
Ph.D. dissertation title: *Balancing Batteries, Performance, and Power: System Issues in CPU Speed-Setting for Mobile Computing*
- 9/1987-6/1992 **University of Cincinnati** **GPA: 3.9/4.0**
College of Engineering, Cincinnati, Ohio
B. S. in Electrical Engineering, with optional minor in VLSI Systems Engineering, June 1992.

Employment:

- 2015-present Associate Director, Virginia Tech Institute for Creativity, Arts, and Technology
2013-present Professor, Department of Electrical and Computer Engineering, Virginia Tech.
2013-2015 Senior Fellow, Virginia Tech Institute for Creativity, Arts, and Technology
2013-present Courtesy faculty appointment, Department of Computer Science, Virginia Tech
2012-present Courtesy faculty appointment, School of Architecture + Design, Virginia Tech.
2006-2013 Associate Professor, Department of Electrical and Computer Engineering, Virginia Tech.
2001-2006 Assistant Professor, Department of Electrical and Computer Engineering, Virginia Tech.
1999-2001 Assistant Professor, Department of Electrical and Computer Engineering, The University of Alabama in Huntsville.

Honors/Awards:

Virginia Tech:

- Virginia Tech Alumni Teaching Award, 2017.
- Virginia Tech College of Engineering Pete White Award for Innovation in Engineering Education, 2014.
- Virginia Tech XCaliber Award (team), 2014. This university award is for using technology in education; Professor Paola Zellner-Bassett and I were selected for collaborating in her Textile Space course.
- Best Paper Award for 2012, IEEE Transactions on Automation Science and Engineering, August 2013.
- First place (tie), Charles W. Steger Design Competition, May 2012, for an interactive architectural textile concept developed with Professor Paola Zellner-Bassett from the VT architecture program.
- Virginia Tech XCaliber Award (team), 2012. This university award is for using technology in education; the award was given to the faculty team from the interdisciplinary design course.
- Virginia Tech Diggs Teaching Scholar, February 2011. This award is a university teaching award for my work on an undergraduate interdisciplinary design course; I was one of two faculty selected in 2011.
- Selected for the National Academy of Engineering Frontiers of Engineering Education symposium to present our findings from the interdisciplinary design course, November 2011.
- A student team from my interdisciplinary product design course won the medical category of the Virginia Tech Entrepreneur Club's VT \$5K executive summary competition, December 2010.
- National Science Foundation Presidential Early Career Award for Scientists and Engineers (PECASE), 2006.
- College of Engineering Dean's Award for Excellence in Teaching Innovation, April 2004.
- College of Engineering Certificate of Teaching Excellence, April 2004.

Carnegie Mellon University:

- National Science Foundation Graduate Research Fellowship, 1993-1996.
- National Science Foundation Engineering Education Scholar, 1995.

External Sponsored Research

1. T. Martin (PI) and M. Jones, "SCH: INT: Collaborative Research: Smart Wearable Systems to Support and Measure Movement in Children With and Without Mobility Impairments," National Science Foundation. Award date: 10/1/2017. Duration: 4 years. Amount: \$395,356. (Collaborative grant with Lucy Dunne at U. of Minnesota and Michele Lobo at U. of Delaware. Total amount: \$1.5M.)
2. T. Martin (PI) and M. Jones, "STTR Phase II: Integrated Sensors for the Evaluation of Structural Integrity of Inflatable Habitats," subcontract to NanoSonic, Inc. for NASA STTR Topic T12.03, Award Date: 9/25/2017: Duration: 2 years. Amount: \$180K.
3. T. Martin (PI), Ideation Session with Steelcase, Award date: 5/2017. Duration: 1 month. Amount: \$16,965,
4. T. Martin (PI), Ideation Session with Cambrian Design and Development for DuPont. Award date: 10/17/2017. Duration: 1 month. Amount: \$4,568.
5. C. Williams (PI) and T. Martin (co-PI), Ideation Session with Anonymous Corp., Award date: 2/1/2017. Duration: 6 months. Amount: \$11,715.
6. L. Lester (PI), B. Knapp, L. McNair, T. Martin, and M. Wisnioski, "IUSE/PFE: RED: Radically Expanding Pathways in the Professional Formation of Engineers," National Science Foundation. Award Date: 7/15/2016. Duration: 5 years. Amount: \$2M.
7. T. Martin (PI) and M. Jones, "STTR Phase I: Integrated Sensors for the Evaluation of Structural Integrity of Inflatable Habitats," subcontract to NanoSonic, Inc. for NASA STTR Topic T12.03, Award Date: 6/9/2016: Duration: 1 year. Amount: \$35K.
8. J. Provo (PI), B. Knapp, D. Maggard, T. Martin, and E. Tranter, "CatalyzeVT," U.S. Economic Development Administration. Award Date: 2/1/2016. Duration: 3 years. Amount: \$500K.
9. T. Martin, "I-Corps Storycoding Team," National Science Foundation. Award Date: 4/1/2015. Duration: 15 months. Amount: \$50K.
10. T. Martin (PI), L. McNair, M. Paretti, "A Longitudinal Study of the Dimensions of Disciplinary Culture to Enhance Innovation and Retention among Engineering Students," National Science Foundation. Award date: 9/1/2013. Duration: 4 years. Amount: \$436K.
11. Darrell Bowman (PI), T. Martin, "An Innovative "Intelligent" Awareness System for Work Zone Workers Using Dedicated Short-Range Communications," Connected Vehicle/Infrastructure University Transportation Center. Award date: 9/3/2012. Duration: 2 years. Amount: \$150K.
12. T. Martin (PI), M. Jones, L. Dunne (U. of Minnesota), "SHB: Small: Collaborative: Electronic Textiles for Ambulatory Health Monitoring," National Science Foundation. Award date: 9/15/2011. Duration: 4 years. Amount: \$498K (VT portion: \$306K).
13. F. Quek (PI), T. Martin, C. North, T. Smith-Jackson, D. Bowman, D. Gracanin, and M. Evans, "II-EN: Device and Display Ecologies," National Science Foundation. Award date: 2/1/2011. Duration: 3 years. Amount: \$600K.
14. L. McNair (PI), E. Coupey, E. Dorsa, R. Kemnitzer, T. Martin, M. Paretti, D. Young-Corbett. "Building New Engineering Education Theory and Practice for Interdisciplinary Pervasive Computing Design," National Science Foundation. Award date: 9/1/2009. Duration: 4 years. Amount: \$396K.
15. M. Jones (PI) and T. Martin, "RECE", DARPA (subcontract from BBN). Awarded: 5/2009. Duration: 6 months. Amount: \$30K.
16. M. Jones (PI) and T. Martin, "Investigating a Novel Embedded Processor Architecture for Electronic Textiles in Wearable and Pervasive Computing," National Science Foundation. Award date: 9/1/2008. Duration: 3 years. Amount: \$220K.
 - a. A Research Experience for Undergraduates supplement of \$16K was awarded to this project in 6/2009.
 - b. A Research Experience for Undergraduates supplement of \$16K was awarded to this project in 6/2010.
17. T. Martin, P. Athanas, and M. Jones, "SBIR Phase I: Wearable Computer for Enhanced Situational Awareness," subcontract from Luna Innovations. Sponsor: U.S. Air Force. Award date: 6/15/2006. Duration: 7 months. Amount: \$30K.
18. T. Martin (PI) and M. Jones, "CRI: Electronic Textiles for Wearable and Pervasive Computing," National Science Foundation Computing Research Infrastructure program, grant number CNS-0454195. Award date: 7/15/2005. Duration: 2 years. Amount: \$85K. (*Acceptance rate: 12-15%*)
19. T. Martin, "CAREER: E-Textile-based Wearable Computing for Sensing User Motions," National Science Foundation, grant number CNS-0447741. Award date: 6/1/2005. Duration: 5 years. Amount: \$400K. (This project was selected for the Presidential Early Career Award for Scientists and Engineers.)
 - a. A Research Experience for Undergraduates supplement of \$12K was awarded to this project in 6/2006.

- b. A Research Experience for Undergraduates supplement of \$12K was awarded to this project in 5/2007.
- c. A Research Experience for Undergraduates supplement of \$16K was awarded to this project in 6/2009.
- 20. T. Lockhart (PI), T. Martin, and M. Jones, "SBIR Phase I: An Electronic Textile System for Gait Analysis," subcontract from Virginia Electronic Textile Systems, LLC. Sponsor: National Science Foundation. Award date: 1/1/2005. Duration: 6 months. Amount: \$33K.
- 21. T. Martin (PI) and M. Jones, "ITR: Tailor-Made: Design of e-Textile Architectures for Wearable Computing," National Science Foundation Information Technology Research program, grant number CCR-0219809. Award date: 9/1/2002. Duration: 3 years. Amount: \$399K. (*Acceptance rate: 15%*)
 - a. A Research Experience for Undergraduates supplement of \$10K was awarded to this project in 7/2003.
 - b. A Research Experience for Undergraduates supplement of \$6K was awarded to this project in 5/2004.
 - c. A Research Experience for Undergraduates supplement of \$12K was awarded to this project in 5/2005.
- 22. T. Martin (PI), D. Ha, and M. Hsiao, "ITR: Architecture for Surviving Denial-of-Service Attacks on Battery-Powered Mobile Computers," National Science Foundation Information Technology Research program, grant number ANI-0219801. Award date: 9/15/2002. Duration: 3 years. Amount: \$412K. (*Acceptance rate: 15%*)
 - a. A Research Experience for Undergraduates supplement of \$32K was awarded to this project in 6/2003.

Exhibitions:

1. Three pieces (e-textile jumpsuit, boot controller for space jetpack, and flexible space suit cuff checklist) were selected for the "Sense and Sensuality" exhibition on wearable technology at the Arts, Design, and Media (ADM) Gallery at Nanyang Technological University, Singapore, October 24-November 8, 2014.

Publications:

Books:

1. M. Morris Mano, Charles R. Kime, and Tom Martin, *Logic and Computer Design Fundamentals, Fifth Edition*, Pearson/Prentice Hall, Upper Saddle River, New Jersey, March 2015.

Book Chapters:

1. R. Younes, K. Hines, J. Forsyth, J. Dennis, T. Martin, and M. Jones, "The design of smart garments for motion capture and activity classification," Chapter 27 in *Smart Textiles and Their Applications*, V. Koncar (editor), Woodhead Publishing, Duxford, UK, 2016, pp. 627-655.
2. T. Smith-Jackson, W. Winchester, Al Lisle, W. Holbach, H. Brackett, and T. Martin, "Accessible Emergency Management: A Human Factors Engineering Approach," in *Handbook of Emergency Response: A Human Factors and Systems Engineering Approach*, A. Badiru, L. Racz (editors), CRC Press, Boca Raton, FL, 2013, pp. 251-273.
3. C. Bowen, I. Burbey, and T. Martin, "Protecting Privacy in Location-Based Applications," Chapter 9 in *Location Based Services Handbook: Applications, Technologies, and Security*, S. Ahson and M. Ilyas, eds., CRC Press, Boca Raton, FL, 2010, pp. 207-232.
4. M.T. Jones and T.L. Martin, "Hardware and Software Architectures for Electronic Textiles," Chapter 6 in *Smart Clothing: Technology and Applications*, G. Cho, ed., CRC Press, Boca Raton, FL, 2010, pp. 135-151.
5. T. Martin, D. Siewiorek, A. Smailagic, and J. Warren, "Power Management for Mobile Computers," Chapter 30, *Mobile Computing Handbook*, I. Mahgoub and M. Ilyas, eds., CRC Press, Boca Raton, FL, 2005, pp. 709-730.

Journal Publications:

1. R. Younes, M. Jones, T. Martin, "Classifier for Activities with Variations," *Sensors*, vol. 18, no. 10, 19 pages, <https://doi.org/10.3390/s18103529>, October 2018.
2. M. Blake, R. Younes, J. Dennis, T. Martin, M. Jones, "A User-independent and Sensor Tolerant Wearable Activity Classifier," *IEEE Computer*, vol. 48, no. 10, pp. 64-71, October 2015.
3. J. Forsyth, T. Martin, D. Young-Corbett, E. Dorsa, "Feasibility of Intelligent Monitoring of Construction Workers for Carbon Monoxide Poisoning," *IEEE Transactions on Automation Science and Engineering*, vol. 9, no. 3, pp. 505-515, July 2012. (Received the Best Paper Award for 2012)
4. T. Martin, K. Kim, J. Forsyth, L. McNair, E. Coupey, and E. Dorsa, "Discipline-based Instruction to Promote Interdisciplinary Design of Wearable and Pervasive Computing Products," *Personal and Ubiquitous*

- Computing*, <http://dx.doi.org/10.1007/s00779-011-0492-z>, December 2011. Print version: Volume 17, Issue 3, pp. 465-478, 2013.
5. Z. Nakad, M. Jones, T. Martin, and W. Fawaz, "Networking in E-textiles," *Computer Communications*, vol. 33, issue 6, pp. 655-666, April 2010.
 6. J. Liu, T. Lockhart, M. Jones, T. Martin, and C. Einsmann, "Local Dynamic Stability Assessment of Motion Impaired Elderly using Electronic Textile Pants," *IEEE Transactions on Automation Science and Engineering*, vol. 5, no. 4, pp. 696-702, October 2008.
 7. Z. Nakad, M. Jones, T. Martin and R. Shenoy, "Using Electronic Textiles to Implement an Acoustic Beamforming Array: A Case Study," *Pervasive and Mobile Computing*, vol. 3, issue 5, pp. 581-606, October 2007.
 8. M. Chandra, M. Jones, and T. Martin, "E-Textiles for Autonomous Location Awareness," *IEEE Transactions on Mobile Computing*, vol. 6, issue 4, pp. 367-380, April 2007.
 9. D. Raskovic, T. Martin, and E. Jovanov, "Medical Monitoring Applications for Wearable Computing," *Computer Journal*, vol. 47, issue 4, pp. 495-504, July 2004.
 10. D. Marculescu, R. Marculescu, N. Zamora, P. Stanley-Marbell, P. K. Khosla, S. Park, S. Jayaraman, S. Jung, C. Lauterbach, W. Weber, T. Kirstein, D. Cottet, J. Grzyb, G. Tröster, M. Jones, T. Martin, Z. Nakad, "Electronic Textiles: A Platform for Pervasive Computing," *Proceedings of the IEEE*, volume 91, number 12, pp. 1995-2018, December 2003.
 11. T. Martin, D. Siewiorek, A. Smailagic, M. Bosworth, M. Ettus, and J. Warren, "A Case Study of a System Level Approach to Power-Aware Computing," *ACM Transactions on Embedded Computing Systems*, volume 2, issue 3, pp. 255-276, August 2003.
 12. T. Martin and D. Siewiorek, "Non-ideal Battery Behavior and Its Impact on Software Design for Wearable Computers," *IEEE Transactions on Computers*, pp. 979-984, August 2003.
 13. T. Martin and D. Siewiorek, "Non-ideal Battery and Main Memory Effects on CPU Speed-Setting for Low Power," *IEEE Transactions on Very Large Scale Integrated Systems*, vol. 9, no. 1, pp. 29-34, February 2001.

Refereed Conference/Workshop Publications:

1. S. Lord, W. Newstetter, J. Sweeney, N. Salzman, T. Martin, J. London, B. Sukumaran, T. Maciejewski, J. LeDoux, "WIP: Progress of the NSF RED Revolution", In Proceedings of the American Society for Engineering Education Annual Conference, Salt Lake City, Utah, June 2018.
2. A. Agrawal, C. Groen, A. Nave, L. McNair, M. Paretto, and T. Martin, "Overriding Tradition: Exploring the Intersection of Institutional and Disciplinary Cultures on Student Perceptions," In Proceedings of the American Society for Engineering Education Annual Conference, Salt Lake City, Utah, June 2018.
3. R. Younes, M. Jones, and T. L. Martin, "Toward practical activity recognition: Recognizing complex activities with wide variations," in CoMoRea'18 - 14th Workshop on Context and Activity Modeling and Recognition (CoMoRea'18), Athens, Greece, Mar. 2018.
4. D. P. Saha, T. L. Martin, and R. B. Knapp, "Towards Defining a Quality-Metric for Affective Feedback in an Intelligent Environment," in IEEE International Conference on Pervasive Computing and Communications Workshops, 2018. PerCom Workshops'18, Athens, Greece, 2018.
5. D. Reeping, L. McNair, S. Harrison, B. Knapp, L. Lester, T. Martin, A. Patrick, and M. Wisnioski, "How are Threshold Concepts Applied? A Review of the Literature," In Proceedings of the American Society for Engineering Education Annual Conference, Columbus, OH. June 25-28, 2017.
6. D. Reeping, L. McNair, M. Wisnioski, A. Patrick, T. Martin, L. Lester, B. Knapp, and S. Harrison, "Restructuring an Electrical and Computer Engineering Curriculum: Using Participatory Research to Prototype Curricula and Situate Threshold Concepts," In Proceedings of the Frontiers In Education Conference, Indianapolis, IN. October 18-21, 2017.
7. D. P. Saha, R. B. Knapp, and T. L. Martin, "Affective Feedback in a Virtual Reality Based Intelligent Supermarket," in Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2017 ACM International Symposium on Wearable Computers, New York, NY, USA, 2017, pp. 646-653.
8. D. Saha, B. Bortz, W. Huang, T. Martin, and B. Knapp, "Affect-aware Intelligent Environment Using Musical Cues as an Emotion Learning Framework," In 12th International Conference on Intelligent Environments IE 2016 London, England. pp. 178- 181 doi:[10.1109/IE.2016.39](https://doi.org/10.1109/IE.2016.39)

9. H. Murzi, T. Martin, L. McNair, and M. Paretti, "A Longitudinal Study of the Dimensions of Disciplinary Culture to Enhance Innovation and Retention among Engineering Students," American Society for Engineering Education Annual Conference, Seattle, Washington, June 2016.
10. P. Zellner, J. Knuteson, and T. Martin, "Forecasting Nets," ACSA 103: The Expanding Periphery and the Migrating Center, Proceedings for the 103th Annual Meeting of the Association of Collegiate Schools of Architecture (ACSA). ACSA Press, 2015, pp. 169-176.
11. Deba Pratim Saha, Thomas L Martin, R Benjamin Knapp, "Towards incorporating affective feedback into context-aware intelligent environments," 2015 International Conference on Affective Computing and Intelligent Interaction (ACII), September 2015, pp. 49-55. (50 of 176 regular paper submissions accepted for oral presentation, 28% acceptance rate)
12. R. Younes, T. Martin, and M. Jones, "Activity classification at a higher level: what to do after the classifier does its best?" Proceedings of the 2015 International Symposium on Wearable Computers, September 2015, pp. 83-86. (13 full papers and 16 notes out of 121 submissions accepted for oral presentation, 24% acceptance rate)
13. H. Murzi, H., T. Martin, L. McNair, and M. Paretti, "Comparative Dimensions of Disciplinary Culture," ASEE Annual Conference, Seattle, WA, June 2015.
14. Jason Forsyth, Tom Martin, Darrell Bowman, "Feasibility of GPS-based Warning System for Roadside Workers", IEEE International Conference on Connected Vehicles and Expo, Vienna, Austria, November 3-7, 2014 (33% acceptance rate)
15. P. Zellner and T. Martin, "Integrating Computing as a Material in Design Education," FabLearn 2014 Conference on Creativity and Fabrication in Education, Palo Alto, CA, October 25-26, 2014 (8 pages).
16. H. Murzi, T. Martin, L. McNair and M. Paretti, "A Pilot Study of the Dimensions of Disciplinary Culture among Engineering Students (Work in progress)," Frontiers in Education Conference, Madrid, Spain, October 2014 (4 pages).
17. J. Forsyth, T. Martin, "Extracting Behavioral Information from Electronic Storyboards," Proceedings of the 6th ACM SIGCHI Symposium on Engineering Interactive Computer Systems, Rome, June 2014 (10 pages, 18% acceptance rate).
18. J. Dennis, R. Lewis, T. Martin, M. Jones, K. Baumann, J. New, T. Pearman, "Garment for rapid prototyping of pose-based applications, International Symposium of Wearable Computers Design Exhibition, Zurich, Switzerland, September 2013 (4 pages).
19. L. McNair, K. Kim, J. Forsyth, E. Dorsa, T. Martin, and E. Coupey, "Interdisciplinary Pedagogy for Pervasive Computing Design Processes: An Evaluative Analysis," American Society of Engineering Education Annual Conference. San Antonio, TX: June 11, 2012 (16 pages).
20. B. Sawyer, F. Quek, W. Wong, M. Motani, S. Chu Yew Yee, M. Perez-Quinones, T. Martin, I. Burbey and L. McNair, "Information Re-finding Through Physical-Social Contexts," Personal Information Management (PIM) Workshop at Computer Supported Collaborative Work (CSCW 2012), February 11-15, 2012, Seattle, Washington. (7 pages)
21. T. Martin, K. Kim, J. Forsyth, L. McNair, E. Coupey, and E. Dorsa, "An interdisciplinary undergraduate design course for wearable and pervasive computing products," Proceedings of the 15th International Symposium on Wearable Computers, June 2011, pp. 61-68. (*Nominated for best paper, 6 long papers accepted out of 31 long paper submissions, 19%*)
22. J. Forsyth, T. Martin, D. Young-Corbett, and E. Dorsa, "Feasibility study of a wearable carbon monoxide warning system for construction workers," Proceedings of the 2011 IEEE Conference on Pervasive Computing and Communications (PerCom 2011), March 2011, pp. 28-36 (*27 papers accepted out of 154 submissions, 18%*).
23. I. Burbey and T. Martin, "When will you be at the office? Predicting future locations and times," Second International ICST Conference on Mobile Computing, Applications, and Services (MobiCASE 2010), October 2010, *Lecture Notes of the Institute for Computer Sciences, Social Informatics, and Telecommunications Engineering*, vol. 76, part 4, pp. 156-175 (*Acceptance rate of 32%*).
24. E. Coupey, E. Dorsa, R. Kemnitzer, L. McNair and T. Martin, "A Case Study of an Interdisciplinary Design Course for Pervasive Computing," The Third Workshop on Pervasive Computing Education, September 2010 (on-line only).
25. I. Bukvic, T. Martin, E. Standley and M. Matthews, "Introducing L2Ork: Linux Laptop Orchestra," New Interfaces for Musical Expression (NIME) 2010, June 2010, pp. 170-173 (*acceptance rate for short papers: 19.5%*)

26. M. Quirk, T. Martin, and M. Jones, "Inclusion of Fabric Properties in the E-Textile Design Process," Proceedings of the 2009 IEEE International Symposium on Wearable Computers, September 2009, pp. 37-40 (6 short papers accepted out of 21 short submissions, 29%)
27. T. Martin, M. Jones, J. Chong, M. Quirk, K. Baumann, and L. Passauer, "Design and Implementation of an Electronic Textile Jumpsuit," Proceedings of the 2009 IEEE International Symposium on Wearable Computers, September 2009, pp. 157-158 (refereed poster).
28. L. McNair, C. Newswander, E. Coupey, E. Dorsa, T. Martin, M. C. Paretto, "Self-Organizing Units in an Interdisciplinary Course for Pervasive Computing Design," American Society for Engineering Education Annual Conference and Exposition. Austin, TX, June 14-17, 2009 (on-line).
29. I. Burbey, T. Martin, "Predicting future locations using prediction-by-partial match," Proceedings of the First ACM International Workshop on Mobile Entity Localization and Tracking in GPS-less Environments, September 2008. 6 pages (CD-ROM only).
30. M. Jones, T. Martin, and B. Sawyer, "An architecture for electronic textiles," Proceedings of the ICST Third International Conference on Body Area Networks, March 2008. 4 pages (CD-ROM only).
31. C. Bowen, D. Raymond, and T. Martin, "Location Privacy for Users of Wireless Devices through Cloaking," Proceedings of the 41st Annual Hawaii International Conference on System Sciences (HICSS), January 2008, 10 pages (CD-ROM only).
32. G. Eichinger, K. Baumann, T. Martin, and M. Jones, "Using a PCB Layout Tool to Create Embroidered Circuits," Proceedings of the 2007 IEEE International Symposium on Wearable Computers, October 2007, pp. 105-106. (refereed poster)
33. D. Graumann, G. Raffa, M. Quirk, B. Sawyer, J. Chong, M. Jones, and T. Martin, "Large Surface Area Electronic Textiles for Ubiquitous Computing: A Systems Approach", Proceedings of MobiQuitous '07, August 2007. 8 pages (CD-ROM only). (27 out of 119 papers accepted, 23%).
34. C. Bowen and T. Martin, "Preserving User Location Privacy Based on Web Queries and LBS Responses". Proceedings of the 8th Annual IEEE Systems, Man and Cybernetics (SMC) Information Assurance Workshop, June 2007, pp. 175-182.
35. C. Bowen and T. Martin, "A Survey of Location Privacy and an Approach for Solitary Users," Proceedings of the Fortieth Annual Hawaii International Conference on System Sciences (HICSS), January 2007, 10 pages (CD-ROM only).
36. C. Bowen and T. Martin, "Combining Position Estimates to Enhance User Location," Wireless Personal Multimedia Communications 2006, September 2006, pp. 648-652.
37. J. Edmison, D. Lehn, M. Jones, and T. Martin, "E-Textile Based Automatic Activity Diary for Medical Annotation and Analysis," Proceedings of the International Workshop on Wearable and Implantable Body Sensor Networks (BSN), April 2006, pp. 131-134.
38. S. Yardi, K. Channakeshava, M. Hsiao, T. Martin, and D. Ha, "A Formal Framework for Modeling and Analysis of System-Level Dynamic Power Management," Proceedings of the 2005 IEEE International Conference on Computer Design (ICCD), October 2005, pp. 119-126 (101 papers accepted out of 313 papers, 32%).
39. C. Einsmann, M. Quirk, B. Muzal, B. Venkatramani, T. Martin, and M. Jones, "Modeling a Wearable Full-body Motion Capture System," Proceedings of the 2005 IEEE International Symposium on Wearable Computers (ISWC), October 2005, pp. 144-151. (16 long (8 pages) papers accepted out of 63 long paper submissions, 25%).
40. J. Edmison, D. Lehn, M. Jones, and T. Martin, "Users' Perceptions of an Automatic Activity Diary for Medical Annotation and Analysis," Proceedings of the 2005 IEEE International Symposium on Wearable Computers (ISWC), October 2005, pp. 192-193. (refereed poster)
41. S. Kim and T. Martin, "GPSDVS: An Improved Task-Based Dynamic Voltage Scaling Scheme for General-Purpose Systems," Proceedings of the 2005 IEEE International System-On-Chip Conference (SOCC), September 2005, pp. 99-100. (refereed poster)
42. S. Kim and T. Martin, "DIP: A Double-interval-based Dynamic Voltage Scaling Scheme for Dynamic Priority-based Task Scheduling Systems," Proceedings of the IEEE Great Lakes Symposium on VLSI, April 2005, pp. 226-231. (22 long (6 page) papers accepted out of 239 submissions, 9%. Overall acceptance rate (long papers, short papers, and posters) of 43%).
43. S. Yardi, M. Hsiao, T. Martin, and D. Ha, "Quality-Driven Proactive Computation Elimination for Power-Aware Multimedia Processing," Proceedings of 2005 Design, Automation, and Test in Europe, March 2005, pp. 340-345. (Acceptance rate for long (6 page) papers: 17%. Overall acceptance rate: 22%).

44. C. Hager, S. Midkiff, J. Park and T. Martin, "Performance and Energy Efficiency of Block Ciphers in Personal Digital Assistants," Proceedings of the Third IEEE International Conference on Pervasive Computing and Communications, March 2005, pp. 127-136. *(31 full papers accepted out of 233 submissions, 13%. Overall acceptance rate (full and short papers): 18%).*
45. D. Nash, T. Martin, D. Ha and M. Hsiao, "Towards an Intrusion Detection System for Battery Exhaustion Attacks on Mobile Computing Devices," Proceedings of the 2nd IEEE Workshop on Pervasive Computing and Communications Security, March 8, 2005, pp. 141-145. *(9 papers accepted out of 29 submissions, 31%).*
46. M. Chandra, M. Jones, and T. Martin, "E-Textiles for Autonomous Location Awareness," Proceedings of the 2004 International Symposium on Wearable Computers, Arlington, VA, Oct. 31-Nov. 3, 2004, pp. 48-55. *(14 full papers accepted out of 60 full paper submissions, 23%).*
47. J. Edmison, M. Jones, T. Lockhart, and T. Martin, "An E-Textile System for Motion Analysis," Wearable eHealth Systems for Personalised Health Management: State of the Art and Future Challenges, Studies in Health Technology and Informatics, vol. 108, August 2004, pp. 292-301.
48. T. Martin, M. Jones, J. Edmison, T. Sheikh, and Z. Nakad, "Modeling and Simulating E-Textile Applications", Proceedings of the ACM SIGPLAN/SIGBED Conference on Languages, Compilers, and Tools for Embedded Systems, Washington, D.C., June 11-13, 2004, pp. 10-19. *(28 papers accepted out of 120 submissions, 23%)*
49. Z. Nakad, M. Jones, and T. Martin, "Fault-Tolerant Networks for Electronic Textiles," Proceedings of the 2004 International Conference on Communications in Computing (CIC 2004), June 2004, pp. 100-106.
50. T. Martin, M. Hsiao, D. Ha, and J. Krishnaswami, "Denial-of-Service Attacks on Battery-powered Mobile Computers," Proceedings of the 2nd IEEE Pervasive Computing Conference, Orlando, Florida, March 2004, pp. 309-318. *(37 papers accepted out of 193 submissions, 19%)*
51. T. Martin, "Experiences Teaching a Course on Wearable and Ubiquitous Computing," Proceedings of the IEEE Workshop on Pervasive Computing Education, Orlando, Florida, March 2004, pp. 252-256.
52. D. Lehn, C. Neely, K. Schoonover, T. Martin, and M. Jones, "e-TAGS: e-Textile Attached Gadgets," Proceedings of the Communication Networks and Distributed Systems Modeling and Simulation Conference, San Diego, CA, January 2004, pp.
53. T. Martin, M. Jones, J. Edmison, and R. Shenoy, "Towards a design framework for wearable electronic textiles," Proceedings of the Seventh International Symposium on Wearable Computers, Oct 21-24, 2003, pp. 190-199. *(30 papers accepted out of 86 submissions, 35%)*
54. M. Jones, T. Martin, Z. Nakad, R. Shenoy, T. Sheikh, D. Lehn, and J. Edmison, "Analyzing the Use of E-textiles to Improve Application Performance," Proceedings of the IEEE Vehicular Technology Conference 2003, Symposium on Wireless Ad hoc, Sensor, and Wearable Networks (VTC 2003), Oct. 2003, pp. 2875-2880.
55. Z. Nakad, M. Jones, and T. Martin, "Communications in Electronic Textile Systems," Proceedings of the 2003 International Conference on Communications in Computing (CIC 2003), June 2003, pp. 37-43.
56. J. Wang, B. Ravindran, T. Martin, "A Power-Aware, Best-Effort Real-Time Task Scheduling Algorithm," Proceedings of the IEEE Workshop on Software Technologies for Future Embedded Systems, Hokkaido, Japan, May 2003, pp. 21-28.
57. J. Warren, T. Martin, A. Smailagic, D. Siewiorek, "System design approach to power aware mobile computers," Proceedings of the IEEE Computer Society Annual Symposium on VLSI, February 2003, pp. 101-106. *(26 papers accepted out 115 submissions, 23%)*
58. T. Martin, "Time and Time Again: Parallels in the Development of the Watch and the Wearable Computer," Proceedings of the Sixth International Symposium on Wearable Computing, Seattle, WA, Oct 7-10, 2002, pp. 5-11. *(21 papers accepted out of 109 submissions, 19%)*
59. J. Edmison, M. Jones, Z. Nakad, T. Martin, "Using Piezoelectric Materials for Wearable Electronic Textiles," Proceedings of the Sixth International Symposium on Wearable Computing, Seattle, WA, Oct 7-10, 2002, pp. 41-48. *(21 papers accepted out of 109 submissions, 19%)*
60. M. Jones, T. Martin, and Z. Nakad, "A Service Backplane for E-textile Applications," Workshop on Electronic Textiles, ASPLOS-X, San Jose, CA, Oct, 2002, pp. 15-22.
61. V. Pandiarajan, L. Joiner, and T. Martin, "Recommendations on a New Cellular Encryption Standard Using Elliptic Curve Cryptography," Proceedings of the 2001 IEEE Southeast Conference (SoutheastCon), Clemson, SC, March 30-April 1, 2001, pp. 136-142.
62. E. Jovanov, J. Price, D. Raskovic, K. Kavi, T. Martin, R. Adhami, "Wireless Personal Area Networks in Telemedical Environment," Proceedings of the Third IEEE EMBS Information Technology Applications in Biomedicine Workshop of the International Telemedical Information Society, ITAB-ITIS 2000, Arlington, Virginia, November 2000, pp. 22-27.

63. T. Martin, E. Jovanov, and D. Raskovic, "Issues in Wearable Computing for Medical Monitoring Applications: A Case Study of a Wearable ECG Monitoring Device," Proceedings of the 2000 International Symposium on Wearable Computers, Atlanta, GA, October 16-17, 2000, pp. 43-50. (*18 papers accepted out of 57 submissions, 32%*)
64. J. Warren, D. Siewiorek, and T. Martin, "Understanding the Interaction Between the Performance and Power Consumption in Mobile Systems to Accurately Predict Battery Life," Proceedings of the 2000 International Symposium on Wearable Computers, Atlanta, GA, October 2000, pp. 179-180. (*refereed poster*)
65. E. Jovanov, T. Martin, D. Raskovic, and S. Hanief, "Environment for Energy Profiling of DSP Applications," Proceedings of the 2000 International Conference on Signal Processing Applications and Technology, ICSPAT, Dallas, TX, October 16-19, 2000 (CD-ROM). (*Finalist for best paper*)
66. T. Martin, D. Siewiorek, and J. Warren, "A CPU Speed-Setting Policy That Accounts for Non-Ideal Memory and Battery Properties," Proceedings of the 39th Power Sources Conference, Maple Hill, NJ, June 2000, pp. 502-505.
67. T. Martin and D. Siewiorek, "Non-ideal Battery Behavior and Its Impact on Power Performance Trade-offs in Wearable Computing," Proceedings of the 1999 International Symposium on Wearable Computers, San Francisco, CA, October 18-19, 1999, pp. 101-106. (*20 papers accepted out of 65 submissions, 31%*)
68. T. Martin and D. Siewiorek, "The Impact of Battery Capacity and Memory Bandwidth on CPU Speed-Setting: A Case Study," Proceedings of the 1999 International Symposium on Low Power Electronics and Design, San Diego, CA, August 16-17, 1999, pp. 200-205. (*34 papers accepted out of 107 submissions, 32%*)
69. T. Martin and D. Siewiorek, "A Power Metric for Mobile Systems," Proceedings of the 1996 International Symposium on Low Power Electronics and Design, Monterey, CA, August 12-14, 1996, pp. 37-42. (*39 papers accepted out of 139 submissions, 28%*)
70. A. Smailagic, D. Siewiorek, D. Anderson, C. Kasabach, T. Martin, J. Stivoric, "Benchmarking an Interdisciplinary Concurrent Design Methodology for Electronic/mechanical Systems," Proceedings of 32nd Design Automation Conference, San Francisco, CA, June 12-16 1995, pp. 514-519. (*Nominated for best paper; acceptance rate of 28%*)

Other Publications:

1. E. Dorsa, E. Coupey, T. Martin, L. McNair, J. Forsyth, K. Kim, "Design, Meet Computational Thinking: An Interdisciplinary Exercise in Developing Smart Products," accepted by the IDSA Education Symposium.
2. T. Martin, E. Coupey, L. McNair, E. Dorsa, J. Forsyth, K. Kim, and R. Kemnitzer, "An Interdisciplinary Design Course for Pervasive Computing," *IEEE Pervasive Computing*, January-March 2012, vol. 11, no. 1, pp. 80-83.
3. K. Kim, L. McNair, E. Coupey, E. Dorsa, R. Kemnitzer, and T. Martin, "Situativity approaches for Improving Interdisciplinary Team Processes," American Society for Engineering Education Southeast Section Conference, Blacksburg, VA, April 18-20, 2010 (on-line).
4. L. McNair, E. Coupey, E. Dorsa, R. Kemnitzer, T. Martin, D. Corbett-Young, M. Paretto, K. Kim, J. Forsyth, "IEECI: Building New Engineering Education Theory and Practice for Interdisciplinary Pervasive Computing Design," Poster presented at the 2010 NSF Engineering Education Awardees conference, Arlington, VA, February 2, 2010.
5. E. Coupey, E. Dorsa, R. Kemnitzer, T. Martin, "Things you probably didn't think of...or tips for creating a successful interdisciplinary product development program," Proceedings of the 2008 IDSA/Eastman National Education Symposium, Phoenix, AZ, September 2008, pp. 55-60.
6. T. Martin and J. Healey, "2006's Wearable Computing Advances and Fashions," *IEEE Pervasive Computing*, January-March 2007, vol. 6, no. 1, pp. 14-17.
7. D. Dagon, T. Martin, and T. Starner, "Mobile Phones as Computing Devices: The Viruses Are Coming!" *IEEE Pervasive Computing*, Oct.-Dec. 2004, vol. 3, no. 4, pp. 11-15.
8. T. Martin, T. Lockhart, M. Jones, and J. Edmison, "Electronic Textiles for In Situ Biomechanical Measurements," 24th Army Science Conference, December 2004, 8 pages, proceedings on CD-ROM, (*accepted on basis of extended abstract*)
9. T. Martin, "Wearable and Ubiquitous Computing," *IEEE Pervasive Computing*, July-September 2003, pp. 2-6.
10. T. Martin, *Evaluation and Reduction of Power Consumption in the Navigator 1 Wearable Computer*, Master's report, Carnegie Mellon University, Department of Electrical and Computer Engineering, December 1994.
11. T. Martin and D. Siewiorek, "Wearable Computers at Carnegie Mellon University," *IEEE Potentials*, Fall 1994, vol. 13, issue 3, pp. 36-38.

Invited Presentations/Papers:

1. J. Forsyth and T. Martin, "Tools for Interdisciplinary Design of Pervasive Computing," *International Journal of Pervasive Computing and Communications*, vol. 8, no. 2, pp. 112-132. (Invited survey)
2. T. Martin, "Creating the Future of Textiles," *Specialty Fabrics Review*, May 2012, vol. 97, no. 5, pp. 22-23.
3. I. Burbey and T. Martin, "A Survey on Predicting Personal Mobility," *International Journal of Pervasive Computing and Communications*, vol. 8, no. 1, pp. 5-22. (Invited survey)
4. Tom Martin, "Electronic textiles for wearable computing," Future Textiles Expert Summit, TEKO Design and Business School, Herning, Denmark, May 12, 2011. (Invited keynote presentation)
5. Tom Martin, "Electronic textiles from a computing perspective," presentation at the Industrial Fabrics Association International (IFAI) Smart, E-textiles Solutions Symposium, September 2009.
6. Tom Martin, "An Overview of Electronic Textiles," Innovative Technologies in Sport, The Hague, Netherlands, November 6, 2007. (Invited presentation)
7. Tom Martin, "Electronic Textiles for Wearable and Pervasive Computing," 24th Annual Houston Conference on Biomedical Engineering Research, February 9, 2007. (Invited keynote presentation)
8. Tom Martin, "Securing personal devices for pervasive computing," NSF Cybertrust PI meeting, August 18-20, 2004, Pittsburgh, PA (Invited presentation)
9. Mark Jones, Thurmon Lockhart, and Thomas Martin, "An E-Textile System for Motion Analysis," Proceedings of the International Workshop on New Generation of Wearable Computers for eHealth, Lucca, Italy, December 2003, pp. 216-223 (Invited paper)

Teaching Experience/Training:

Virginia Tech:

- Overall teaching evaluation average at Virginia Tech of 3.8/4.0, with a range of 3.5 to 4.0 (2001-2011), 5.6/6.0 , with a range of 5.1-5.8 (2011-present).
- Participated in the Virginia Tech Center for Excellence in Undergraduate Teaching/Center for Instructional Development and Educational Research faculty teaching group program, 2001-2008, 2010/2011.
- Chaired the ad hoc committee to update the digital design sequence (ECE 2504, 3504/3544, 4514), 2011-2012. Led the implementation of two of the courses (ECE 2504 in Fall 2012, ECE 3544 in Fall 2013).
- Courses taught:
 1. ENGE 1104: *Exploration of Your Digital Future*, Spring 2005 (half course).
 2. ECE 2504: *Introduction to Computer Engineering*, Spring 2004, Fall 2005, Fall 2006, Fall 2007, Spring 2011, Fall 2012.
 3. ECE 5564: *Wearable and Ubiquitous Computing*, Spring 2003 (as ECE 5984), Spring 2005, Fall 2008, Fall 2009, Fall 2010, Fall 2011, Spring 2015, Spring 2017, Spring 2018.
 4. ECE 4514: *Digital Design II*, Fall 2001, Fall 2002, Fall 2003, Fall 2004, Spring 2006, Fall 2006.
 5. ECE 4984: *Wearable and Ubiquitous Computing* (new course), Spring 2002.
 6. ECE 4984: *Interdisciplinary Product Development Studio* (new course), Spring 2007. This courses was taught as a set of independent studies in Spring 2006, Fall 2008, Fall 2009, Fall 2010, Fall 2011, and Fall 2012. In all offerings except Spring 2007, the course included students from electrical and computer engineering, industrial design, and marketing.
 7. ECE 2500: *Computer Organization*. Spring 2010, Spring 2012.
 8. ECE 3544: *Digital Design I*. Fall 2013, Fall 2014, Fall 2016, Fall 2017, Fall 2018.
 9. CS 2984/Architecture 3514: *Introduction to Physical Computing*, Spring 2014. This course was a new course aimed at teaching physical computing concepts and prototyping to students from Computer Science, Architecture, and Industrial Design.
 10. Architecture 3514: *Textiles Space*. Spring 2013, Spring 2014. Co-taught with Paola Zellner from Architecture. Students in these courses participated in team projects in conjunction with NASA's Johnson Space Center.
- A student team from the interdisciplinary pervasive computing product design course (course #6 above) won the medical category of the Virginia Tech Entrepreneur Club's VT \$5K executive summary competition, December 2010.

University of Alabama in Huntsville:

- Overall teaching evaluation average at UAH of 92% out of 100%, with a range of 85% to 98%.
- Courses taught:
 1. CPE/EE 493 *VLSI Design II*, Spring 2000, Spring 2001.
 2. CPE/EE 492 *VLSI Design I*, Fall 1999, Fall 2000.
 3. CPE 582, *Introduction to VLSI Design*, Spring 2001
 4. CPE 610 *Computer Security* (new course, with a distance-learning section) Fall 2000.

Carnegie Mellon University:

- Teaching Intern, Spring 1995, for 18-360 *Introduction to CAD*. Responsibilities included lecturing on routing algorithms, developing Verilog and simulated annealing projects, and writing test and homework problems.
- Attended National Science Foundation Engineering Education Scholars Workshop, Atlanta, GA, July 1995.
- Attended *Preparing for a Faculty Career* seminar series, Fall 1995-Spring 1997. Topics included writing syllabi, lecturing, and supervising graduate research.
- Pennsylvania Junior Academy of Science, 1992-1995, 1997. Annual program to introduce high school students to electronics by teaching them Boolean logic and SSI prototyping.

Student Advising:

Graduate students (alumni):

Ph.D.: Zahi Nakad (12/2003, co-advised with Mark Jones), Sookyoung Kim (April 2008), Ingrid Burbey (April 2011), Jason Forsyth (2015), Deba Saha (2018, co-advised with Ben Knapp), Rabih Younes (2018, co-advised with Mark Jones).

Master's thesis: Larry McDaniel (6/2003), Tanwir Sheikh (9/2003), Jayan Krishnaswami (2/2004), Daniel Nash (5/2005), Chris Einsmann (2/2006), Vineet Jolly (8/2006, co-advised with Mark Jones), Justin Chong (9/2008), Andrew Love (9/2009), Meghan Quirk (12/2009), Jason Forsyth (3/2010), Ramya Narayanaswamy (7/2010, co-advised with Mark Jones), Karthick Lakshmanan (7/2010, co-advised with Mark Jones), Jacob Simmons (8/2010), Robert Lewis (5/2011), Sarosh Malayattil (2/2012, co-advised with Mark Jones), Anup Mandlekar (8/2012, co-advised with Mark Jones), Deba Pratim Saha (12/2014, co-advised with Ico Bukvic of Music), Madison Blake (2/2014, co-advised with Mark Jones), Steve Ressler (4/2014, co-advised with Dennis Hong of Mechanical Engineering), Jacob Dennis (2015), Kristen Hines (2016), Prerana Rane (2017).

Current graduate students:

Master's: Amanda Redhouse.

Undergraduate independent study/research students:

Spring 2003: Adam Lewis

Summer 2003: Brian Begnoche

Fall 2004: Patrick Papadopoulos

Spring 2005: Jon Burgett, Alex Riabtsev

Spring 2006: Justin Chong, Jason Corwin, Christian Tergino

Fall 2006: Mike Diaz, Steve Ressler

Summer 2007: Charles Irick

Fall 2007: Aaron Marcus

Spring 2008: Stephen Groat, Leah Passauer

Fall 2008: Cassandra Gluyas, James Thomas, Caleb Hopkins, Ben Clay, Fran Gaillie, Marshall Roach, Terrence Torrence

Fall 2009: Brian Kanhofer, Owen Hardman, Chris Wilson, Sam Vannoy

Fall 2010: Zach Rattner, David Uliana, John Cristy, Scott Moore, Kris Mascher, Cole Hasson, Logan Linn

Spring 2011: Zach Rattner

Fall 2011: Tony Angell, Chris Baumann, Chris Moore, Chris Stack, Jasdeep Singh, Kevin Burns, Matt Kracht, Austin Marusco

Spring 2011: Chris Baumann

Research Experience for Undergraduates advisees:

Summer 2004: Amy Anderson, Meghan Quirk, Alex Riabtsev.

Summer 2005: Scott Wilson, Eric Muller.
Summer 2006: Brian Neely, Steve Ressler, Erik Rollwage, Kyle Forrester
Fall 2006/Spring 2007: Steve Ressler, Mike Diaz, George Eichinger
Summer 2007-present: Kara Baumann
Summer 2008-Spring 2009: Leah Passauer
Summer 2010: David Uliana
Summer 2013: John New, Taylor Pearman
Summer 2014: Bryan Faulkner, Alexis Tuason, Mary Lee Carter
Fall 2014: Mary Lee Carter, Tony Jackson

Professional Activities:

1. General chair, Eighth IEEE International Symposium on Wearable Computers (ISWC), October-November 2004 (approximately 230 attendees, budget of \$130K).
2. Program committee co-chair for 2001, 2006, and 2014 International Symposium on Wearable Computers, program committee member for ISWC 2000, 2002, 2005, 2007-2009, 2011-2013, 2015.
3. Vice-chair of IEEE Computer Society Technical Committee on Wearable Information Systems (TCWIS) (now the Special Technical Community on Wearable and Ubiquitous Computing), 2011-2017. Chair of vice-chair nomination committee, October 2002-October 2003. Member of TCWIS steering committee, 2001-present.
4. Advisory board, WEAR conference (formerly called Smart Fabrics), 2011-present.
5. Educational program advisory committee, Industrial Fabrics Association International (IFAI) Expo Americas Safety & Technical Products and Advanced Textiles Conference, 2012-2013.
6. Co-organizer with Dr. Lisa McNair, Workshop on Interdisciplinary Approaches to Pervasive Computing Design, held in conjunction with PerEL workshop at PerCom, Seattle, WA, March 2011.
7. Organizer, Workshop on the Role of Design in Wearable Computing, ISWC, October 13, 2007.
8. Organizing committee co-chair with Dr. Lucy Dunne and Dr. Patricia Wilson for the Smart, E-textiles Solutions Symposium at the IFAI Expo, San Diego, CA, September 22, 2009.
9. Program committee member for Second International Forum on Applied Wearable Computing, 2005.
10. Program committee member for 19th International Conference on Architecture of Computing Systems (ARCS), 2006, 2009, 2010, 2011.
11. Program committee member for BodyNets 2009.
12. Panel review member for National Science Foundation, numerous times.
13. Research demonstrations chair, 2003 ACM/Usenix International Conference on Mobile Systems, Applications, and Services (MobiSys), May 2003.
14. Served as reviewer for *IEEE Transactions on VLSI Systems*, *IEEE Transactions on Computer Aided Design*, *IEEE Transactions on Circuits and Systems II*, *ACM Transactions on Embedded Computing Systems*, *IEEE Pervasive Computing*, *IEEE Transactions on Information Technology in BioMedicine*, *ACM Transactions on Embedded Computing Systems*, *Journal of Personal and Ubiquitous Computing (special issue on Material Computing)*, *ACM Symposium on User Interface Software and Technology (UIST) 2010*, *International Symposium on Wearable Computers*, *Design Automation Conference*, and *International Performance, Computing, and Communications Conference*, .
15. Editorial board member, *International Journal of Pervasive Computing and Communications*.
16. Served as a judge for the Alabama State Science Fair, April 2000.
17. Member IEEE, IEEE Computer Society, ACM, ACM SIGMOBILE, Eta Kappa Nu, Phi Kappa Phi.

University/Departmental Service:

1. Academy of Teaching Excellence Executive Committee, 2017-present.
2. ECE Faculty Advisory Committee. Member, 1/2009 – 1/2012. Chair, 12/2009-12/2010. This committee advises the department head on matters related to running the department, such as devising standards for departmental teaching loads and writing charges to departmental committees.
3. Virginia Tech Faculty Senate. Member, 8/2007 – 8/2012.
4. Virginia Tech Commission on Graduate Studies and Policies, 8/2008 – 7/2011.
5. ECE Graduate Committee, 8/2005 – 7/2011.
6. ECE computer engineering graduate admissions officer, 8/2005-8/2008. As graduate admissions officer, I was responsible for handling about 500 applications per year.
7. ECE Graduate Admissions Czar, 8/2012-7/2013.

8. Chair, faculty search committee for a position in cyber-physical systems, academic year 2009-2010.
9. Member, ECE Freshman-Sophomore Transition Committee, 2010-2011.