Proposal to Faculty Senate
Washington State University

Smart Environments Research Center

Introduction

Our society faces significant challenges in sustaining and improving the environments in which we live and work. For example, we need to provide for the health of the growing elderly component of our population. We need to provide security for the critical infrastructures of these environments. We need to improve the efficiency of our resource utilization in order to sustain these environments in the face of ever-increasing demands on productivity and economic growth. At the same time, we also enjoy an unprecedented ability to collect large amounts of data (or "big data") from these environments, mine the data for new knowledge, and take actions to effect changes in the environments in order to improve health, security, efficiency and sustainability. A multi-disciplinary team of researchers at WSU is already working on approaches to collect and analyze data in order to sustain and improve these environments. The WSU team is recognized both nationally and internationally for their accomplishments in these areas, and they have established significant interdisciplinary collaborations with other academic, industry and government institutions. Therefore, in order to provide a focal point for this work, accelerate growth and collaboration, and further establish WSU as a leader in this area, we propose the formation of the WSU Smart Environments Research Center (SERC).

Nature and Scope of Activities

The mission of SERC is to enable the environments in which we live and work to be safer, healthier and more efficient through the use of intelligent data analytics and adaptive systems. SERC will pursue this mission through multi-disciplinary research, education, outreach, and technology development and transfer in areas related to data analytics and adaptive systems for smart environments. Our vision is for SERC to become a nationally and internationally recognized center of excellence in the study of data analytics and adaptive systems for smart environments. The main strategy for achieving these goals is to facilitate and promote multi-disciplinary research within WSU and in collaboration with other academic, industry and government institutions.

Already, the core faculty within the WSU School of Electrical Engineering and Computer Science (EECS) are collaborating with faculty from the WSU Department of Mechanical and Materials Engineering, the School of Chemical Engineering and Bioengineering, the School of Nursing, and the Department of Psychology in order to investigate the use of adaptive systems to automate homes in order for elderly inhabitants to stay in their homes longer, substantially benefiting their own well-being and that of their family and care-givers, as well as reducing the costs and other resource burdens on an already stressed healthcare system. This multi-disciplinary effort has resulted in numerous grants from the Life Sciences Discovery Fund (LSDF), the National Institutes of Health (NIH) and the National Science Foundation (NSF), including an ongoing $3M grant from NSF's Integrative Graduate Education and Research

Traineeship (IGERT) program. Data analytics and adaptive software systems developed from this research have been globally disseminated and published in top-tier venues[1]. The WSU team is also working in collaboration with the Oregon Health and Science University, University of Missouri, University of Florida, University of Texas at Arlington, University of Essex, University of Ulster, Dartmouth University, and industry firms Bosch and Cisco. Current efforts are underway to commercialize the technology for residential installations.

SERC researchers are also involved in the study of data analytics and adaptive systems for safety and security in smart environments related to defense and homeland security, which involves a collaboration among WSU EECS faculty, the Pacific Northwest National Laboratory (PNNL), and the Tennessee Technological University. This research involves the fusion of data from multiple, diverse sources, including sensor data from critical infrastructure systems and environments. The analysis of this fused data has revealed new insights into the threats both internal and external to the environments for which we want to maintain safety and security. This research has been funded by the Department of Homeland Security (DHS), the Department of Defense (DOD), and the Department of Energy (DOE).

SERC researchers are collaborating with individuals from the WSU Power Systems group, the Pacific Northwest National Laboratory (PNNL), and Avista Corporation to research data mining methods for power data. Specifically, SERC researchers are designing algorithms to process, predict, and utilize whole-home energy usage information provided by smart meters placed in 20,000 buildings around the Palouse. The results of this research provide insights on the link between in-home behavior and energy usage and will be used to improve the Smart Grid as well as design mobile apps to monitor and automate energy-efficient smart homes. The project is funded by the Department of Energy (DOE).

SERC researchers are conducting multi-disciplinary research in drug development, computational biology, climate modeling and engineering design. In collaboration with faculty in the Department of Veterinary Microbiology and Pathology and the Paul G. Allen School for Global Animal Health, SERC EECS faculty are developing adaptive machine learning algorithms to predict specific types of proteins in pathogens with applications to drug development and to understanding the mechanisms used to destroy host cells. SERC EECS faculty also develop algorithms for some of the most important data-intensive applications in modern day life sciences including: characterization of environmental microbial communities; sequencing and annotation of complex plant genomes; and vaccine development for diseases at the interface of cattle and humans. They design novel algorithms and software that can scale to next-generation supercomputers and multicore architectures. The research is in collaboration with leading plant scientists, veterinary microbiologists, and systems biologists. SERC EECS faculty have also recently been involved in research collaborations with faculty from environmental engineering to study regional climate modeling. They are developing cyberinfrastructure for modeling the process-level interactions among atmospheric, terrestrial and aquatic layers in the Pacific Northwest region. This research is supported through grants from the National Science Foundation, the Department of Agriculture and the Department of Energy.

[1] Cook, Diane J. (2012). How smart is your home? *Science*, 335:1579-1581.

As the aforementioned activities demonstrate, SERC researchers have established strong and vibrant multi-disciplinary research programs within the context of the SERC mission. Therefore, the formation of SERC will serve to focus and grow these collaborations. In addition to the scholarly output of SERC, consisting mainly of publications, data repositories and software, we also intend to pursue major funding for these activities and for the center as a whole. Over the last five years, SERC researchers have increased research expenditures from $1M in 2007 to $3M in 2012, and we project a level of $6M per year by 2016. SERC researchers have also contributed to a 30% increase in graduate student enrollment in SERC-related areas over the last five years (2007 to 2012), many of which come from minorities and underrepresented groups. We anticipate an additional 30% increase in graduate student enrollments in the next three years based on the popularity of the center's research areas, the ability to provide financial support to these students based on anticipated increases in funding, and the expected increase in faculty recruited to the EECS program and other programs in the College of Engineering and Architecture. EECS is currently in the process of recruiting two faculty members in the area of smart environments: one junior level tenure track, and one senior level tenured. We anticipate hiring an additional two junior level tenure-track faculty in the smart environments area in 2014. These new EECS SERC faculty members will improve the status and recognition of the center and help us meet or exceed our funding and enrollment milestones.

The director and core faculty will pursue several strategies for achieving the goals of SERC. They will facilitate multi-disciplinary projects and grant proposals by exploiting overlapping and complimentary interests between existing SERC researchers and others at WSU, other institutions, government laboratories and industry. SERC will host meetings or workshops designed to bring these groups together in order to initiate multi-disciplinary research, large-scale grant proposals, technology development and technology transfer. SERC will solicit industry sponsorship and partner donations to help fund SERC activities. SERC will also invite internationally recognized researchers and practitioners in SERC-related areas to visit WSU. The SERC director and core faculty will promote center activities at K-12 and undergraduate institutions in order to attract future students into SERC-related areas and recruit top undergraduate and graduate students to WSU. Finally, SERC will continue to impact educational programs at WSU through the development of new multi-disciplinary curricula in SERC-related areas. The director and core faculty will be primarily responsible for pursuing the above strategies toward the goal of establishing SERC as a nationally and internationally recognized center of excellence in the area of data analytics and adaptive systems for smart environments.

Director Selection and Term

Director

The goals, members and resources of SERC reside primarily within the School of Electrical Engineering and Computer Science (EECS). Therefore, the Director of SERC will be appointed by the Director of the School of EECS in consultation with the Dean of the College of Engineering and Architecture (CEA). The Director of SERC will serve for a renewable five-year term. Re-appointment will be subject to a comprehensive review. Dr. Lawrence Holder has been appointed as Director of SERC for an initial three-year term ending August 31, 2016. His curriculum vitae is attached in Appendix B.

Core Faculty

The SERC Core Faculty, including the Director, will serve to steer the direction of the center. The following are the Core Faculty participants in SERC, who have collaborated significantly on SERC-related projects, including being PIs on the recently funded NSF IGERT project on Health-Assistive Smart Environments. Their curricula vitae are attached in Appendix B. The Core Faculty will meet regularly to consider the status and future directions of the center. They will also seek input from core constituencies (see below) to inform their deliberations.

Name	**Discipline**	**Affiliation**
Diane Cook	Machine learning, activity recognition and prediction	School of Electrical Engineering & Computer Science (EECS)
Lawrence Holder	Data mining, security, bioinformatics	EECS
Maureen Schmitter-Edgecombe	Neuropsychology and rehabilitation	Department of Psychology
Behrooz Shirazi	Pervasive computing, smart sensors, robust sensor networks	EECS

Participating Faculty

The following lists additional Participating Faculty in SERC. Participating faculty are those faculty whose research and/or education interests are related to those of SERC and who wish to be affiliated with the center. We will continue to pursue cross-disciplinary affiliations for SERC and seek to facilitate collaborative research among its members.

Name	**Discipline**	**Affiliation**
David Bakken	Middleware, software engineering	EECS
Gregory Belenky	Sleep and performance	Sleep and Performance Center, WSU Spokane
Nancy Blossom	Design for health, design for older adults	WSU Interdisciplinary Design Institute (IDI)
Anjan Bose	Energy use for conservation, load control	EECS
Shira Broschat	Data analysis for drug development	EECS
Cindy Corbett	Diabetes pain management, intervention for older adults with chronic illnesses	College of Nursing
Dennis Dyck	Family caregiver	Psychology
Lisa Fournier	Visual attention, memory, perception and action	Psychology
Christine Horne	Technology and Society	Sociology
Deuk Heo	Design of batteryless wireless sensors	EECS
Chris Hundhausen	Human-computer interaction	EECS

Sankar Jayaran	Immersive environments, modeling	School of Mechanical & Materials Eng. (MME)
Uma Jayaram	Virtual reality for ergonomic studies, human factors, modeling	MME
Ananth Kalyanaraman	Computational biology	EECS
George LaRue	Sensor design	EECS
Janet Purath	Fitness assessment of older adults	College of Nursing
David Lin	Rehabilitation medicine	Bioengineering
John Roll	Substance abuse and addictive disorders	College of Nursing
Eugene Rosa	Technology and Society	Sociology
Nirmalya Roy	Wireless sensor networks	EECS
Bob Scarfo	Housing design for older adults	IDI
Krishna Sivakumar	Network data fusion and clustering	EECS
Matt Taylor	Learning, multiagent systems, robotics	EECS
Hans Van Dongen	Sleep and cognition	Sleep and Performance Center, WSU Spokane
Anita Vasavada	Biomechanics and neural control	Bioengineering
Paul Whitney	Memory and executive function	Psychology

Industry and Government Participants

SERC has established collaborations with several industry and government representatives, which are listed below. These participants perform research and development in SERC-related areas, are involved in related legislative and policy issues, and have ongoing student and faculty internship opportunities in these areas. Industry and government participants are those individuals or institutions whose interests are related to those of SERC and who wish to be affiliated with the center.

Name	**Discipline**	**Affiliation**
Farzin Guilak	Home health technologies	Intel
Archan Mishra & Chatschik Bisdikian	Location monitoring and telepresence	IBM
Bhaskar Srinivasan & Burton Andrews	Health monitoring	Bosch
Sateesh Vijay	Networking for home automation	Cisco
Tom Fritz	Health information technology	INHS
Darcy Clark	Medicine management	Talyst
David Kortenkamp	Robotic assistance	NASA
Patty Murray	Health policy	U.S. Senate

Colleges and Departments Involved

The following WSU colleges and departments are involved in SERC.

- College of Engineering and Architecture
  - School of Electrical Engineering and Computer Science
  - School of Mechanical and Materials Engineering
  - School of Chemical Engineering and Bioengineering
  - Department of Civil and Environmental Engineering

- College of Liberal Arts and Sciences
  - Department of Psychology
  - Department of Sociology

- College of Nursing

- College of Pharmacy

- WSU Interdisciplinary Design Institute

Amount of Budgetary Support Requested

The goal for SERC is to be self-sustaining within three years, mainly through a projected increase in external funding for the center via federal research grants, indirect cost returns, and gifts. Specific funding needs for SERC include the following.

- Director's ADR including benefits. Funding to be provided by center resources.
- Manager salary and benefits. The center manager will be responsible for outreach activities, assistance with grant and contract development and maintenance, and center administration. Half-time for first three years; full-time thereafter. Funding to be provided by center resources.
- Operations, office support, supplies and equipment. Funding to be provided by center resources.

Expected Funding Needed from University, State, External Awards or Gift Sources

Current external funding level is $3M per year with a projected level of $6M per year by 2016. We project that the center will be self-sustaining within three years based on indirect cost returns from center proposals and industry gifts in the form of donations and SERC graduate student assistantships (GRAs). Given the high level of industry interest in SERC-developed research and technology, we will solicit industry funding to maintain four SERC GRAs to help recruit new PhD students into SERC disciplines, facilitate multidisciplinary research within the scope of the center, and provide a mechanism for industry participants to focus research on their areas of interest, stay abreast of new SERC developments, and benefit from the scientific results of SERC research. GRAs will be funded at standard university levels with some additional funding

requested of industry participants to support center operational costs. Student recipients of the SERC GRAs will be determined based on applications reviewed by the SERC Core Faculty.

Needs for Space, Equipment and Supplies

The space, equipment and supplies needs for SERC are currently being met by existing lab space and external funding. SERC encompasses three main laboratory spaces in the School of EECS as well as affiliated research laboratory space elsewhere in EECS and in other departments and colleges. Equipment needs are currently being met, although additional computing resources and living laboratory environments are anticipated needs for the near future. Supplies needs are currently met via external funding. However, an additional 3200 sq. ft. laboratory space will be needed to support new SERC faculty: two in 2013 and two in 2014.

Expected Contribution to and Impact on the Instructional Programs

SERC will contribute to the instructional programs by introducing new courses in SERC-related areas, training graduate students to perform research and pursue research careers in SERC-related areas, and providing new graduate programs either at the certificate or degree level. Already through one of SERC's primary grants, the NSF IGERT grant for Health-Assistive Smart Environments, we have introduced two new courses on Gerontechnology and Smart Environments, are providing ten graduate research fellowships per year, and are offering a graduate certificate in Health-Assistive Smart Environments. As instructional and research resources grow, we will expand these instructional programs. These new offerings will also have a significant impact on existing instructional programs. The new courses are available to all WSU students and complement existing programs in other departments and colleges, e.g., in the areas of global health and sustainability.

Expected Contribution to University and Other Clients

SERC will contribute to the university in several ways. As mentioned above, the new programs in health-assistive environments and opportunities for multi-disciplinary graduate research will contribute to the university's goal of expanding graduate-level research. Our already-established collaborations with other institutions, industry and government will help to improve WSU's standing in these communities. The SERC focus on data analytics and adaptive systems in a variety of environments will provide a common theme around which to promote multi-disciplinary collaborations that can successfully pursue large external multi-disciplinary research grants. SERC's focus on data analytics, specifically the collection, management, mining and visualization of large amounts of data from a variety of domains, will also provide a much needed source of expertise for ongoing data analysis efforts across WSU. The increased visibility of SERC as a university-approved center will provide a recognizable research unit to attract external gifts to support and expand the scope and impact of the center.

Beyond the university and research communities, SERC stands to make a significant contribution to several sectors of society both economically and in terms of quality of life. Again, the focus of the current grants that fund SERC activity are on data analytics for improving the adaptability of homes to allow elderly inhabitants to live at home longer while

maintaining their health and safety. This data analytics and adaptive systems approach can also be applied to other environments, including workplaces, cities, public areas, ports of entry, and ecological and biological environments, to improve our ability to monitor, automate, protect and preserve these environments. A major goal of SERC is to transition the research and technologies into society via dissemination of information and commercialization of developed technologies.

Supporting Letters

The director of SERC will report to the Director of the School of Electrical Engineering and Computer Science and the Dean of the College of Engineering and Architecture. A letter of support from these individuals is included in Appendix A.

Appendix A

Letter of support from the Director of the School of Electrical Engineering and Computer Science and the Dean of the College of Engineering and Architecture.

WASHINGTON STATE UNIVERSITY
School of Electrical Engineering and Computer Science

TO: Research and Arts Committee

FROM: Candis Claiborn, Dean
College of Engineering and Architecture

Behrooz Shirazi, Director and Huie-Rogers Chair Professor
School of Electrical Engineering and Computer Science

DATE: August 14, 2013

SUBJECT: Recommendation of Support – Smart Environments Research Center (SERC)

We are pleased to submit this joint letter of support for the proposed WSU Smart Environments Research Center (SERC). Smart environments encompass the increasingly inter-connected and sensor-rich environments in which we live and work, and the need to improve health, safety and sustainability in such environments through the use of smart technologies. WSU is a recognized leader in this area, and the establishment of SERC will facilitate and promote multi-disciplinary research within WSU and in collaboration with other academic, industry and government institutions. SERC will serve as a focal point for the pursuit of large, multi-disciplinary and multi-institutional grants, recruitment of increasing numbers of STEM students and faculty, and transfer of technology to the commercial sector both to improve economic opportunities in the region and to positively impact society through the integration of SERC technologies into everyday life.

The College of Engineering and Architecture (CEA) and the School of Electrical Engineering and Computer Science (EECS) are committed to the success of the center. CEA and EECS have identified Smart Environments as an area of excellence in the college and a target for investment and growth. Along those lines, CEA has already committed two junior faculty positions and one senior faculty position in EECS to the Smart Environments area. One of the junior faculty positions was filled in January 2013, and the second was just filled with a start date of January 2014, both in Smart Environments. The search for the senior position is ongoing. Additional hires have been made in EECS to increase the teaching faculty to keep up with the increased enrollments and allow time for SERC faculty to aggressively pursue their research agenda. CEA and EECS project the ability to offer additional junior EECS faculty hires in the Smart Environments area in 2014.

The emphasis and success in the Smart Environments area at WSU has attracted external interest from industry and alumni. Industry support is described in more detail in the proposal, but particular successes have involved Bosch and Cisco partnering with SERC faculty to collect and analyze data from their assisted-care facilities, Avista partnering with SERC faculty in collaboration with the WSU Energy Systems Innovation Center to analyze smart

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gird power data from smart meters in Pullman, and ongoing commercialization of Smart Environments technology to support ageing in place supported by the Washington State Life Sciences Discovery Fund. In addition, WSU alumni Doug and Loretta Allred have established a Distinguished Professorship offering $50K per year for 5 years to support the Professorship, and a Distinguished Lectureship Series on Artificial Intelligence with funding for speaker expenses, which was used to attract the first series speaker, Dr. Eric Horvitz, Co-Director of Microsoft Research, in Fall 2012. The second speaker in the series, Dr. Jaap Suermondt, Vice President and Director of the Analytics Lab at HP Labs, will be speaking in Fall 2013. Doug Allred is a WSU Computer Science graduate from 1973, and Senior Vice President of Cisco Systems. The establishment of SERC will help accelerate these investments and provide a center of excellence to attract additional investment.

The researchers, practitioners and policy makers affiliated with SERC, as detailed in the proposal, already represent a large multi-disciplinary group that have been successfully addressing SERC-related issues in terms of research and technology transfer. With a large portion of the affiliated faculty being in the WSU School of EECS, that school has seen significant increases in enrollments and research expenditures due in a large part the efforts of SERC faculty. With recent and forthcoming strategic faculty hires we project a continuing increase in enrollments and funding. Furthermore, the establishment of SERC will allow these efforts to be combined and focused on larger endeavors and grand challenges.

The development of smart technologies, especially for health and safety, is accelerating at a rapid pace, will drive research for years to come, and will have an enormous impact on society. We believe based on the demonstrated success, support, interest and commitment, that the Smart Environments Research Center will become an internationally-recognized center of excellence and establish WSU as a world leader in this area. Therefore, we enthusiastically support the establishment of SERC and strongly encourage the faculty senate to approve the center proposal.

Appendix B

Curricula vitae for the SERC center director and core faculty.

- Lawrence Holder, Professor, School of EECS, SERC Director
- Diane Cook, Professor, School of EECS, SERC Core Faculty
- Maureen Schmitter-Edgecombe, Professor, Dept. of Psychology, SERC Core Faculty
- Behrooz Shirazi, Professor and Director, School of EECS, SERC Core Faculty

CURRICULUM VITAE

Lawrence B. Holder, Ph.D.

Professor
School of Electrical Engineering and Computer Science
Washington State University
PO Box 642752, Pullman, WA 99164-2752
Phone: 509-335-6138, FAX: 509-335-3818, Email: holder@wsu.edu
URL: www.eecs.wsu.edu/~holder

Research Interests
Artificial Intelligence, Machine Learning, Data Mining, Graph Theory, Algorithms, Security and Bioinformatics.

Academic Degrees

- Doctor of Philosophy (1991) in Computer Science with emphasis in Artificial Intelligence, University of Illinois at Urbana-Champaign. Thesis entitled "Maintaining the Utility of Learned Knowledge Using Model-Based Adaptive Control." Thesis advisor: Larry Rendell.
- Master of Science (1988) in Computer Science, University of Illinois at Urbana-Champaign. Thesis entitled "Discovering Substructure in Examples." Thesis advisor: Robert E. Stepp.
- Bachelor of Science with Honors (1986) in Computer Engineering, University of Illinois at Urbana-Champaign.

Professional Experience

- September 2006 – present: Professor in the School of Electrical Engineering and Computer Science, Washington State University.
- September 2004 – August 2006: Professor in the Department of Computer Science and Engineering, University of Texas at Arlington.
- September 1997 – August 2004: Associate Professor in the Department of Computer Science and Engineering, University of Texas at Arlington.
- September 1999 – December 2000: Associate Chair in the Department of Computer Science and Engineering, University of Texas at Arlington.
- September 1991 – August 1997: Assistant Professor in the Department of Computer Science and Engineering, University of Texas at Arlington.
- May 1989 – August 1991: Research Assistant on the Construction Management Team, U.S. Army Construction Engineering Research Lab, Champaign, Illinois. Design and development of an intelligent natural language interface to an Army construction database.
- August 1988 – May 1989: Teaching Assistant for *Pattern Recognition and Machine Learning*, *Computer Inference and Knowledge Acquisition*, and *Introduction to Artificial Intelligence* courses, Department of Computer Science, University of Illinois at Urbana–Champaign.
- August 1986 – August 1988: Research Assistant for Dr. Robert E. Stepp in the area of

artificial intelligence and machine learning, Department of Computer Science, University of Illinois at Urbana–Champaign.
- August 1984 – August 1988: Programming Consultant for Computing Services Office, University of Illinois at Urbana–Champaign.

Teaching (Washington State University)
- Artificial Intelligence
- Machine Learning
- Advanced Data Structures
- Gerontechnology

Teaching (UT Arlington)
- Intelligent Environments (designed course)
- Computer System Design Project I and II
- Machine Learning (designed course)
- Artificial Intelligence I
- Artificial Intelligence II
- Algorithms and Data Structures
- Design and Analysis of Algorithms
- Short Course: Intermediate UNIX (designed course)

Professional Service

Conference Chairs/Co-Chairs:
- Co-Chair, Florida Artificial Intelligence Research Society Conference, 2005.

Program Chairs/Co-Chairs:
- Co-Chair with Xifeng Yan, IEEE International Conference on Data Mining, Workshop on Mining Graphs and Complex Structures, 2007.
- Co-Chair with Mohan Kumar and Raffaele Bruno, Mobile Ad-hoc Sensors and Systems (MASS) Workshop on MASS for Global and Homeland Security, 2007.
- Co-Chair with Zdravko Markov, Florida Artificial Intelligence Research Society Conference, Special Track on Machine Learning, 2004-2008.

Contest Chairs/Co-Chairs:
- Co-Chair with Ashok Srivastava, IEEE International Conference on Data Mining Contest, 2011.

Journal Editorial Boards:
- *Intelligent Data Analysis*, IOS Press, since 2005.
- *International Journal of Social Network Mining*, InderScience Publishers, since 2010.
- *Computing*, Springer, since 2013

Member:
- American Association for Artificial Intelligence (AAAI)

- Association for Computing Machinery (ACM), *Professional Member* since 2008
- Institute of Electrical and Electronic Engineers (IEEE) Computer Society, *Senior Member* since 2009

Program committee member for numerous conferences; reviewer for numerous journals and funding agencies.

University Service (Washington State University)

School of EECS
- Teaching Excellence Committee (Chair, 2007-present)
- Graduate Studies Committee (2009-present)
- Computer Science Curriculum Committee (2006-present)

University
- Faculty Senate (2008-2015)
- High-Performance Computing Committee (2011-present)

University Service (UT Arlington)

CSE Department Administration: Associate Chair (1999-2000)

CSE Department Committees
- Undergraduate Studies Committee (1992 - 2006, Chair 1999 - 2006)
- Faculty Recruiting Committee (1999 - 2006, Chair 1999 - 2000)
- Tenure and Promotion Committee (1997 - 2006)
- Graduate Studies Committee (1991 - 2006)

CSE Department Faculty Advisor
- UTA Student Programming Team (1995 - 2000)
- ACM and IEEE Computer Society Student Chapter (1994 - 2000)
- Undergraduate Honors Program in Parallel Processing (1995 - 1999)

College of Engineering Committees
- Undergraduate Curriculum Committee (1999 - 2006)
- Various awards, scholarships and grade dispute committees

UTA University Committees
- Committee on Research Integrity (2005 - 2006)
- University Teaching Awards Committee (2002 - 2006, Chair 2004 - 2006)

UTA Awards and Honors
- *Research Excellence Award*, Univ. of Texas at Arlington, 2005, 2006.
- *Outstanding Research Achievement*, Univ. of Texas at Arlington, 2005.
- *Academy of Distinguished Teachers*, Univ. of Texas at Arlington, 2002.

- Algorithms and Data Structures course website, Lightspan's StudyWeb One of the Best Educational Resources on the Web, 2001.
- *Chancellor's Council Award for Excellence in Teaching*, Univ. of Texas at Arlington, 2000.
- *Outstanding Young Faculty Award*, Univ. of Texas at Arlington, College of Engineering, 2000.
- *Teaching Excellence Award*, Univ. of Texas at Arlington, College of Engineering, 1999.

Publications (citation counts from Google Scholar on 1/2010 unless otherwise noted)

Books

1. D. Cook and L. Holder (Editors), *Mining Graph Data*, John Wiley & Sons, December 2006. Citations: 72.
2. S. Bandyopadhyay, U. Maulik, L. Holder and D. Cook (Editors), *Advanced Methods for Knowledge Discovery from Complex Data*, Springer, September 2005. Citations: 4.

Book Chapters

1. D. Cook and L. Holder, "Sensor Selection to Support Practical Use of Health-Monitoring Smart Environments," In *Ambient Intelligence and Smart Environments*, IOS Press, 2012.
2. C. You, L. Holder and D. Cook, "Substructure Analysis of Metabolic Pathways by Graph-based Relational Learning," In A. Sidhu and T. Dillon (Editors) *Biomedical Data and Applications*, Springer, September 2009.
3. W. Eberle, L. Holder and D. Cook, "Identifying Threats Using Graph-Based Anomaly Detection," in J. Tsai and P. Yu (Editors), *Machine Learning in Cyber Trust*, Springer, May 2009.
4. L. Holder and D. Cook, "Graph-based Data Mining." In J. Wang (ed.) *Encyclopedia of Data Warehousing and Mining, Second Edition*, Idea Group Publishing, 2009. Also appears in 2006 first edition.
5. J. Potts, D. Cook, and L. Holder, "Learning from Supervised Graphs," *Applied Graph Theory in Computer Vision and Pattern Recognition* (M. Last, A. Kandel, and H. Bunke, editors), Wiley, 2007. Citations: 1.
6. D. Cook, L. Holder and N. Ketkar, "Unsupervised and Supervised Pattern Learning in Graph Data," in D. Cook and L. Holder (Editors), *Mining Graph Data*, John Wiley & Sons, December 2006.
7. D. Cook, L. Holder, J. Coble and J. Potts, "Graph-based Mining of Complex Data," in S. Bandyopadhyay, U. Maulik, L. Holder and D. Cook (Editors), *Advanced Methods for Knowledge Discovery from Complex Data*, Springer, September 2005.
8. L. Holder, D. Cook, J. Coble and M. Mukherjee, "Graph-based Relational Learning with Application to Security," in T. Washio, L. De Raedt, and J. Kok (eds.) *Advances in Mining Graphs, Trees and Sequences*, IOS Press, 2005. Citations: 16.
9. L. Holder, D. Cook, J. Gonzalez and I. Jonyer, "Structural Pattern Recognition in Graphs." In D. Chen and X. Cheng (eds.) *Pattern Recognition and String Matching*, Kluwer Academic Publishers, November 2003. Citations: 18.
10. D. J. Cook, G. Galal and L. B. Holder, "Discovering Concepts in Structural Data." In J. T. L. Wang, B. A. Shapiro and D. Shasha (eds.) *Pattern Discovery in Biomolecular Data: Tools, Techniques and Applications*, Oxford University Press, 1999. Citations: 1.
11. D. J. Cook, P. Gmytrasiewicz and L. B. Holder, "Decision-Theoretic Multi-Agent Sensor Planning." In O. Firschein and T. Strat (eds.) *Reconnaissance, Surveillance, and Target Acquisition for the Unmanned Ground Vehicle*, pages 413-428, 1997. Citations: 3.

Journal Special Issue Editorships

1. L. Holder, M. Kumar and R. Bruno (Editors), *Pervasive and Mobile Computing Journal, Special Issue on Homeland and Global Security*, Elsevier Publishing, Volume 5, Number 2, April 2009.
2. Z. Markov, L. Holder, I. Jonyer and D. Bisant (Editors), *International Journal on Artificial Intelligence Tools, Special Issue on Machine Learning, Data Mining and Neural Networks*, World Scientific Publishing, Volume 17, Number 3, June 2008. Impact factor (2/08): 0.24 [citeseer].
3. I. Russell, Z. Markov and L. Holder (Editors), *International Journal on Artificial Intelligence Tools, Special Issue on Knowledge Acquisition and Representation*, World Scientific Publishing, Volume 15, Number 6, December 2006. Impact factor (2/08): 0.24 [citeseer].
4. I. Russell, Z. Markov, A. Pipe, B. Carse and L. Holder (Editors), *International Journal on Pattern Recognition and Artificial Intelligence, Special Issue on Feature Selection and Extraction for Classification Problems*, World Scientific Publishing, Volume 19, Number 2, March 2005. Impact factor (2/08): 0.508 [isi jcr].

Journal Articles

1. M. Haque, L. Holder, M. Skinner and D. Cook, "Generalized Query Based Active Learning to Identify Differentially Methylated Regions in DNA," To appear in *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2013.
2. S. Long and L. Holder, "Graph-Based Shape Analysis for MRI Classification," *International Journal of Knowledge Discovery in Bioinformatics*, 2(2):19-33, 2011.
3. D. Cook, M. Schmitter-Edgecombe and L. Holder, "Gerontechnology Education: Beyond the Barriers," *IEEE Pervasive Computing*, 10(4):59-63, October-December 2011.
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91. G. Galal, D. J. Cook and L. B. Holder, "Improving Scalability in a Knowledge Discovery System by Exploiting Parallelism," *Proceedings of the Third International Conference on Knowledge Discovery and Data Mining*, pages 171–174, 1997. Citations: 6.
92. T. Duell and L. B. Holder, "A Study of Overfit in Decision-Tree Induction," *Proceedings of the Tenth International Florida Artificial Intelligence Research Society Conference*, pages 342–346, 1997.
93. D. J. Cook, P. Gmytrasiewicz and L. B. Holder, "Multi-Agent Cooperative Sensor Planning," *Proceedings of the Image Understanding Workshop*, pages 1321–1332, 1996.
94. P. Hsia, C. T. Hsu, D. C. Kung and L. B. Holder, "User-Centered System Decomposition: Z-Based Requirements Clustering," *Proceedings of the Second International Conference on Requirements Engineering*, pages 126–135, 1996. Citations: 3.
95. L. B. Holder, "Intermediate Decision Trees," *Proceedings of the 14th International Joint Conference on Artificial Intelligence*, pages 1056–1062, 1995. Citations: 13.

96. S. Djoko, D. J. Cook and L. B. Holder, "Analyzing the Benefits of Domain Knowledge in Substructure Discovery," *Proceedings of the First International Conference on Knowledge Discovery and Data Mining*, pages 75–80, 1995. Citations: 34.
97. L. B. Holder, D. J. Cook and S. Djoko, "Substructure Discovery in the SUBDUE System," *Proceedings of the AAAI Workshop on Knowledge Discovery in Databases*, pages 169–180, 1994. Citations: 131.
98. D. J. Cook and L. B. Holder, "Sensor Planning and Coordination in Multi-Agent Systems," *Proceedings of the Image Understanding Workshop*, 1994.
99. A. Chaudhry and L. B. Holder, "An Empirical Approach to Solving the General Utility Problem in Speedup Learning," *Seventh International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems*, pages 149–158, 1994.
100. L. B. Holder and A. Chaudhry, "Simple Selection of Utile Control Rules in Speedup Learning," *Proceedings of the Third International Workshop on Knowledge Compilation and Speedup Learning*, pages 77–82, 1993. Citations: 3.
101. L. B. Holder, "Empirical Analysis of the General Utility Problem in Machine Learning," *Proceedings of the Tenth National Conference on Artificial Intelligence*, pages 249–254, 1992. Citations: 14.
102. L. B. Holder, D. J. Cook and H. Bunke, "Fuzzy Substructure Discovery," *Proceedings of the Ninth International Conference on Machine Learning*, pages 218–223, 1992. Citations: 19.
103. L. B. Holder, "Unifying Empirical and Explanation-Based Learning by Modeling the Utility of Learned Knowledge," *Proceedings of the ML92 Workshop on Knowledge Compilation and Speedup Learning*, 1992. Citations: 4.
104. L. B. Holder, "Selection of Learning Methods Using an Adaptive Model of Knowledge Utility," *Proceedings of the International Workshop on Multistrategy Learning*, pages 247–254, 1991. Citations: 7.
105. L. B. Holder, "The General Utility Problem in Machine Learning," *Proceedings of the Seventh International Conference on Machine Learning*, pages 402–410, 1990. Citations: 24.
106. L. B. Holder, "Application of Machine Learning to the Maintenance of Knowledge Base Performance," *Proceedings of the 3rd International Conference on Industrial & Engineering Applications of AI & Expert Systems*, pages 1005–1012, 1990.
107. L. B. Holder, "Performance–Driven Knowledge Transformation," *Proceedings of the Third Florida Artificial Intelligence Research Symposium*, pages 149–153, 1990.
108. D. J. Cook and L. B. Holder, "Accelerated Learning on the Connection Machine," *Proceedings of the Second IEEE Symposium on Parallel and Distributed Processing*, pages 448–454, 1990. Citations: 20.
109. L. B. Holder, "Empirical Substructure Discovery," *Proceedings of the Sixth International Workshop on Machine Learning*, pages 133–136, 1989. Citations: 9.
110. R. E. Stepp, B. L. Whitehall and L. B. Holder, "Towards Intelligent Machine Learning Algorithms," *Proceedings of the Eighth European Conference on Artificial Intelligence*, pages 333–338, 1988.

Conference Posters/Abstracts

1. L. P. Behmer, J. Fairey, S. Gonzales, K. Albright, L. R. Fournier and L. B. Holder (2013). Using EEG and Machine Learning to Predict Action Goals from Data in the Human Mirror System. Poster and abstract. 20th Annual Meeting of the Cognitive Neuroscience Society.

Technical Reports

1. R. Shah and L. B. Holder, "Subdue Web Interface and GUI," Technical Report CSE-2004-9, Department of Computer Science and Engineering, University of Texas at Arlington, November 2004.
2. D. J. Cook, L. B. Holder and S. Djoko, "Knowledge Discovery from Structural Data," Technical Report TR-95-149, NASA Center of Excellence in Space Data and Information Sciences, 1995.
3. L. B. Holder, "Maintaining the Utility of Learned Knowledge Using Model-Based Adaptive Control," Ph.D. Thesis, Department of Computer Science, University of Illinois, Urbana, IL, October 1991. Citations: 9.
4. S. F. Kappes, A. B. Baskin, R. E. Reinke and L. B. Holder, "A Knowledge-Based Natural Language Database Interface," Technical Report P-91/15, U.S. Army Corps of Engineers Construction Engineering Research Laboratory, Champaign, IL, May 1991.
5. L. B. Holder, "Substructure Discovery in Subdue," Technical Report UILU-ENG-88-2220, Department of Computer Science, University of Illinois, Urbana, IL, May 1988. Citations: 1.
6. L. B. Holder, "Discovering Substructure in Examples," Masters Thesis, Department of Computer Science, University of Illinois, Urbana, IL, May 1988. (Available as Technical Report UILU-ENG-88-2223). Citations: 10.
7. R. E. Stepp, B. L. Whitehall and L. B. Holder, "Toward Intelligent Machine Learning Algorithms," Technical Report UILU-ENG-88-2221, Department of Computer Science, University of Illinois, Urbana, IL, May 1988. Citations: 4.

Invited Talks

1. "Mining Dynamic Graphs," Pacific Northwest National Laboratory, March 2013.
2. "Graph-based Pattern Learning," DOE Summer School on Multiscale Mathematics and High Performance Computing, WSU Tri-Cities Campus, August 2008.
3. "Center for Research in CyberIntelligence," Pacific Northwest National Laboratory, January 2007.
4. "Graph-based Relational Learning," Washington State University, February 2006.
5. "Graph-based Relational Learning," Colloquia of the Computer Science and Engineering Department, University of Notre Dame, November 2005.
6. "Graph-based Data Mining in Biological Databases," Guest Lecturer, Bioinformatics Course, University of Notre Dame, November 2005.
7. "Connecting the Dots: Graph-based Discovery Informatics for Learning Patterns of Asymmetric Threats," Visionary Lecture Series in Discovery Informatics, Johns Hopkins University School of Professional Studies in Business and Education, March 2004.
8. "Extracting Knowledge from Structural Data Using Substructure Discovery," invited talk to the NASA Goddard Space Flight Center CESDIS Group, 1994.

9. "North Texas Association for Artificial Intelligence (NTAAI) Panel on Data Mining," panelist, 1994.
10. "Empirical Analysis of the General Utility Problem in Machine Learning," invited talk to the Computer Science Department at the University of Texas at Austin, 1992.
11. "Common Trends in the Performance of Symbolic and Connectionist Learning Methods," invited talk to the UTA MIND group, 1992.
12. "The Utility of Machine Learning," invited talk to the North Texas Association for Artificial Intelligence (NTAAI), 1992.
13. "Maintaining the Utility of Learned Knowledge Using Model-Based Adaptive Control," invited talk to the NASA Ames Research Center Intelligent Systems Group, 1991.
14. "Controlling the Application of Learning Methods for the Improvement and Maintenance of Knowledge Base Performance," invited talk to the Jet Propulsion Laboratory (JPL) Intelligent Systems Group, 1990.

Support

1. L. Holder, "Pattern Learning in Large, Heterogeneous, Attributed Graphs," *Pacific Northwest National Laboratory*, 10/1/2010–9/30/2012, $120,000.
2. L. Holder, "HUNTER: HUMINT Use of Networks for Tactical Exploitation and Reasoning," *DARPA GUARD-DOG Program, Subcontract to BAE Systems*, 10/1/2010-10/31/2011, $90,000.
3. W. Eberle and L. Holder, "Detecting Anomalies in Shipping Data Using a Graph-based Approach," *Department of Homeland Security (DHS)*, 9/21/2010-12/31/2011, $300,000.
4. D. Cook, M. Schmitter-Edgecombe, L. Holder, B. Shirazi, and S. Jayaram, "IGERT: Integrative Training in Health-Assistive Smart Environments," *NSF Integrative Graduate Education and Research Traineeship Program (IGERT)*, 7/1/2009–6/30/2014, $2,823,126.
5. L. Holder, "Scaling Graph-based Pattern Learning for Large Graphs," *Pacific Northwest National Laboratory*, 7/14/2009–6/30/2010, $39,392.
6. D. Cook and L. Holder, "Advanced Analysis for Proliferation Control," *Pacific Northwest National Laboratory*, 7/1/2008–12/31/2008, $40,000.
7. L. Holder and W. Eberle, "Insider Threat Detection Using a Graph-based Approach," *DHS Cyber-Security Research and Development Program*, 3/1/2008–9/20/2010, $327,667.
8. L. Holder, T. Pratt, D. Hindman and K. Marett, "Cybercriminology and Digital Forensics," *WSU Initiation of Collaboration*, 7/1/07-6/30/08, $5,000.
9. L. Holder and D. Cook, "Integration of a MOUT Simulator into the General Game Playing (GGP) System for the Evaluation of Transfer Learning," *Naval Research Laboratory*, 10/01/07–9/30/08, $137,450.
10. L. Holder, G. M. Youngblood, D. Cook and M. Huber, "Transfer Learning in Integrated Cognitive Systems," subcontract with the Institute for the Study of Learning and Expertise (ISLE), *DARPA Transfer Learning Program (BAA05-29)*, 10/1/05–9/30/07, $600,000.
11. D. Cook and L. Holder, "Graph-based Mining of Public Health Data," *NSF Science and Engineering Informatics (SEI) Program*, 9/1/05–8/31/08, $352,327. In collaboration with K. Singh at University of North Texas.

12. L. Holder and D. Cook, "Graph-Based Structural Pattern Learning," *NRL BAA 55-03-05r*, 4/1/05–3/31/06, $118,622.
13. L. Holder and D. Cook, "Application of Graph-based Pattern Learning to Financial Transaction Data," *Booz-Allen-Hamilton*, 9/1/04–8/31/05, $30,000.
14. L. Holder and G. M. Youngblood, "Integration of a Cognitive Architecture and an Urban Warfare Simulator for the Evaluation of AI Methods," *NRL BAA 55-03-02*, 9/1/04–8/31/05, $75,500.
15. L. Holder, I. Ahmad, S. K. Das, F. Lewis and F. Lu, "Acquisition of Instrumentation for Engineering Research in Advanced Security Detection Systems," *NSF Major Research Instrumentation (MRI) Program*, 9/1/04–8/31/07, $357,143.
16. L. Holder and D. Cook, "Graph-Based Structural Pattern Learning," *U.S. Air Force Evidence Assessment, Grouping, Linking and Evaluation (EAGLE) Program*, 1/1/04–3/15/06, $377,516.
17. S. Das, I. Ahmad, D. Cook, L. Holder, and M. Kumar, "ITR Collaborative Research: Pervasively Secure Infrastructures (PSI): Integrating Smart Sensing, Data Mining, Pervasive Networking, and Community Computing," *NSF Information Technology Research (ITR) Program*, 9/1/03–8/31/08, $1,600,000.
18. S. Chakravarthy, J. Yu, L. Holder, S. Das and Y. Aslandogan, "Acquisition of High-Performance Distributed Computing and Storage Infrastructure at UTA," *NSF Major Research Instrumentation (MRI) Program*, 9/1/02–8/31/05, $950,000.
19. L. Holder and D. Cook, "Graph-Based Structural Pattern Learning," *DARPA Evidence Extraction and Link Discovery (EELD) Program*, 9/6/01–12/5/03, $375,000.
20. D. Cook, L. Holder and S. Chakravarthy, "Graph-Based Data Mining," *NSF*, 9/1/01–8/31/04, $442,487.
21. D. Cook, S. Chakravarthy, S. Das, M. Huber, L. Holder, F. Kamangar and R. Yerraballi, "MavHome: An Intelligent Home Environment," *NSF Information Technology Research (ITR) Program*, 9/1/01–8/31/06, $1,159,959.
22. D. Cook, L. Holder, S. Das, M. Huber and R. Yerraballi, "Instrumentation for Intelligent Agent Wireless Computing Research," *NSF Major Research Instrumentation (MRI) Program*, 9/1/01–8/31/04, $426,284.
23. D. Cook, L. Holder, S. Das, F. Kamangar and R. Yerraballi, "Integrating Intelligent Agent and Wireless Computing Research into the Undergraduate Curriculum," *NSF Educational Innovation Grant*, 1/1/01–12/31/03, $329,915.
24. D. Cook, L. Holder, S. Das, F. Kamangar and R. Yerraballi, "Remote Site Monitoring, Measurement, and Control," *Automation and Robotics Research Institute*, 5/1/00–8/15/00, $20,000.
25. D. J. Cook and L. B. Holder, "Scalable Knowledge Discovery," *Texas Higher Education Coordinating Board Advanced Technology Program*, 1/1/98–8/31/00, $108,346.
26. L. B. Holder and D. J. Cook, "Scalable Knowledge Discovery from Large Structural Databases," *NSF*, 2/15/97–8/31/00, $304,323.
27. L. B. Holder and D. J. Cook, "Problem-Solving Strategies for Knowledge-Based Engineering Applied to Generative N/C Programming," *Texas Instruments, Dallas, TX*, 8/16/94–1/15/95, $13,250.
28. D. J. Cook and L. B. Holder, "Parallel Knowledge Discovery from Large Complex Databases," *NASA CESDIS HPCC Program*, 7/1/93–9/30/96, $147,000.
29. L. B. Holder, "Control of Machine Learning Methods," *University of Texas at Arlington*

Research Initiation Grant, 9/1/91–8/31/92, $20,000.

Advising

Doctoral

1. Syeda Akter, "Graph Mining Sensor Network Data," May 2015 (expected).
2. Jason Fairey, "Decision-Making Based on a Reduction of Sensory Entropy," May 2015 (expected).
3. Yibo Yao, "Supervised Learning in Dynamic Graphs," May 2014 (expected).
4. Sutanay Choudhury, "Subgraph Isomorphism for Dynamic Graphs," May 2014 (expected).
5. Abhik Ray, "Frequent Subgraph Mining in Dynamic Graphs," May 2014 (expected).
6. Jeyanthi Narasimhan, "Link Mining in Dynamic Graphs," May 2014 (expected).
7. Joel Helkey, "Sensor Network Optimization Based on Target Application," May 2014 (expected).
8. Zachary Wemlinger, "Mining the Semantic Web Graph," May 2014 (expected).
9. Muksitul Haque, "Graph Mining in the Genome," December 2013 (expected).
10. Samuel Seth Long, "Graph Mining in Brain Imagery," December 2013 (expected).
11. Chang hun You, "Learning Patterns in Dynamic Graphs with Application to Biological Networks," August 2009. Currently a senior scientist at NetSeer, Inc.
12. Nikhil Ketkar, "Empirical Comparison of Graph Classification and Regression Algorithms," May 2009. Currently a software developer in the at TransMarket Group.
13. William Eberle, "Information Theoretic, Probabilistic and Maximum Partial Substructure Algorithms for Discovering Graph-Based Anomalies," May 2007. Currently an Assistant Professor in the Department of Computer Science at Tennessee Technological University.
14. Jacek Kukluk, "Inference of Node and Edge Replacement Graph Grammars," May 2007. Currently a Research Associate at the Dana-Farber/Harvard Cancer Center.
15. G. Michael Youngblood, "Automating Inhabitant Interactions in Home and Workplace Environments Through Data-Driven Generation of Hierarchical Partially-Observable Markov Decision Processes," co-advised with Dr. Diane Cook, August 2005. Currently an Assistant Professor in the Department of Computer Science at the University of North Carolina at Charlotte.
16. Istvan Jonyer, "Learning Context-Free Graph Grammars Using the Minimum Description Length Principle," August 2003. Currently in Partner Solutions at Google.
17. Jesus Gonzalez, "Empirical and Theoretical Analysis of Structural Concept Learning," August 2001. Currently an Investigator in the Department of Computer Science at the National Institute of Astrophysics, Optics and Electronics in Puebla, Mexico.

Masters

1. Ngan Dong, "Natural Language Generation from Graphs," May 2013.
2. Ruoyu Zou, "Frequent Subgraph Mining on a Single Large Graph Using Sampling Techniques," December 2010.
3. Damian Johnson, "Port Locale Modeling and Scenario Evaluation in 3D Virtual Environments," May 2009.

4. Allen Christiansen, "Modeling Sensors and Threats in a Three-Dimensional Real-Time Simulation of a Seaport Environment," May 2009.
5. Yan Zhang, "Improving the Efficiency of Graph-based Data Mining with Application to Public Health Data," December 2007.
6. Ashish Singh, "Improving the Survivability of Agents in a First-Person Shooter Urban Combat Simulation by Incorporating Military Skills," December 2007.
7. Janakiram Natarajan, "Simulation of Sensor Responses of Advanced Security Systems," August 2006.
8. Amar Singh, "Improving Security Detection Using Multiple Sensor Data," May 2006.
9. ChungHun You, "Application of Graph-based Data Mining to Biological Networks," December 2005.
10. Chris Gonsalves, "Comparison of Search-based and Kernel-based Methods for Graph-based Relational Learning," August 2005.
11. Bharat Kondeti, "Integration of the D'Artagnan Cognitive Architecture with Real-Time Simulated Environments," May 2005.
12. Maheshwar Nallachura, "Spatial Reasoning for Real-Time Simulated Environments," May 2005.
13. Nikhil Ketkar, "Comparison of Graph-based and Logic-based Relational Learning," December 2004.
14. Rohan Shah, "Empirical Comparison of Graph-Based Data Mining Systems Based on Minimum Description Length," December 2004.
15. Maitrayee Mukherjee, "Graph-Based Data Mining on Social Networks," August 2004.
16. Abhilash Maniam, "Graph-Based Click-Stream Mining for Categorizing Browsing Activity in the World Wide Web," August 2004.
17. Swapnil Palod, "Transformation of Relational Databases to Graphs for Data Mining," May 2004.
18. Amit Pant, "Improved Data Partitioning for Distributed Graph-Based Data Mining," December 2003.
19. Jacek Kukluk, "Algorithm and Experiments for Testing Planar Graphs for Isomorphism," December 2003.
20. Arash Rakhshan, "Structural Web Search Engine," August 2003.
21. Parag Mhashilkar, "Networking for the AMEBA Cognitive Architecture," August 2003.
22. G. Michael Youngblood, "Agent-Based Simulated Cognitive Intelligence in a Real-Time First-Person Entertainment-Based Artificial Environments," August 2002.
23. Ali Chousein, "Using Bayesian Model Averaging in Modeling Other Agents and Learning the Beliefs of Other Agents in Multi-Agent Environments," December 2001.
24. Gayathri Sampath, "Subdue Graph Visualizer," May 2001.
25. Bharath Peramur, "Development of Intelligent Process Agents for the Agent Based Manufacturing Operating System," August 2000.
26. Istvan Jonyer, "Hierarchical Conceptual Clustering Using a Graph-Based Knowledge Discovery System," May 2000.
27. Ravindra Chittimoori, "Discovering Substructures in Chemical Toxicity Domain," December 1999.
28. Kruti Mehta, "A Java-Based Client-Server Simulator for Intelligent Agent Design," December 1999.
29. Jesus Gonzalez, "Application of Structural Discovery to Real-World Datasets," May

1999.

30. Ron Maglothin, "Data Mining in DNA: Using the Subdue Knowledge Discovery System to Find Potential Gene Regulatory Sequences," May 1999.
31. Karthik Amirtharajan, "Agent-Based Manufacturing Operating System Architecture: Design and Implementation of a Generic Device Control Agent Language for Reconfigurable Automation," May 1999.
32. Thomas Duell, "A Study of Overfit in Inductive Learning," August 1998.
33. Shaobing Su, "Applications of Knowledge Discovery to Molecular Biology: Identifying Structural Regularities in Proteins," August 1998.
34. Sharon Barber, "Model-Based Object Recognition Using Invariants," May 1998.
35. Robert Duff, "EGOS: An Environment for Generalized Object-Oriented Simulation," May 1998.
36. Ramakrishna Kintada, "Detection of Closed Shapes in Images," May 1997.
37. Prasad Parthasarthy, "Subdue GUI: Interface of Graph-Based Discovery System with a Graph Visualization Tool," May 1997.
38. Stephen Poe, "Substructure Discovery in Image Data Using Subdue," August 1995.
39. Vikram Dintyala, "Object-Oriented Analysis and Graphical User Interface for the RSTA Subsystem of the Unmanned Ground Vehicle Project," May 1995.
40. Anurag Chaudhry, "Empirical Analysis of the General Utility Problem in Speedup Learning," August 1993.

Undergraduate Honors Theses

1. Heather Chan, "Real-Time Visualization of Graph-Based Data Mining," May 2004.
2. Pravin Muthukumar, "WISE: Wireless Intelligent Simulation Environment," Aug. 2001.
3. Istvan Jonyer, "Design, Implementation and Evaluation of a Dialog-based Interactive System," May 1999.
4. G. Michael Youngblood, "Autonomous Mobile Robot Exploration and Mapping of Place-Centric Occupancy Grids," May 1999.

CURRICULUM VITAE

Diane J. Cook
Huie-Rogers Chair Professor
School of Electrical Engineering and Computer
Science Washington State University
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http://www.eecs.wsu.edu/~cook/

Academic Degrees

Doctor of Philosophy, October 1990, emphasis in Artificial Intelligence, University of Illinois, Urbana, IL.
Topic: Base selection in analogical planning

Master of Science, May 1987, major in Computer Science, University of Illinois, Urbana, IL.
Topic: Automated modern music notation

Bachelor of Science, May 1985, major in Math/Computer Science, minor in Music, Wheaton College, Wheaton, IL.

Research Interests

Artificial Intelligence, Machine Learning, Data Mining, Robotics, Parallel AI Algorithms, Smart Environments

Courses Taught

- Introduction to Automata Theory (undergraduate)
- Data Structures (undergraduate)
- Theoretical Computer Science (graduate)
- Design and Analysis of Algorithms (graduate)
- Introduction to Artificial Intelligence (undergraduate and graduate)
- Genetic Algorithms and Neural Networks (undergraduate and graduate, designed course)
- Parallel Algorithms for Artificial Intelligence (graduate, designed course)
- Planning and Robotics (graduate, designed course)
- Planning and Decision Theory (graduate, designed course with P. Gmytrasiewicz)
- Data Mining (graduate, designed course)
- Gerontechnology I and II (graduate, multidisciplinary, designed course with M. Schmitter-Edgecombe)
- Advanced Topics in Machine Learning (graduate, designed course)

Honors and Awards

- Anjan Bose Outstanding Researcher of the Year Award, 2010
- WSU/EECS Excellence in Research Award, 2009, 2010
- FTRA Fellow, 2010 - present
- IEEE Fellow, 2007 - present
- IEEE Systems, Man, and Cybernetics Society, Outstanding Contribution Award, 2007
- Best paper award, Florida Artificial Intelligence Research Symposium, 2005
- Charter Member, Academy of Distinguished Scholars, University of Texas at Arlington, 2004
- UTA College of Engineering Research Excellence Award, 2004
- UTA Outstanding Research Achievement Award, 2002
- UTA Keeper of the Vision Award, 2002
- CSE Outstanding Teacher Award, 2001
- Lockheed Martin Award for Excellence in Teaching, 2000
- Sponsored student team with winning entry at AAAI Life On Mars robot competition, 1998

- NSF Career Development Award, 1995
- Halliburton Outstanding Young Faculty Award, 1995
- NSF Research Initiation Award, 1993

Professional Experience

August 2006 - Present
Huie-Rogers Chair Professor, School of Electrical Engineering and Computer Science, Washington State University, Pullman, WA.

May 2007 - Present
Data Mining Consultant for Organizations including
US Environmental Protection Agency, C. Grant and Company, Bosch

August 1992 - 2006
University Distinguished Scholar Professor (2004 - 2006), Professor (2001 - 2004), Associate Professor (1996 - 2001), Assistant Professor (1992 - 1996),
Department of Computer Science and Engineering, University of Texas at Arlington, Arlington, TX.

August 1999 - May 2001
Senior Data Mining Consultant, International Business Machines, Dallas, TX.

August 1992 - 2006
Faculty Associate, Automation and Robotics Research Institute, Fort Worth, TX.

June 1991 - August 1991; June 1992 - August 1992
Research Faculty Fellow, NASA Ames Research Center, Moffett Field, CA.

January 1991 - May 1992
Assistant Professor, Department of Computer Science and Engineering,
University of South Florida, Tampa, FL.

August 1989 - December 1991
Consultant for the National Center for Supercomputing Applications, Urbana, IL.

January 1990 - May 1990
Assistant for designing and teaching *Scientific Visualization* course in connection with National Center for Supercomputing Applications, Urbana, IL.

October 1990
Instructor for *Connection Machine Graphics* workshop, Urbana, IL.

January 1988 - December 1989
Teaching Assistant, University of Illinois, Urbana, IL.

June 1988 - August 1988 and January, 1989
Research Associate in Computer Science, International Business Machines, Almaden Research Center, San Jose, CA.

January 1986 - December 1987
Research Assistant for the Computer Music Project, University of Illinois, Urbana, IL.

June 1984 - August 1985
Software Consultant for Dr. William F. Nowlin, Merrillville, IN.

July 1985 - August 1985
Software Consultant for Gary Methodist Hospital, Gary, IN.

June 1985 - July 1985
Software Consultant for William James and Assoc., Wheaton, IL.

January 1984 - May 1985
Teaching Assistant, Wheaton College, Wheaton, IL.

Publications

Journal Articles

1. P. Dawadi, D. Cook, M. Schmitter-Edgecombe, and C. Parsey. Automated assessment of cognitive health using smart home technologies. Technology and Health Care, to appear.

2. N. Krishnan and D. Cook. Activity recognition on streaming sensor data. Pervasive and Mobile Computing, to appear.

3. P. Dawadi, D. Cook, and M. Schmitter-Edgecombe. Automated cognitive health assessment using smart home monitoring of complex tasks. IEEE Transactions on Systems, Man, and Cybernetics: Systems, to appear.

4. D. Cook, A. Crandall, B. Thomas, and N. Krishnan. CASAS: A smart home in a box. IEEE Computer, to appear.

5. A. Seelye, M. Schmitter-Edgecombe, D. Cook, and A. Crandall. Smart environment prompting technologies for everyday activities in mild cognitive impairment. Journal of the International Neuropsychological Society, to appear.

6. D. Cook, N. Krishnan and Z. Wemlinger. Learning a taxonomy of predefined and discovered activity patterns. Journal of Ambient Intelligence and Smart Environments, to appear.

7. G. Acampora, D. J. Cook, P. Rashidi, and A. Vasilakos. A survey on ambient intelligence in health care. Proceedings of the IEEE, to appear.

8. J. Lloret, C. Zorita, J. Aguiar, B. Carro, A. Sanchez-Esguievillas, D. Chinaaro, J. Gomez, and D. Cook. A multi-agent-system architecture for smart grid management and forecasting of energy demand in virtual power plants. IEEE Communications Magazine, to appear.

9. P. Rashidi, D. Cook, and W. Pan. COM: A method for mining and monitoring human activity patterns in home-based health monitoring systems. ACM Transactions on Intelligent Systems and Technology, to appear.

10. L. Callejo, J. Aguiar, L. Calavia, B. Carro, A. Sanchez-Esguevillas, D. Cook, D. Chinarro, and J. Gomez. A study of the relationship between weather variables and electric power demand, and its application to the smart world: smart grid, smart cities, smart environments, and smart systems. Sensors, to appear.

11. D. Cook, N. Krishnan, and P. Rashidi. Activity discovery and activity recognition: A new partnership. IEEE Transactions on Systems, Man, and Cybernetics, Part B, to appear.

12. D. Cook, K. Feuz, and N. Krishnan. Transfer learning for activity recognition: A survey. Knowledge and Information Systems, to appear.

13. C. Chen, D. Cook, and A. Crandall. The user side of sustainability: Modeling behavior and energy usage in the home. Pervasive and Mobile Computing, to appear.

14. D. De, W.Z. Song, S. Tang, D. Cook, and S. Das. Activity-aware sensor network in smart environments. Pervasive and Mobile Computing, to appear.

15. D. De, W.Z. Song, S. Tang, and D. Cook. EAR: An energy and activity aware routing protocol for wireless sensor networks in smart environments. The Computer Journal, to appear.

16. M. Haque, M. Skinner, L. Holder, and D. Cook. Generalized query based active learning to identify differentially methylated regions in DNA. IEEE/ACM Transactions on Computational Biology and Bioinformatics, to appear.

17. D. Cook and L. Holder. Automated activity-aware prompting for activity initiation. Gerontechnology, 11(4):1-11, 2013.

18. L. Chen, J. Hoey, C. Nugent, D. Cook, and Z. Yu. Sensor-based activity recognition: A survey. IEEE Transactions on Systems, Man, and Cybernetics, Part C, 42(6):790-808, 2012.

19. B. Das, D. Cook, M. Schmitter-Edgecombe, and A. Seelye. PUCK: An automated prompting system for smart environments. Personal and Ubiquitous Computing, 16(7):859-873, 2012.

20. A. Seelye, M. Schmitter-Edgecombe, B. Das, and D. Cook. Application of cognitive rehabilitation theory to the development of smart prompting technologies. Reviews in Biomedical Engineering, 5:29-44, 2012.

21. A. Aztiria, J. Augusto, and D. Cook. Discovering frequent user-environment interactions in intelligent environments. Personal and Ubiquitous Computing, 16(1):91-103, 2012.

22. D. Cook. How smart is your home? Science, 335:1579-1581, 2012.

23. D. Cook. Learning setting-generalized activity models for smart spaces. IEEE Intelligent Systems, 27(1):32-38, 2012.

24. D. Cook and S. Das. Pervasive computing at scale: Transforming the state of the art. Pervasive and Mobile Computing, 8(1):22-35, 2012.

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Patents Issued

- D. J. Cook and P. Rashidi. Systems and methods for adaptive smart environment automation. U.S. Patent 8,417,481, filed September 2, 2009, issued March 9, 2013.

Students

- Joey Baumgartner (MS, 12/93): "Genetic solutions to load balancing in parallel computers" Thesis was nominated by UTA for national "Outstanding Thesis Award".
- Shubha Nerur (MS, 4/94): "A hybrid parallel-window / distributed-tree algorithm for improving the performance of planning and search-related tasks"
  AAAI student paper, 1994.
- Kishore Durg (MS, 7/94): "A decision-theoretic model for optimizing the dynamic tradeoff between communication and failure recovery in multi-agent planning systems"
- Tom Lai (MS, 7/94): "A branch-and-bound graph isomorphism algorithm with application to CAD circuit discovery"
- Viralkumar Bharatia (MS, 12/94): "Design and analysis of multiagent coordination models"
  Recipient of UTA/CSE best master's thesis award, 1995
- Tim Roden (MS, 5/95): "A reactive model for multi-agent coordination"
- Vikram Jariwala (MS, 7/95): "Exploring WWW & graphics tools for organization publicity on the Internet"
- Szu-Ling Chuang (MS, 8/95): "Robot motion planning design and implementation"
- Andy Winger (MS, 10/95): "An empirical evaluation of plan reuse in STRIPS / PLANEX"
- Gehad Galal (MS, 5/97): "Design and comparison of parallel and distributed techniques for graph-based knowledge discovery"
- Sudheer Maremanda (MS, 4/99): "A graph visualization tool for data mining"
- Michael Finch (MS, 5/99): "Multiagent decision-theoretic map generation and maintenance"
- Avinash Kumar (MS, 8/99): "Simulation and analysis of frequency allocation algorithms for wireless communication networks"
- Ravi Althuru (MS, 12/99): "Design of a Java/Corba wireless communication network simulator"
- Praveenrao Kalmadi (MS, 8/00): "An adaptive approach to schedule requests for an on-line robot lab"
- Pratima Rao (MS, 12/99): "Design of a wireless robot communication network"
- Andi Baritchi (MS, 12/99): "Discovering interesting substructures in telecommunications data"
- Devaki Chandramouli (MS, 5/00): "Handshaking algorithms for a wireless robot communication network"
- Sona Srinivasan (MS, 5/00): "A CORBA based environment for distributed database access"
- Veena Raja (MS, 5/00): "Development of interestingness criteria for temporal pattern discovery"

- Trivikram Bhat (MS, 8/00): "Data mining of program source code"
- Sriram Subramanian (MS, 5/00): "Data mining in nonuniform distributed databases"
- Nitish Manocha (MS, 6/00): "Mining the Web link structure using a graph-based discovery system"
  Recipient of UTA/CSE Outstanding Master's Thesis Award, 2001
  Recipient of UTA University Scholar Award, 2001
- Pushpalatha Sreenath (MS, 8/00): "A JAVA-based animation of a substructure discovery algorithm"
- Jyothsna Nayak (MS, 8/00): "Association rule mining in the presence of incomplete and imprecise data"
- Aravind Ginjupalli (MS, 8/00): "A web search engine assistant tool"
- Manish Mehta (MS, 5/00): "Applying reinforcement learning with function approximation techniques to robot soccer"
- Mohammad Islam (MS, 12/00): "Learning hierarchical robot soccer playing strategies"
- Kevin Gee (MS, 5/01): "Extending LSA and NBC text mining algorithm using bigrams and parts of speech"
- Ashwini Kuntamukkala (MS, 11/01) "Development of the WISE simulator environment"
- Jessica Lin (MS 8/02): "Utility reasoning for a smart home operating as a rational agent"
- Priyath Sandanayake (MS, 8/02): "Learning HMMs for the Wumpus World environment"
- Sira Rao (MS, 5/03): "Predicting user actions in a smart home"
- Ritesh Mehta (MS, 7/03) "Graph-based identification of inhabitants in a smart environment"
- Sriram Rajappa (MS, 7/03) "Interactive biasing in graph-based data mining"
- Phanindra Powmpati (MS, 7/03) "Integrating ontologies into a graph-based data mining system"
- Runu Rathi (MS, 7/04): "Serial partitioning for a graph-based data mining system"
- Gaurav Jain (MS, 12/05): "Monitoring health by detecting drifts and outliers in patterns of an inhabitant in a smart home"
- Robert Hawes (MS, 12/05): "Probabilistic graph-based relational learning"
- Srilatha Inavolu (MS, 5/06): "Stochastic approaches to scaling discovery in graph data"
- Geetika Singla (MS, 5/09): "Recognizing ADL initiation and completion in a smart home"
- Jim Kusznir (MS, 1/09): "CLM as a smart home middleware"
- Yasamin Sahaf (MS, 8/11): "Comparing sensor modalities for activity recognition"
- Raghavendran Srinivasan (MS, 9/11): "Learning relationships between detected activities, sleep patterns, and physiological data"

- Gilbert Peterson (MS, 3/98; PhD, 8/01): "Learning opponent strategies in a multiagent competitive environment" (MS)
  "Decision-theoretic robot plan generation and execution" (PhD)
  Recipient of UTA/CSE Outstanding PhD Research award, 2001
- Vikramaditya Jakkula (MS, 12/07; PhD expected, 5/13): "Using temporal relations to enhance anomaly detection and event prediction" (MS)
  "Recognizing critical conditions from environment sensor event mining" (PhD)
- Surnjani Djoko (PhD, 8/95): "Evaluating the role of domain knowledge in substructure discovery"
  AAAI student paper, 1994
  Recipient of UTA/CSE Best PhD Thesis Award, 1996
- William Briggs (PhD, 8/96): "Modularity and communication in multiagent planning"
- Kang Soo Tae (PhD, 5/97): "Experimentation-driven learning of planning operators" AAAI student paper, 1996
- Craig Varnell (PhD, 8/97): "An architecture for improving the performance of parallel search"
- Billy Harris (MS, 5/95; PhD, 5/02): "Hierarchical Analogical Planning" (MS)
  "Improving the Efficiency and Applicability of Planning" (PhD)
- Darin Brezeale (MS, 8/99; PhD, 12/07): "Design of an intelligent agent to support web-based stock market investment" (MS)
  "Learning video preferences using closed caption and video features" (PhD)
- Joe Potts (MS, 2/97; PhD, 5/06): "Parallel knowledge discovery techniques" (MS)
  "A probabilistic approach to graph-based data mining" (PhD)
- Charles Hannon (PhD, 8/00): "Modeling language learning in children"
- Jeff Coble (PhD, 8/05): "Relational discovery in sequentially-connected data streams: Efficient algorithms for lossless pattern discovery and change detection"
- Ed Heierman (PhD, 11/04): "Using information-theoretic principles to discover interesting episodes in a time-ordered sequence"
- Michael Youngblood (PhD, 8/05) "Creation of a dynamic agent hierarchy for intelligent environments"
- Parisa Rashidi (MS, 12/07; PhD 2/11): "Incorporating user feedback into a smart home automation model" (MS)
  "Scaling Activity Discovery Recognition to Large, Complex Datasets" (PhD)
  Recipient of WSU/EECS Outstanding Graduate Student Award, 2011
- Aaron Crandall (PhD, 2/11): "Behaviometrics for multiple residents in a smart environment"
- Chao Chen (PhD, 4/13): "Investigating the human behavior side of building energy efficiency"
- Prafulla Dawadi (PhD expected 5/14): "Tracking and prompting missing steps in daily activities"

- Brian Thomas (PhD expected 5/14): "Automation of electrical devices to support learning-based energy efficiency"
- Barnan Das (PhD expected 5/14): "Automated functional assessment using machine learning technologies"
- Ehsan Nazerfard (PhD expected 5/14): "Timing and packaging effective cues in smart environments"
- Jennifer Williams (PhD expected 5/14): "Trend detection in functional health for older adults"
- Kyle Feuz (PhD expected 5/14): "Learning home control patterns using sequence analysis"
- Salikh Bagaveyev (PhD expected 5/14): "Active learning for crowd sourcing"
- Chris Cain (PhD expected 5/16): "Studying the effects of automated economic incentives for energy-efficient home automation"
- External dissertation committee member for students from University of South Florida, Arizona State University, Yale University, Massey University
- Also supervised twelve undergraduate projects: one of these students (Brijesh Bhatia) won a UTA CSE award (1997) and a Sigma Xi outstanding undergraduate research project award (1997), another of these students (Shar Whisenhunt) won a McNair scholarship (1997, 1998), a CSE undergraduate scholarship (1998), and an American Minority Program scholarship (1997, 1998). Her project also won a Sigma Xi outstanding undergraduate research project award (1998), a SURCA Engineering award (1998), and a McNair outstanding presentation award (1998). Undergraduate Scott Taylor published two conference papers on his research project. Undergraduate Courtney Pace published one conference paper on her research project and won first prize in the statewide paper competition for the Louis Stokes Alliance for Minority Participation (LSAMP) Program (2002).

Professional Societies and Activities

Editor In Chief:

IEEE Transactions on Systems, Man, and Cybernetics, 2005 - 2009

Associate Editor:

ACM Transactions on Knowledge Discovery from Data, 2012 - present
ACM Transactions on Intelligent Systems and Technology, 2012 - present
IEEE Transactions on Systems, Man, and Cybernetics, 1999 - 2004
IEEE Transactions on Knowledge and Data Engineering, 2006 - 2010
Knowledge and Information Systems, 2011 - present
Ambient Intelligence and Humanized Computing, 2009 - present

Editorial Board:

International Journal of Social Network Mining, 2010
Journal of Artificial Intelligence Research, 2006 - present
Journal of Pervasive and Mobile Computing, 2007 - present

ICST Transactions on Future Intelligent Educational Environments, 2012 – present
ICST Transactions on Ubiquitous Environments, 2008 - present
IOS Press book series on Ambient Intelligence and Smart Environments, 2008 – present
Intern. Journal of Computer Vision and Signal Processing, 2011 - present
Intern. Journal of Information Technology, Communications and Convergence, 2009 – present
Journal of Intelligent Information Systems, 2010 - present

Advisory Board:
Ambient Intelligence and Smart Environments, 2007 – present
International Conference of Hybrid Intelligent Systems, 2011
International Journal of Intelligent Computing and Cybernetics, 2007 – present
International Journal of Smart Home, 2007 - present
International Conference on Intelligent Systems Design and Applications, 2008
International Conference of Soft Computing and Pattern Recognition, 2009
International Journal of Life Sciences and Technology, 2008 – present
International Workshop on U-Healthcare Technologies and Services, 2010
Machine Intelligence Research Labs, 2010 - present
Nature and Biologically Inspired Computing, 2008 – present
International Conference on Personal Health (pHealth), 2011
VM BioSciences Journal, 2007 - present
IEEE Conference on Cybernetics and Intelligent Systems, 2007 – present
IEEE SMC Technical Committee on Cognitive Computing, 2008 – present
Research Unit of Fondazione Cariplo

General Chair:
International Conference on Data Mining, 2013
AAAI Fall Symposium on AI for Gerontechnology, 2012
IEEE International Conference on Pervasive Computing and Communications, 2011
NSF Workshop on Pervasive Computing at Scale (with Andrew Campbell and Roy Want), 2011
International Conference on Intelligent Environments, 2008
Florida Artificial Intelligence Research Symposium, 2005
North Texas Natural Language Processing Workshop (with Dan Moldovan), 1994

Program Chair:
International Conference on Data Mining, 2011
Special Session on Intelligent Knowledge-Based and Agent-Based Systems at the International Conference on Intelligence Environments, 2009
Workshop on Artificial Intelligence Techniques for Ambient Intelligence, 2009-2013
Special Track on Intelligent Environments at the Pervasive Computing Conference, 2003
Special Track on AI and Education at FLAIRS, 2003
National Science Foundation Information and Data Management Workshop (with S. Chakravarthy), 2001
Machine Learning Workshop on Learning From Spatial Information, 2000
Florida Artificial Intelligence Research Symposium, 1998

Program Vice-Chair:
ACM International Conference on Information and Knowledge Management, 2014
International Conference on Data Mining, 2009, 2010
IEEE International Conference on Tools with Artificial Intelligence

Publication Co-Chair:
International Conference on Ubiquitous Computing, 2009

Industry and Professional Society Liaison:
IET/IEEE International Conference on Intelligent Environments, 2009-2010

Workshop Co-Chair:
IEEE PerCom Workshop on Smart Environments, 2010
International Conference on Intelligent Environments, 2009-2010

Area Chair:
International Conference on Tools with AI, 2009

Track Chair:
ACM Conference on Information and Knowledge Management (CIKM), 2010

Poster Co-Chair:
SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2010

Guest Editor:
Journal of Pervasive and Mobile Computing,
special issue on Pervasive Health, 2012
(with Franca Delmastro, Marge Skubic, and Paul Lukowitz)
ACM Transactions on Intelligent Systems and Technology,
special issue on intelligent systems for socially aware computing, 2012
(with Zhiwen Yu, Daqing Zhang, and Nathan Eagle)
Journal of Pervasive and Mobile Computing,
special issue on Knowledge-Driven Activity Recognition in Intelligent Environments, 2010
(with Liming Chen, Chris Nugent, and Zhiwen Yu)
Journal of Pervasive and Mobile Computing,
fast track issue on Intelligent Environments, 2009
Journal of Ambient Intelligence and Smart Environments,
special issue on Body Area Networks and Ambient Intelligence, 2008
(with WenZhan Song)
Journal of Pervasive and Mobile Computing,
special issue on Design and Use of Smart Environments, 2007
International Journal of Pattern Recognition and Artificial Intelligence,
special issue on selected papers from the FLAIRS conference, 2005
IEEE Pervasive Computing,
special issue on selected papers from the Pervasive Computing Conference, 2004
International Journal of Pattern Recognition and Artificial Intelligence,
special issue on selected papers from the FLAIRS conference, 1998
IEEE Wireless Communications,
special issue on Smart Homes, 2001
(with Sajal K. Das)

Tutorial:
IJCAI Tutorial on Ambient Intelligence (with J. Augusto), 2007
AAAI Tutorial on Ambient Intelligence (with J. Augusto and H. Guesgen), 2008

Panelist:

NIH, 2011, 2012
NSF IIS Large Program, 2008 NSF EIC Program, 2009
NSF ERC Program, 2007, 2010 NSF CAREER Program, 2007
NSF ITR Program, 2002
NSF Division of Information and Intelligent Systems, 2003
NSF Division of Information, Robotics, and Intelligent Systems, 1994-1999, 2001-2003
NSF Division of Cross-Disciplinary Activities, 1996
NSF Site Visit Panelist, 1996 National Research Council Research Council of Norway

Scientific Committee:

International Conference on Smart Homes and Health Telematics (ICOST)

Program Committee:

AAMAS Workshop on Human Aspects in Ambient Intelligence, 2008-2013 ACM Symposium on Applied Computing, 1993
Artificial Intelligence in Design Conference Series, 1992 Canadian Conference on Artificial Intelligence, 2004
CODATA International Workshop on Motion and Vital Data Acquisition, Storage and Trends for Aging Pop Cognitive Collaborative Appliances Workshop, 2008
Conference on Applications for Artificial Intelligence, 1991 Conference on Systems, Cybernetics and Informatics, 2001
ECML/PKDD Workshop on Graph, Tree, and Sequence Mining and Learning, 2004
EvAAL Activity Recognition Competition, 2012
Florida Artificial Intelligence Research Symposium, 1991, 1999-2013 FLAIRS Special Track on Data Mining, 2007-2013
FLAIRS Special Track on Parallel and Distributed Reasoning, 1999 FLAIRS Special Track on Knowledge Discovery and Data Mining, 2001 FLAIRS Special Track on Machine Learning, 2001-2002, 2004-2007 FLAIRS Special Track on AI and Education, 2004
FLAIRS Special Track on Machine Learning for Planning, 2004
HTL-NAACL Workshop on Graph-Based Algorithms for Natural Language Processing, (TextGraphs), 2006
IEEE Symposium on Intelligent Agents, 2009
ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2005, 2006, 200 KDD Workshop on Anomaly Detection, 2005
KDD Workshop on Link Discovery and Group Detection, 2005-2006 KDD Workshop on Mining and Learning with Graphs, 2010-2011 KDD Workshop on Multi-relational Data Mining, 2002-2005
IAPR Workshop on Graph-based Representations in Pattern Recognition, 2010-2011
Iberoamerican Workshop on Machine Learning for Scientific Data Analysis, 2004 IEEE Emerging Technologies Conference, 2006
IEEE International Conference on Cyber, Physical and Social Computing, 2011
IEEE International Conference on Pervasive Computing and Communication (PerCom), 2004-2010, 2012
IEEE International Conference on Pervasive Intelligence and Computing, 2010
IEEE International Symposium on Intelligent Agents, 2008, 2010
IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing, 2008-2013 IEEE PerCom Workshop on Smart Environments (SmartE), 2011
IEEE PerCom Workshop on Pervasive Healthcare, 2010

IEEE World Congress on Computational Intelligence, 2012
IEEE Workshop on Managing Ubiquitous Communications and Services, 2013
IEEE WoWMom Workshop on Interdisciplinary Research on E-Health Services and Systems, 2010
International Conference on Agents and Artificial Intelligence, 2008-2013
International Conference on Advanced Data Mining and Applications, 2011-2012
International Conference on Advances in Social Networks Analysis and Mining, 2010-2013
International Conference on Health Informatics, 2013
International Conference on Machine Learning (ICML), 2003-2006
International Conference on Machine Learning and Applications, 2011
International Conference on Multimedia and Ubiquitous Engineering, 2007-2008
International ICST Conference on Mobile and Ubiquitous Systems: Computing, Networking, and Services, 2011
International Conference on Pervasive and Embedded Computing and Communication Systems, 2011-2014
International Conference on Smart Systems, Devices and Technologies, 2012-2013
International Conference on Ubiquitous Computing and Ambient Intelligence, 2012-2013
International Symposium on Ambient Intelligence, 2012
International Symposium on Ubiquitous Applications and Security Services, 2009
International Symposium on Ubiquitous Computing Systems, 2007-2009
International Workshop on Knowledge Discovery from Sensor Data, 2009-2011
International Workshop on Mining and Learning with Graphs, 2007
International Workshop on Situation, Activity and Goal Awareness, 2011-2012
Innovative Applications of Artificial Intelligence Conference (IAAI), 2003-2007
International Conference on Pervasive Technologies for Assistive Living, 2007
International Conference on Physiological Computing Systems, 2014
IEEE International Conference on Tools with Artificial Intelligence, 2001, 2003
International Conference on Smart Homes and Health Telematics (ICOST), 2003-2013
International Conference on Systems, Man and Cybernetics, 2003-2007
International Conference on Data Mining (ICDM), 2003, 2005, 2012
ICDM Workshop on Multi-Agent Data Warehousing and Multi-Agent Data Mining, 2005
First International Workshop on Mobile Distributed Computing, 2003
International Joint Conference on Artificial Intelligence (IJCAI), 2006, 2011
IJCAI Workshop on Artificial Intelligence Techniques for Ambient Intelligence, 2006
International Joint Conference on Autonomous Agents & Multi-Agent Systems, 2002
International Workshop on Bioinformatics in Data Mining (BIOKDD), 2001
International Conference on Intelligent Systems, 2001
International Conference on Discovery Science, 2001-2002
International Conference on Intelligent Systems for Molecular Biology, 1998-2000
International Symposium in Ambient Intelligence, 2011
KDD Workshop on Mining and Learning with Graphs, 2011
Mexican International Conference on Artificial Intelligence, 2010
Pacific Symposium on Biocomputing, 1999-2000
Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2007-2013
Pervasive 2012 Workshop on Recent Advances in Behavior Prediction and Pro-Active Pervasive Computing, 2012
Portuguese Conference on Artificial Intelligence, special track on Ambient Intelligence Environments, 2011
SIAM International Conference on Data Mining, 2010-2013
Southern Conference on Computing, 2000

Symposium on Educational Advances in Artificial Intelligence, 2011-2012
Workshop on Behavior Informatics, 2012
Workshop on Future Intelligent Educational Environments, 2012
Workshop on the Predictive Toxicology Challenge, 2001

Reviewer:

AAAI workshop program, 2000
Academy of Finland, 2008, 2012
Addison-Wesley
AI Magazine
Air Force Office of Sponsored Research
Alzheimer's Association Program on Everyday Technologies for Alzheimer's Care, 2007
Artificial Intelligence in Medicine
Artificial Intelligence Journal
Bioinformatics Journal
BioNanoScience
Cambridge University Press
Computational Intelligence
Computer Magazine
Data Mining and Knowledge Discovery
Decision Support Systems
Journal Fundamenta Informaticae
GRE Computer Science Example, Writer and Reviewer, 2006
IEEE Computer
IEEE Computer Society Press
IEEE Concurrency
IEEE Expert
IEEE Fellow Evaluator, 2011 – 2012
IEEE Intelligent Systems
IEEE Parallel and Distributed Technology: Systems and Applications
IEEE Transactions on Automation Science and Engineering
IEEE Transactions on Computers
IEEE Transactions on Information Technology in BioMedicine
IEEE Transactions on Knowledge and Data Engineering
IEEE Transactions on Pattern Analysis and Machine Intelligence
IEEE Transactions on Sensor Networks
IEEE Transactions on Systems, Man and Cybernetics Information Processing Letters
Information Systems
International Conference on Artificial Intelligence in Design
International Conference on Industrial and Engineering Applications of AI and Expert Systems
International Joint Conference on Neural Networks (2000)
International Journal of Expert Systems: Research and Applications
International Journal of Computer Aided Engineering and Technology
International Journal of Pattern Recognition and Artificial Intelligence
Journal of the American Society of Information Systems
Journal of Parallel and Distributed Computing Journal of Pervasive and Mobile Computing
Knowledge and Information Systems Journal
Machine Learning Journal
McGraw-Hill

Prentice Hall
National Institutes of Health / Robotics Technology Development and Deployment, 2011
Natural Sciences and Engineering Research Council of Canada (NSERC), 1998, 2006
Neurocomputing, 2011
NSF CISE, 2010
NSF Division of Microelectronic Information Processing Systems, 1994
NSF Biomedical Program (external reviewer), 2005
NSF CREST Program (external reviewer), 2004
NSF Large Scientific and Software Data Set Visualization Program (external reviewer), 1999
NSF NetSE Program, 2010
NSF US-Egypt Joint Research Program (external reviewer), 2005
NSF US-India Program for Exploratory Experiences for Researchers and Students (PEERS), 2008
Pattern Recognition, 2006
Transactions on Information Technology in BioMedicine

Member:

American Association for Artificial Intelligence (AAAI)
Fellow, Institute of Electrical and Electronics Engineers (IEEE) Fellow, Future Technology Research Association International (FTRA) Phi Beta Delta
IEEE Systems, Man, and Cybernetics Society Board of Governors, 2004-2006 IEEE Task Force on Intelligent Agents, 2007
IEEE Task Force on Emergent Technologies, 2011-2012
IEEE CIS Emergent Technology Technical Committee, 2009-2010 Member, Alzheimer's Association Work Group on Technology, 2006
Sigma Xi (Admissions Coordinator for UTA Chapter of Sigma Xi, 1998 - 2000) Chapter won a National Chapter Certificate of Excellence, 1998
Faculty Member, Center for Research in Wireless Mobility and Networking (CReWMaN), 2000-2006
Faculty Advisor for Honor's Program in Parallel Processing, 1995 - 2000

Invited Talks:

Consumer Communications and Networking Conference, 2012 UW/WSU Board of Regents, 2011
International Conference on Smart Homes and Health Telematics, 2011
Innovation in the Age of Reform, Swedish 100th Anniversary Symposium, 2010
Orcatech, 2009
Pullman Chapter of Kiwanis, 2009 University of Idaho, 2008
International Conference on Supportive Technology and Design for Healthy Aging, keynote speaker, 2008
WSU Vancouver Chancellor's Seminar Series, 2008
The Innovators, 2008
International Conference on Body Area Networks, keynote speaker, 2008 TSPE, 2006
Mid-Cities Technical Club, 2005 University of North Texas, 2004
Arlington Rotary Club, 2004 Southern Methodist University, 2003
First International Workshop on Distributed Computing with Agent Technologies, 2002
Dallas Group for Ergonomics and Human Factors, 2002
Seminar on Intelligent Environments at the meeting of the Texas Society of Professional Engineers, 2002
National Institute of Standards and Technologies, Gaithersburg, Maryland, 2001

International Business Machines Watson Research Center, Yorktown, New York, 2001
University of Texas at Dallas, Dallas, Texas, 2001
International Business Machines, New York City, New York, 2000
SABRE Corporation, Dallas, Texas, 2000
International Symposium on Computer Science, Torreon, Coahuila, Mexico, 1997 IPPS, 1995 (with B. Shirazi and J. Baumgartner)
IEEE Robotics and Automation Conference, Workshop on Ideal Factory of the Future, 1994
Workshop on Distributed Computing and Agent Technologies, 2002
Metrocon '02
Metrocon '96
Metrocon '95
MIND Workshop, 1993
NTAAI Workshop, 1992

Faculty Advisor:
Society of Women Engineers (1993 - 2001)
Undergraduate Honors Program in Parallel Processing (1995 - present)
Autonomous Vehicles Systems Team (1995 - 2000)
Society of Professional Hispanic Engineers (1993 - 1997)
Kung Fu Club (1995 - 1997)

Support

Smart environment technology for longitudinal behavior analysis and intervention, (PI), National Institutes of Health, $1,566,691, 09/30/12 - 09/29/16.

Design of a smart community, (PI), Cisco, $15,000, 06/01/12 - 12/31/12.

CASAS-Care: Pilot Study of a Smart Home in a Box, (PI), Life Sciences Discovery Fund, $149,312, 01/01/12 - 12/31/12.

SHB: Medium: Collaborative Research: Crafting a Human-Centric Environment to Support Human Health Needs (PI, with M. Di Francesco, University of Texas at Arlington), NSF, $1,050,426, 07/01/11 - 06/30/15.

Smart Home-Based Analysis and Automation for Energy Efficiency (PI), Avista, $200,000, 07/01/11 - 06/30/14.

Interactive, Self-programming AI System for Activity Monitoring of the Elderly (PI), NIH, sub- contract to Ingenium, $56,196, 04/11/11 - 04/10/12.

NSF Workshop on Pervasive Computing at Scale, NSF, $98,000, 11/1/10 - 10/31/11.

PerCom Student Travel Support, NSF, $20,000, 1/1/11 - 12/31/11.

Research Experiences for Undergraduates in Smart Environments (PI, with B. Shirazi), NSF REU Program, $326,770, 5/1/10 - 4/30/14.

Discovering, Visualizing, and Tracking Patterns in Sensor Streams (PI), Bosch, $100,000, 8/1/10 - 07/31/11.

IGERT: Integrative Training in Health-Assistive Smart Environments (PI, with L. Holder, B. Shirazi, M. Schmitter-Edgecombe, and S. Jayaraman), NSF, $2,999,928, 7/1/09 - 6/30/14.

Smart Environment Technologies for Health Monitoring and Intervention (PI, with M. Schmitter-Edgecombe), NIH, $1,276,965, 3/1/10 - 2/28/14.

Activity-Aware Sensor Network for Smart Environments (PI, with W. Song), NSF, $300,000, 10/1/09 - 9/30/12.

II-EN: Smart Environment Infrastructure for Resident and Environment Modeling (PI), NSF, $300,000, 6/1/09 - 5/31/12.

Learning Activity Profiles for Smart Environment Residents for Functional Health Monitoring and Intervention (PI), Bosch, $75,000, 1/15/09 - 5/31/10.

Smart home-based health platform for functional monitoring and intervention (PI, with M. Schmitter-Edgecombe), Life Sciences Discovery Fund, $790,906, 1/1/09 - 12/31/12.

Predicting Intent from Real-World Datasets, (co-PI, with S. Thompson), DOE, $40,000, 4/1/08 - 3/31/09.

Smart Home-based Health Platform for Behavioral Monitoring and Alteration for Diabetic and Obese Individuals (PI), NIH/University of Florida, $267,000, 11/1/07 - 10/30/11.

Subdueing RHSEG, (co-PI, with J. Tilton), NASA, $100,000, 10/15/07 - 10/14/08.

Research Experiences for Underrepresented Undergraduates in Smart Environments (co-PI, with B. Shirazi), NSF REU Program, $277,768, 3/15/07 - 3/14/10.

SEI: Graph Based Mining of Public Health Data (PI, with L. Holder and K. Singh, NSF, $481,971, 8/1/05 - 7/31/08.

Transfer Learning in Integrated Cognitive Systems (co-PI, subcontract to ISLE), DARPA, $1,864,420, 10/1/05 - 9/30/08.

Graph-Based Structural Pattern Learning (co-PI, with L. Holder), Naval Research Lab, 1/1/05 - 12/31/05, $118,000.

Application of Graph-Based Pattern Learning to Financial Transaction Data, Booz-Allen-Hamilton (co-PI, with L. Holder), $30,000, 9/1/04-8/31/05.

Graph-Based Structural Pattern Learning (co-PI, with L. Holder), U.S. Air Force EAGLE Program, $220,000, 1/1/04 - 12/31/05.

ITR Collaborative Research: Pervasively Secure Infrastructures (PSI): Integrating Smart Sensing, Data Mining, Pervasive Networking, and Community Computing (co-PI, with S. K. Das, K. Basu, L. Holder, M. Kumar, F. Lewis, and B. Shirazi), NSF, $1,000,000, 1/1/04 - 12/31/09.

Connect: A Personal Remote Messaging and Monitoring Infrastructure for Persons with Disabilities (co-PI, with F. Kamangar, S. K. Das, M. Huber, M. Kumar, D. Levine, D. Schoech, B. Shirazi, J. Smith, K. Varghese, and G. Zaruba), Texas Health and Human Services Commission, $2,000,000, 9/1/03 - 8/31/05.

Research Experiences for Undergraduates in Distributed Rational Agents (co-PI, with M. Huber and B. Shirazi), NSF REU Program, $191,000, 1/1/02 - 12/31/04.

An Active, Collaborative Learning Program in Smart Home Technologies (co-PI, with M. Huber, L. Burnell, C. Hannon, and J. Priest), NSF CISE Research Infrastructure Program, $324,000, 5/1/02 - 4/30/05.

MavHome: An Intelligent Home Environment, (PI, with S. Chakravarthy, S. K. Das, L. Holder, M. Huber, F. Kamangar, and R. Yerraballi), NSF ITR Program, $1,159,959, 9/1/01 - 8/31/04. REU supplement 2002, $14,500; REU supplement 2003, $10,000.

Graph-Based Data Mining, (PI, with L. Holder and S. Chakravarthy), NSF, $442,487, 9/1/01 - 8/31/04. REU supplement, $10,000, 1/1/02 - 12/31/02.

Instrumentation for Intelligent Agent and Wireless Computing Research, (PI, with L. Holder, S. K. Das, M. Huber, and R. Yerraballi), NSF Major Research Instrumentation Program, $426,284, 9/1/01 - 8/31/04.

Graph-Based Structural Pattern Learning (co-PI, with L. Holder), DARPA, $375,000, 9/1/01 - 12/31/03.

NASA Graduate Student Funding (PI, with J. Potts), $48,000, 9/1/01 - 8/31/03.

Integrating Intelligent Agent and Wireless Computing Research into the Undergraduate Curriculum, (PI, with L. Holder, F. Kamangar, S. K. Das, and R. Yerraballi), NSF Educational Innovation, $329,915, 1/1/01 - 12/31/03.

Remote Site Monitoring, Measurement, and Control (PI, with L. Holder, F. Kamangar, S. K. Das, and R. Yerraballi), ARRI, $20,000, 5/1/00 - 8/15/00.

Research Experiences for Undergraduates in Tools for Concurrent Programming (co-PI, with B. Shirazi), NSF, $126,000, 6/1/99 - 5/30/02.

Scalable Knowledge Discovery (PI, with L. Holder), Texas ATP, $108,346, 1/1/98 - 12/31/99.

Equipment for Next Generation Supervisory and Real-Time Controller for Reconfigurable Manufacturing Workcells (co-PI, with F. Lewis), NSF, $110,091, 9/1/97 - 8/31/00.

Scalable Knowledge Discovery from Large Structural Databases (co-PI, with L. Holder), NSF, $304,323, 2/15/97 - 2/14/00.

Design of a Distributed Computing Environment Using PowerPC Microkernel (PI, with B. Shirazi and K. Kavi), NSF, $62,000, 3/1/96 - 2/28/99.

A Microkernel-Based Operating Systems Laboratory (PI, with K. Kavi, B. Shirazi, D. Umbaugh, and D. Levine), NSF, $81,500, 8/1/95 - 7/31/98.

Scaling Up Planning Systems Using Parallel Hardware and Machine Learning
NSF Career Development Award, $135,000, 6/1/95 - 6/31/98.
REU supplement, $12,375, 9/1/97 - 7/31/98.

Equipment Development for High-Performance Robotic Intelligent Material Handling in Unstruc- tured Environments (co-PI, with F. Lewis and K. Liu)
NSF, $210,784, 10/1/94 - 9/30/99.

Problem Solving Strategies for Knowledge-Based Engineering applied to Generative N/C Program- ming (co-PI, with L. Holder)
Texas Instruments, $13,250, 8/16/94 - 1/15/95.

Graduate Research Traineeships in Robotics / Intelligent Control (co-PI, with F. Lewis) NSF, Graduate Research Traineeships, $558,000, 9/1/94 - 8/31/99.

Parallel Knowledge Discovery from Large Complex Databases (PI, with L. Holder)
NASA, CESDIS HPCC program, $147,000, 7/1/93 - 6/30/96.

Parallel Artificial Intelligence Techniques Applied to Robot Planning
NSF, Research Initiation Award, $99,926, 6/1/93 - 5/31/96.

Planning and Control of Reconfiguration in Multiagent Systems (co-PI, with K. Harbison-Briggs) ARPA, $750,000, 4/22/93 - 6/30/96.

Development of Parallel Heuristic Search and Planning Techniques, National Center for Super- computing Applications, Connection Machine 2 and Connection Machine 5 usage, 4/21/93 - 4/20/95.

Development of Parallel Heuristic Search and Planning Techniques, NAS / NASA Ames, Intel iPSC/860 and Intel Paragon usage, 6/1/94 - 5/30/95.

Analysis and Design Methodologies for Autonomous Vehicles (co-PI, with K. Harbison-Briggs, S. Hufnagel, and B. Hammons)
Hughes Research Laboratory, $128,000, 4/15/93 - 9/30/93.

Parallel Algorithms for Machine Learning Methods Applied to Robot Path Planning University of Texas at Arlington Research Initiation Grant,
$20,000, 9/1/92 - 8/31/93.

The Creation of Parallel Algorithms for Analogical Planning
DSR Faculty Research and Creative Scholarship
Program,
$5,000, 4/1/91 - 3/31/92.

Curriculum Vitae
Maureen Schmitter-Edgecombe, Ph.D.

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EDUCATION

Ph.D. August, 1994	The University of Memphis, Memphis, TN Major**:** APA Clinical Psychology with specialized training in Neuropsychology
Internship July, 1993-94	University of Arizona Health Sciences Center, Tucson, AR Specialty Training**:** INS and APA Division 40 Clinical Neuropsychology
M.S. August, 1991	The University of Memphis, Memphis, TN Major**:** APA Clinical Psychology with specialized training in Neuropsychology
B.S. May, 1988	Bucknell University, Lewisburg, PA Major: Biology with coursework completed for major in Psychology

ACADEMIC APPOINTMENTS

August, 2007	Professor, Department of Psychology, Washington State University, Pullman, WA
August, 2000	Associate Professor, Department of Psychology, Washington State University, Pullman, WA
August, 1994	Assistant Professor. Department of Psychology, Washington State University, Pullman, WA

HOSPITAL APPOINTMENTS

June, 1993-94	Psychology Intern. Department of Psychiatry, University of Arizona Health Sciences Center, Tucson, AR
Summer, 1992	Psychology Summer Intern. Department of Psychology, Veterans Administration Medical Center, Memphis, TN

OTHER PROFESSIONAL POSITIONS

2002-04	Director of Clinical Training, Department of Psychology, Washington State University, Pullman, WA
2002-	Licensed Clinical Psychologist. Psychology Clinic, Washington State University, Pullman, WA
2000-01	Interim Director of Clinical Training, Department of Psychology, Washington State University, Pullman, WA
1989-93	Therapist. Psychological Services Center, University of Memphis, Memphis, TN
1988-90	Neuropsychology Technician. Cortical Brain Assessment Laboratory, Baptist Memorial Hospital, Memphis, TN

FELLOWSHIPS, RESEARCH AWARDS, AND HONORS

2012	2010 International Research Grant awardee selected for sponsorship by the Alzheimer's Association Research Roundtable (AARR). Fellowship to present at AARR meeting.
2011-2014	Meyer Distinguished Professor, CLA, Washington State University
2010	Fellowship to present at the National Institute of Health Workshop on Personal Motion Technologies for Independent Living
2007	Microsoft and University of Rochester Fellowship to attend Workshop on Intelligent Systems for Assisted Cognition
2004-05	Presented at the Galveston Brain Injury Conference with a Grant from the Moody Endowment
2004	Adams award for Excellence in Graduate Mentorship in Experimental Methodology, WSU Psychology
2003-04	NIA Fellowship to participate in the Psychology of Aging Institute
2002	Appointed to the Graduate Faculty in the Program of Neuroscience
2002	APA Fellowship to attend an Advanced Summer Training Institute on Functional Magnetic Resonance Imaging
1993	APA Dissertation Research Award Recipient
1992-93	Van Vleet Memorial Doctoral Fellowship, University Fellowship
1991-92	Van Vleet Memorial Doctoral Fellowship, University Fellowship
1990-91	Vidulich Research Fellowship, Departmental Fellowship
1990	National Academy of Neuropsychology Student Research Award
1989	Phi Kappa Phi, National Honor Society
1988	Graduated Cum Laude and with Honors in Psychology, Bucknell University
1987	Sigma Xi, National Honor Society for Biology

FUNDED GRANTS: External

Improving Awareness, Training in and Access to Aging Services Technologies (ASTs) for individuals with Dementia, their Caregivers, and Health-care Providers. *Attorney General's Office, Washington State*, 2013-2015, $206,103. PI.

Smart Environment Technology for Longitudinal Behavior Analysis and Intervention. *NIH: National Institute of Biomedical Imaging and Bioengineering*. #R01 EB015853 2012-2016, $1.5M. MPI

A Multi-dyad Cognitive Rehabilitation Intervention. *Alzheimer's Association*. 2011-2013, $320,000. PI.

Smart Environment Technologies for Health Assessment and Assistance. *NIH: National Institute of Biomedical Imaging and Bioengineering*. #R01 EB009675 2010-2014, $1.2M. MPI.

Integrative Training in Smart Environment and Health Technologies. *National Science Foundation*. IGERT funding. #DGE-0900781 2009-2014, $2.9M. Co-PI.

Smart Home-Based Health Platform for Functional Monitoring and Intervention. *Life Sciences Discovery Fund*. 2009-2011, $790,906. Co-PI.

Promoting Partnerships between WSU and EWU. *Society of Teaching in Psychology*. 2008-2009 $500. Co-PI.

Cognitive Recovery following Traumatic Brain Injury. *National Institute of Neurological and Stroke Disorders*, 2004-2008, #R01 NS047690, $609,250. PI.

Acquisition and Retention of Skilled Visual Search following Traumatic Brain Injury. *National Institute of Child Health and Human Development*, 1998-2000, #RO3 HD035838, $110,638. PI.

The Effects of Divided Attention on the Implicit and Explicit Memory Performance of Control Subjects and Severe Closed-Head Injured Patients. *American Psychological Society*, Dissertation Research Award, 1993, $500. PI.

FUNDED GRANTS: Internal

Identification of Parkinson's disease Motor States from Body-worn Sensor Data. IGIS Team Building Grant. Washington State University, College of Liberal Arts. 2012-2013, $5,000. PI

Biomarkers, Caregiving and a Multi-dyad Cognitive Rehabilitation Intervention. *Berry Family CLA Faculty Excellence Fellow funding. Washington State University*, 2011-2014, $25,000. PI.

Improving the Everyday Functional Independence of Older Adults with Cognitive and Physical Disability through Technology. *Washington State University, College of Liberal Arts*, CLA Grant Development Award. 2008-2009, Direct Cost: $14,820. PI.

Cognitive Interventions for Persons with Early-stage Dementia. *Washington State University, College of Liberal Arts*, Edward R. Meyer Project Award, 2007-2008, Direct Cost: $1000. PI.

Memory Performance Following Severe Closed-Head Injury. *Washington State University, College of Liberal Arts,* Initiation and Completion of Research Projects Grant, 2004-2005, $600. PI.

Memory Performance and Adaptive Functioning in Normal Aging, Mild Cognitive Impairment, and Alzheimer's Disease Populations. *Washington State University, College of Liberal Arts*, Meyer Grant Development Award, 2003-2004, $5,000. PI.

Recovery from Traumatic Brain Injury. *Washington State University, Department of Psychology*, 2002-2003, $5,000. PI.

Cognitive Aging Longitudinal Research Project. *Washington State University, College of Liberal Arts*, 2000-2001, $2,000. PI.

Executive Functions and Parkinson's Disease. *Washington State University, College of Liberal Arts,* Initiation and Completion of Research Projects Grant, 2000-2001, $400. Co-PI.

Psychology and Aging Curriculum Development. *Washington State University,* Service Learning Curriculum Development Minigrant, 1998-1999, $750. PI.

Traumatic Brain Injury and Cognitive Performance. *Washington State University, College of Liberal Arts*, Initiation and Completion of Research Projects Grant, 1996-97, $500. PI.

Cognitive Aging. *Washington State University, College of Liberal Arts*, Initiation and Completion of Research Projects Grant, 1995-1996, $500. PI.

Cognitive Aging. *Washington State University, College of Liberal Arts*, Initiation and Completion of Research Projects Grant, 1994-1995, $500. PI.

Cognitive Aging. *Washington State University, Spokane*, Matching Funds, 1994-1995, $500. PI.

The Effects of Severe Closed Head Injury on Three Stages of Cognitive Processing. *The University of Memphis, Department of Psychology*, Vidulich Research Fellowship, 1990-1991. $8000 plus tuition remission. PI.

GRANTS UNDER REVIEW OR RECENTLY REVIEWED

Multifamily Psychoeducation for TBI: Comparison of In-Person and Web Delivery. 2013-2018, $914,568, NIH: Co-I.

Training Program for Undergraduate Gerontechnologists (TUG). 2013-2017, 1.6M, R25, NIH: MPI.

Toxicology of the Built Environment: Energy Efficient Buildings, Indoor Air Quality and Health. $100,000. WSU Challenge Grant. Co-PI. Not funded.

Hot and cold sources of risk updating in decision making over the adult lifespan. NIH: HHS: 1.1M. Co-PI. Not funded.

A Noninvasive Cognitive Decline Monitoring System. NSF: SHB:TypeII(INT): Collaborative Research. $528,808. Co-PI. Not funded.

Objective Measures of Functional Status through Smart Home Technologies. ETAC. Alzheimer's Association. 175,887. Co-PI. Not funded.

A Smart Memory Activity System for Persons with Cognitive Impairment. Life Sciences Discovery Fund. Co-PI. Not funded.

PROFESSIONAL AFFILIATIONS

2004-2005	Geriatric Society of America
1991-	American Psychological Association (Member)
1991-	International Neuropsychological Society (Member)
1990-	National Academy of Neuropsychology (Member)
1995-2009	The Psychonomic Society (Member)
2001-2010	Cognitive Neurosciences Society (Member)

EDITORIAL ACTIVITIES

Editorial Board *ISRN Rehabilitation (2011-)*
Consulting Editor *Neuropsychology (2010-2013)*

Ad Hoc Reviewer, *Neuropsychology*
Journal of the International Neuropsychological Society
Neuropsychologia
Memory and Cognition
Psychology and Aging
Aging, Neuropsychology, and Cognition
Psychological Bulletin
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning, Memory, and Cognition
Neuropsychology Review
Neuropsychological Rehabilitation
Journal of Clinical and Experimental Neuropsychology
Scandinavian Journal of Psychology
Neurocase
Behavior Research Methods
Alzheimer's disease and Other Disorders
Current Directions in Psychological Science
Gerontechnology
The Clinical Neuropsychologist
Journal of Applied Gerontology
Journal of Cognitive Psychology
Journal of Geriatric Psychiatry and Neurology

PEER REVIEWED PUBLICATIONS (*denotes student author)

74. *Tam, J. W., & Schmitter-Edgecombe, M. (in press). The role of processing speed in the Brief Visuospatial Memory test-Revised. *The Clinical Neuropsychologist.*
73. *McAlister, C. & Schmitter-Edgecombe, M. (in press). Naturalistic assessment of executive function and everyday multitasking in healthy older adults. *Aging, Neuropsychology and Cognition.* doi:10.1080/13825585.2013.781990

72. *Dawadi, P., Cook, D., & Schmitter-Edgecombe, M. (in press). Automated cognitive health assessment using smart home monitoring of complex tasks. *IEEE Transactions on Human-Machine Systems*.
71. *Tam, J. W. & Schmitter-Edgecombe, M. (in press). Event-based prospective memory and everyday forgetting in healthy older adults and individuals with mild cognitive impairment. *Journal of Clinical and Experimental Neuropsychology.* DOI: 10.1080/13803395.2013.770823
70. *Seelye, A. M., Schmitter-Edgecombe, M., Cook, D. J., & Crandall, A. (in press). Naturalistic assessment of everyday activities and prompting technologies in mild cognitive impairment. *Journal of the International Neuropsychological Society.* PMID 23351284
69. *Parsey, C. M., Schmitter-Edgecombe, M., & Belenky, G. (in press). Sleep and everyday functioning in older adulthood. *Journal of Applied Gerontology*. doi:10.1177/0733464812458364
68. Schmitter-Edgecombe, M., *McAlister, C., & *Weakley, A. (2012). Naturalistic assessment of everyday functioning in individuals with mild cognitive impairment: the day out task. *Neuropsychology, 26*, 631-641. doi: 10.1037/a0029352 PMID 22846035
67. *Seelye, A. M., Schmitter-Edgecombe, M., *Das, B., & Cook, D. (2012). Application of cognitive rehabilitation theory to the development of smart prompting technology. *IEEE Reviews in Biomedical Engineering, 5*, 29-44. doi: 10.1109/RBME.2012.2196691 PMID 23231987
66. *Sanders, C. & Schmitter-Edgecombe, M. (2012). Identifying the nature of impairment in planning ability with normal aging. *Journal of Clinical and Experimental Neuropsychology, 34*, 724-737. doi: 10.1080/13803395.2012.670210. PMID: 22506736
65. *Das, B., Cook, D. J., Schmitter-Edgecombe, M., *Seelye, A. M. (2012). PUCK: An automated prompting system for smart environments. *Personal & Ubiquitous Computing, 16*, 859-873. doi: 10.1007/s00779-01100445-6
64. Schmitter-Edgecombe, M., & *Seelye, A. M. (2012). Recovery of content and temporal order memory for performed activities following moderate to severe traumatic brain injury. *Journal of Clinical and Experimental Neuropsychology*, *34*, 256-268. doi: 10.1080/13803395.2011.633497 PMID 22220505
63. *Pavawalla, S., Schmitter-Edgecombe, M. & Smith, R (2012). Prospective memory following moderate-to-severe traumatic brain injury: a formal multinomial modeling approach. *Neuropsychology, 26,* 91-101. doi: 10.1037/a0025866 PMID 21988127
62. Cook, D. J., Schmitter-Edgecombe, M. & Holder, L. B. (2011). Gerontechnology education: Beyond the barriers. *IEEE Persuasive Computing, 10,* 59-63.
61. Schmitter-Edgecombe, M., *Parsey, C., & Cook, D. (2011). Cognitive correlates of functional performance in older adults: comparison of self-report, direct observation and performance-based measures. *Journal of the International Neuropsychological Society, 17,* 853-864. PMID 217129400
60. *Wright, M. & Schmitter-Edgecombe, M. (2011). The impact of verbal memory encoding and consolidation deficits during recovery from moderate-to-severe traumatic brain injury. *Journal of Head Trauma Rehabilitation, 26*, 182-191. PMID 21552067
59. Schmitter-Edgecombe, M. & *Seelye, A. M. (2011). Predictions of verbal episodic memory in persons with Alzheimer's disease. *Journal of Clinical and Experimental Neuropsychology, 33*, 218-225. PMID 20839133
58. *Anderson, J. & Schmitter-Edgecombe, M. (2011). Recovery of time estimation following moderate to severe traumatic brain injury. *Neuropsychology, 25*¸ 36-44. PMID 20919767.
57. *Parsey, C. & Schmitter-Edgecombe, M. (2011). Quantitative and Qualitative Analyses of the Clock Drawing Test in Mild Cognitive Impairment and Alzheimer's Disease: Evaluation of

a Modified Scoring System. *Journal of Geriatric Psychiatry and Neurology, 24*, 108-118. PMID 21546651

56. *Rashidi, P., Cook, D. J., Holder, L. B., & Schmitter-Edgecombe, M. (2011). Discovering activities to recognize and track in a smart environment. *IEEE Transactions on Knowledge and Data Engineering, 23*, 527-539. PMID 21617742
55. Schmitter-Edgecombe, M., & *Creamer, S. (2010). Assessment of strategic processing during narrative comprehension in individuals with mild cognitive impairment. *Journal of the International Neuropsychological Society, 16*, 661-671. PMID 20438657
54. *Wright, M. J., Schmitter-Edgecombe, M., & *Woo, E. (2010). Verbal memory impairment in severe closed-head injury: The role of encoding and consolidation. *Journal of Clinical and Experimental Neuropsychology, 32*, 728-736. PMID 20175012
53. *Anderson, J. & Schmitter-Edgecombe, M. (2010). Mild cognitive impairment and feeling-of-knowing in episodic memory. *Journal of Clinical and Experimental Neuropsychology, 32*, 505-514. PMID 19821173
52. *Creamer, S. & Schmitter-Edgecombe, M. (2010). Narrative comprehension in Alzheimer's disease: Assessing inferences and memory operations with a think-aloud procedure. *Neuropsychology, 24*, 279-290. PMID 20438206
51. *Singla, G., Cook, D. J., & Schmitter-Edgecombe, M. (2010). Recognizing independent and joint activities among multiple residents in smart environments. *Journal of Ambient Intelligence and Humanized Computing,1*, 57-63. PMID 20975986
50. *Seelye, A. M., Schmitter-Edgecombe, M. & *Flores, J. (2010). Episodic memory predictions in persons with amnestic and non-amnestic mild cognitive impairment. *Journal of Clinical and Experimental Neuropsychology, 32*, 433-441. PMID 20397298
49. *Livengood, M., *Anderson, J., & Schmitter-Edgecombe, M. (2010). Assessment of memory self-awareness following traumatic brain injury. *Brain Injury, 24*, 598-608. PMID 20235762
48. *Woo, E., & Schmitter-Edgecombe, M. (2009). Aging and semantic cueing during learning nd renetion of verbal episodic information. *Aging, Neuropsychology, and Cognition, 16*, 103-119. PMID 18923945
47. Cook, D. J., & Schmitter-Edgecombe, M. (2009). Assessing the quality of activities in a smart environment. *Methods of Information in Medicine, 48*, 480-485.
46. *Wright, M. J., *Woo, E., Schmitter-Edgecombe, M., Hinkin, C. H., & Miller, E. N. (2009). The item specific deficit approach to evaluating verbal memory dysfunction: rationale, psychometrics and application. *Journal of Clinical and Experimental Neuropsychology, 31*, 790-802. PMID 19142773
45. *Singla, G., Cook, D. J., & Schmitter-Edgecombe, M. (2009). Tracking activities in complex settings using smart environment technologies. *International Journal of BioSciences, Psychiatry and Technology, 1*, 25-35. PMID 20019890
44. *Anderson, J., & Schmitter-Edgecombe, M. (2009). Predictions of episodic memory performance following moderate-to-severe traumatic brain injury. *Journal of Clinical and Experimental Neuropsychology, 31*, 425-438. PMID 18696113
43. *Rueda, A., & Schmitter-Edgecombe, M. (2009). Time estimation abilities in persons with mild cognitive impairment and Alzheimer's disease. *Neuropsychology, 23*, 178-188. PMID 19254091
42. Schmitter-Edgecombe, M., *Woo, E. & Greeley, D. (2009). Characterizing multiple memory deficits and their relation to everyday functioning in individuals with mild cognitive impairment. *Neuropsychology, 23*, 168-177. PMID 19254090
41. Schmitter-Edgecombe, M. & *Sanders, C. (2009). Task switching in mild cognitive impairment: Switch and nonswitch costs. *Journal of the International Neuropsychological Society, 15*, 103-111. PMID 19128533

40. Schmitter-Edgecombe, M., *Howard, J. T., *Pavawalla, S., *Howell, L. & *Rueda, A. (2008). Multi-dyad Memory Notebook Intervention for Very Mild Dementia: A Pilot Study. *American Journal of Alzheimer's Disease & Other Dementias, 23*, 477-487.
39. *McWilliams, J., & Schmitter-Edgecombe, M. (2008). Semantic memory organization during the early stage of recovery from traumatic brain injury. *Brain Injury, 22*, 243-253.
38. Schmitter-Edgecombe, M., & *Rueda, A. D. (2008). Time estimation and episodic memory following traumatic brain injury. *Journal of Clinical and Experimental Neuropsychology, 30*, 212-223.
37. *Woo, E., Schmitter-Edgecombe, M., & *Fancher, J. (2008). Memory prediction accuracy in younger and older adults: A cross-sectional and longitudinal analysis. *Aging, Neuropsychology, and Cognition, 15*, 1-27.
36. *Chaytor, N., & Schmitter-Edgecombe, M. (2007). Fractionation of the Dysexecutive Syndrome in a Heterogeneous Neurological Sample. *Brain Injury, 21*, 615-621.
35. Schmitter-Edgecombe, M. & *Woo, E. (2007). Effects of age and divided attention on memory components derived for the category exemplar generation task. *Aging, Neuropsychology, and Cognition, 14,* 274-300.
34. Schmitter-Edgecombe, M., & *Anderson, J. W. (2007). Feeling-of-knowing in episodic memory following moderate-to-severe closed-head injury. *Neuropsychology, 21,* 224-234.
33. Schmitter-Edgecombe, M., & *Kayne, M. (2006). Costs of predictable switch between simple cognitive tasks following severe closed-head injury. *Neuropsychology, 20,* 675-684.
32. *Pavawalla, S. & Schmitter-Edgecombe, M. (2006). Long-term retention of skilled visual search following severe closed-head injury. *Journal of the International Neuropsychological Society, 12*, 802-811.
31. *Chaytor, N. S., Schmitter-Edgecombe, M., & Burr, R. (2006). Improving the ecological validity of executive functioning tests: Environmental demands and compensatory strategies. *Archives of Clinical Neuropsychology, 21*, 217-227.
30. Schmitter-Edgecombe, M. (2006). Implications of basic science research for brain injury remediation: A focus on intact learning mechanism. *Journal of Head Trauma Rehabilitation, 21*, 131-141.
29. Schmitter-Edgecombe, M., & *Bales, J. W. (2005). Understanding text after severe closed-head injury: Assessing inferences and memory operations with a think-aloud procedure. *Brain and Language, 94,* 331-346.
28. Schmitter-Edgecombe, M., & *Wright, M. (2004). Event-based prospective memory following severe closed-head injury. *Neuropsychology, 18*, 353-361.
27. Schmitter-Edgecombe, M., & *Woo, E. (2004). Memory self-awareness and memory self-monitoring following severe closed-head injury. *Brain Injury, 10*, 997-1016.
26. Chaytor, N., & Schmitter-Edgecombe, M. (2004). Working memory and aging: A cross-sectional and longitudinal analysis. *Journal of the International Neuropsychological Society, 10*, 489-503.
25. Schmitter-Edgecombe, M., Marks, W., *Wright, M. & Ventura, M. (2004). Retrieval inhibition in directed forgetting following severe closed-head injury. *Neuropsychology, 18*, 104-114.
24. *Chaytor, N., & Schmitter-Edgecombe, M. (2003). The ecological validity of neuropsychological tests: A review of the literature on everyday cognitive skills. *Neuropsychology Review, 13*, 181-197.
23. Schmitter-Edgecombe, M. & *Wright, M. J. (2003). Content memory and temporal order memory for performed activities after severe closed-head injury. *Journal of Clinical and Experimental Neuropsychology, 25*, 933-948.
22. Schmitter-Edgecombe, M. & *Chaytor, N. (2003). Self-ordered pointing performance following severe closed-head injury. *Journal of Clinical and Experimental Neuropsychology, 25*, 918-932.

21. *Simpson, A., & Schmitter-Edgecombe, M. (2002). Prediction of employment status following traumatic brain injury using a behavioral measure of frontal lobe functioning. *Brain Injury, 16*, 1075-1091.
20. Schmitter-Edgecombe, M., & *Nissley, H. (2002). Effects of aging on implicit covariation learning. *Aging, Neuropsychology, and Cognition, 9*, 61-75.
19. *Nissley, H. M., & Schmitter-Edgecombe, M. (2002). Perceptually-based implicit learning in severe closed-head injury patients. *Neuropsychology, 16*, 111-122.
18. Schmitter-Edgecombe, M., & *Beglinger, B. (2001). Acquisition of skilled visual search performance following severe closed-head injury. *Journal of the International Neuropsychological Society, 7*, 615-630.
17. Schmitter-Edgecombe, M., & *Simpson, A. L. (2001). Effects of age and intentionality on content memory and temporal order memory for performed activities. *Aging, Neuropsychology, and Cognition, 8,* 81-97.
16. Schmitter-Edgecombe, M. &, *Nissley, H. M. (2000). Effects of divided attention on automatic and controlled components of memory after severe closed head injury. *Neuropsychology, 14,* 559-569.
15. Schmitter-Edgecombe, M., *Vesneski, M., & *Jones, D. (2000). Aging and word finding: A comparison of discourse and nondiscourse tests. *Archives of Clinical Neuropsychology, 15,* 479-493.
14. *Simpson, A., & Schmitter-Edgecombe, M. (2000). Effects of severe closed-head injury on inhibitory attentional mechanisms. *Neuropsychology, 14,* 310-319.
13. Schmitter-Edgecombe, M. (1999). Effects of divided attention and time course on automatic and controlled components of memory in older adults. *Psychology and Aging, 14,* 331-343.
12. Schmitter-Edgecombe, M. (1999). Effects of divided attention on perceptual and conceptual memory performances. *Memory and Cognition, 27,* 512-525.
11. Kibby, M., Schmitter-Edgecombe, M., & Long, C. J. (1998). Ecological validity of neuropsychological tests: Focus on the California Verbal Learning Test and the Wisconsin Card Sorting Test. *Archives of Clinical Neuropsychology, 13,* 523-534.
10. Schmitter-Edgecombe, M., & Kibby, M. (1998). Visual selection following severe closed head injury: Focused and divided attention. *Journal of the International Neuropsychological Society, 4,* 144-159.
9. Schmitter-Edgecombe, M., & Rogers, W. A. (1997). Automatic process development following severe closed head injury. *Neuropsychology, 11,* 296-308.
8. Schmitter-Edgecombe, M. (1996). Effects of divided attention on implicit and explicit memory performance following severe closed head injury. *Neuropsychology, 10,* 155-167.
7. Schmitter-Edgecombe, M. (1996). Effects of traumatic brain injury on cognitive performance: An attentional resource hypothesis in search of data. *Journal of Head Trauma Rehabilitation, 11,* 17-30.
6. Schmitter-Edgecombe, M. (1996). The effects of divided attention on implicit and explicit memory performance. *Journal of the International Neuropsychological Society, 2,* 111-125.
5. Schmitter-Edgecombe, M., Fahy, J. F., Whelan, J. P., & Long, C. J. (1995). Memory remediation after severe closed-head injury: Notebook training versus supportive therapy. *Journal of Consulting and Clinical Psychology, 63,* 484-489
4. Schmitter-Edgecombe, M., Marks, W., & Fahy, J. F. (1993). Semantic priming following severe closed-head trauma: Automatic and attentional processes. *Neuropsychology, 7,* 136-148.
3. Schmitter-Edgecombe, M., Marks, W., Fahy, J. F., & Long, C. J. (1992). Effects of severe closed-head injury on three stages of information processing. *Journal of Clinical and Experimental Neuropsychology, 14,* 717-737.
2. Fahy, J. F., & Schmitter, M. E. (1992). Current issues in memory research: What is prospective memory? *The Journal of Head Injury, 2,* 21-24.

1. Long, C. J., & Schmitter, M. E. (1990). The use of neuropsychological data in the development of a treatment plan for brain injured individuals. *Psychotherapy in Private Practice, 8,* 99-114.

PEER REVIEWED TECHNICAL REPORTS AND PROCEEDINGS

7. *Darnall, N., Krishnan, N., Carlson, J., Greeley, D., Mark, J., Schmitter-Edgecombe, M., & Lin, D. (June, 2013). Identifying the presences of dyskinesia in patients with Parkinson's disease from accelerometer data. *Proceedings of the the ASME Summer Bioengineering Conference (Sunriver, Oregon).*
6. *Zulas, A., *Crandall, A., Schmitter-Edgecombe, M. & Cook, D. (October, 2012). Caregiver needs from elder care assistive smart homes: Nursing assessment. *Proceedings of the Human Factors and Ergonomics Society's 56th Annual Meeting.*
5. *Das, B., *Thomas, B. L., *Seelye, A., Cook, D. J., Holder, L. B., & Schmitter-Edgecombe, M. (January, 2012). Context-aware prompting from your smart phone. *Proceedings of the 2nd IEEE International Workshop on Consumer eHealth Platforms, Services and Applications CCNC,* 56-57.
4. *Das, B., *Seelye, A., *Thomas, B. L., Cook, D. J., Holder, L. B., & Schmitter-Edgecombe, M. (January, 2012). Using smart phones for context-aware prompting in smart environments. *Proceedings of the 2nd IEEE International Workshop on Consumer eHealth Platforms, Services and Applications CCNC,* 399-403.
3. *Dawadi, P., Cook, D., *Parsey, C., Schmitter-Edgecombe, M., & *Schneider, M. An approach to functional assessment in smart home. (August, 2011). *Proceedings of the Knowledge Discovery and Data Mining Workshop on Medicine and HealthCare*.
2. Cook, D., Schmitter-Edgecombe, M., *Crandall, A., *Sanders, C. & *Thomas, B. (April, 2009). Collecting and disseminating smart home sensor data in the CASAS project. *Proceedings of the Computer-Human Interaction Workshop on Developing Shared Home Behavior Datasets to Advance HCI and Ubiquitous Computing Research.*
1. *Singla, G., Cook, D. J., & Schmitter-Edgecombe, M. (2008). Incorporating Temporal Reasoning into Activity Recognition for Smart Home Residents. *AAAI Technical Report Series: Spatial and Temporal Reasoning*, 53-61.

BOOK CHAPTERS

4. Schmitter-Edgecombe, M., *Seelye, A., & Cook, D. J. (2013). Technologies for health assessment, promotion and assistance: Focus on gerontechnology. In J. J. Randolph (Ed.), *Positive Neuropsychology: An Evidence-Based Perspective on Promoting Cognitive Health*. New York, NY: Springer Science and Business Media, LLC.
3. *Sanders, C., Ziegler, E., & Schmitter-Edgecombe, M. (2012). Traumatic brain injury and the impact of secondary influences. In P. Arnett (Ed.), *Secondary Influences on Neuropsychological Test Performance*. Oxford University Press.
2. Schmitter-Edgecombe, M., *Pavawalla, S., *Howard, J. T., *Howell, L. & *Rueda, A. (2009). Dyadic Interventions for Persons with Early-Stage Dementia: A Cognitive Rehabilitative Focus. In R. R. Bougham (Ed.), *New Directions in Aging Research: Health and Cognition*. Nova Science Publishers.
1. Long, C. J., & Schmitter, M. E. (1992). Neuropsychological outcome: Evaluation of cognitive sequelae following head injury. In C. J. Long & L. Ross (Ed.), *Handbook of head trauma: From acute care to recovery* (pp. 107-122). New York: Plenum Press.

BOOK REVIEWS

1. Schmitter-Edgecombe, M. (2008). Inhibition: What does it mean and how can we measure it? Book review of D. S. Gorfein and C. M. MacLoed (Eds.), Inhibition in Cognition. *Journal of Clinical and Experimental Neuropsychology, 30*, 607-609.

TREATMENT MANUALS

2. Schmitter-Edgecombe, M., Dyck, D. G., Norell, D., & Warren, L. (last updated, January 2012). A Cognitive Rehabilitation Multi-Family Group Intervention for Individuals with Mild Cognitive Impairment and their Care-Partners: Treatment Manual (pp. 1-59). *Alzheimer's Association*.
1. Schmitter-Edgecombe, M., Dyck, D. G., Norell, D., & Warren, L. (last updated, January 2012). A Cognitive Rehabilitation Multi-Family Group Intervention for Individuals with Mild Cognitive Impairment and their Care-Partners: Workbook (pp. 1-138). *Alzheimer's Association*.

MANUSCRIPTS SUBMITTED

*Dawadi, P., Cook, D., Schmitter-Edgecombe, M., & *Parsey, C. (submitted). *Automated assessment of cognitive health using smart home technologies.*

*Anderson, J. A., *Rueda, A., & Schmitter-Edgecombe, M. (submitted). *Stability of time estimation: evaluating the effects of age.*

*Weakley, A., Schmitter-Edgecombe, M., & Anderson, J. (submitted). *Analysis of verbal fluency in amnestic and nonamnestic mild cognitive impairment.*

*Parsey, C. M., & Schmitter-Edgecombe, M. (submitted). *Applications of technology in neuropsychological assessment.*

SUBMITTED PROCEEDINGS

Williams, J., Weakley, A., Cook, D. & Schmitter-Edgecombe, M. (July, 2013). Machine learning techniques for diagnostic differentiation of mild cognitive impairment and dementia. *Proceedings of the First Workshop on Expanding the Boundaries of Health Informatics using Artificial Intelligence (Bellevue, Washington).*

THESES AND DISSERTATIONS SUPERVISED

Master's Theses Chaired or Chairing: 13

Jill McConnell, Amy Simpson, Tamra Karl, Naomi Chaytor, Heather Nissley, Shital Pavawalla, Michelle Kayne, Scott Creamer, Alicia Rueda, Chad Sanders, Carolyn Parsey, Joyce Tam, Kayela Robertson

Doctoral Dissertations Chaired or Chairing: 18

Amy Simpson, Pamela Freske, Naomi Chaytor, Heather Nissley, Ellen Woo, Matt Wright, Shital Pavawalla, Lisa Howell, Alicia Rueda, Carly Anderson, Scott Creamer, Adrianna Seelye, Chad Sanders, Carolyn Parsey, Courtney McAlister, Joyce Tam, Alyssa Weakley

Undergraduate McNair Projects Chaired: 2 (both published)

Jennifer McWilliams, Michelle Livengood

Undergraduate Honor's Theses Chaired: 3 (2 published)
David Jones, James Bales, Sara Anderson

POST DOCTORAL STUDENTS SUPPORTED AND SUPERVISED

Jonathan Anderson
Randi McDonald

PAPER PRESENTATIONS AND SYMPOSIUM

117. Tam, J., & Schmitter-Edgecombe, M. (October, 2103). *Temporal order memory and intentional learning in individuals with mild cognitive impairment.* Submitted to the 33rd annual meeting of the National Academy of Neuropsychology, San Diego, CA.
116. McAlister, C., & Schmitter-Edgecombe, M. (October, 2103). *Everyday functioning and neuropsychiatric symptoms in healthy older adults and individuals with mild cognitive impairment.* Submitted to the 33rd annual meeting of the National Academy of Neuropsychology, San Diego, CA.
115. Tam, J., & Schmitter-Edgecombe, M. (July, 2103). *Age-differences in prospective memory performance in a naturalistic setting.* To be presented at the 11th Annual Conference of the American Academy of Clinical Neuropsychology, Chicago, IL.
114. Fanale, C.M., Eldridge, D., Wright, B., Schmitter-Edgecombe, M., Warren, L., Banasik, J., & Dyck, D. (May, 2013). *Preliminary results: High-density lipoprotein is predictive of superior cognitive function in older adults with mild cognitive impairment.* To be presented at the 25th annual meeting of the Association for Psychological Science, Washington, DC.
113. Fanale, C.M., Eldridge, D., Wright, B., Schmitter-Edgecombe, M., Warren, L., Banasik, J., & Dyck, D. (May, 2013). *Preliminary results for the effects of a psychoeducational intervention upon physiological markers associated with cognitive impairment.* To be presented at the 25th annual meeting of the Association for Psychological Science, Washington, DC.
112. Fritz, R. L., Doty, K., Mavana, N., Schmitter-Edgecombe, M., & Cook, D. (April, 2013). *Detecting cognitive decline using smart home technology*. Submitted to the 46th annual meeting of the Western Institute of Nursing, Anaheim, CA.
111. Robertson, K., Fuller, S., & Schmitter-Edgecombe, M. (February, 2013). *Examination of attentional deficits following traumatic brain injury.* To be presented at the 41st annual meeting of the International Neuropsychological Society, Kona, Hawaii.
110. Schmitter-Edgecombe, M., Parsey, C., McAlister, C., Weakley, A. & Cook, D. J. (February, 2013). *Functional impairment and cognitive correlates of performance: aging and mild cognitive impairment.* Symposia be presented at the 41st annual meeting of the International Neuropsychological Society, Kona, Hawaii.
109. Seelye, A., Schmitter-Edgecombe, M., Cook, D. J. & Crandall (February, 2013). *Technology based prompting for instrumental activities of daily living in healthy aging, mild cognitive impairment and dementia.* To be presented at the 41st annual meeting of the International Neuropsychological Society, Kona, Hawaii.
108. Weakley, A., Schmitter-Edgecombe, M., & Anderson, J. (February, 2013). *Analysis of verbal fluency in mild cognitive impairment.* To be presented at the 41st annual meeting of the International Neuropsychological Society, Kona, Hawaii.
107. Parsey, C., M., & Schmitter-Edgecombe, M. (February, 2013). *Direct observation of instrumental activities of daily living in normal aging, mild cognitive impairment, and*

dementia. To be presented at the 41st annual meeting of the International Neuropsychological Society, Kona, Hawaii.

106. Schmitter-Edgecombe, M., Sanders, C., Low, C., Warren, L., Norell, D., Wu, L, & Dyck, D. (July 2012). *An integrated cognitive rehabilitation multi-family group intervention for individuals with mild cognitive impairment and their care partners: preliminary data*. Presented at the Alzheimer's Association International Conference, Vancouver, WA. (also presented at Spokane showcase, March, 2013).
105. Parsey, C., Schmitter-Edgecombe, M., & Belenky, G. (June, 2012). *Sleep and everyday functioning in a cognitively healthy older adult population*. Presented at the 10th Annual Conference of the American Academy of Clinical Neuropsychology, Seattle, WA.
104. Tam, J., Schmitter-Edgecombe, M. (June, 2012). *Incidental memory in individuals with amnestic mild cognitive impairment (aMCI) and non-amnestic mild cognitive impairment (non-aMCI)*. Presented at the 10th Annual Conference of the American Academy of Clinical Neuropsychology, Seattle, WA.
103. McAlister, C., Weakley, A. & Schmitter-Edgecombe, M., (June, 2012). *Naturalistic assessment of everyday functioning in individuals with mild cognitive impairment: the day out task*. Presented at the 10th Annual Conference of the American Academy of Clinical Neuropsychology, Seattle, WA.
102. Schmitter-Edgecombe, M. (May, 2012). *Smart home technology – current application and data extrapolation*. Presented as part of a symposium entitled: Update in Smart Home Technologies: "Getting Smarter as we Age" at the Annual Scientific Meeting of the American Geriatric Society, Seattle, WA.
101. Tam, J. W., Creamer, S., & Schmitter-Edgecombe, M. (February, 2012). *The role of processing speed in the Brief Visuospatial Memory Test (BVMT)*. Presented at the 40th annual meeting of the International Neuropsychological Society, Montreal, CA.
100. Seelye, A. M., Smith, A., Schmitter-Edgecombe, M., & Cook, D. (February, 2012). *A graded hierarchy of prompts to assist healthy older adults in completion of instrumental activities of daily living in a smart environment*. Presented at the 40th annual meeting of the International Neuropsychological Society, Montreal, CA.
99. Das, B., Thomas, B., Seelye, A. Cook, D., Holder, L. & Schmitter-Edgecombe, M. (January 2012), Context-Aware Prompting From Your Smart Phone, Presented at the IEEE Consumer Communications and Networking Conference Demonstration, Las Vegas, NV, USA, 2012.
98. Schmitter-Edgecombe, M., Parsey, C., & Cook, D. (November, 2011). *Cognitive correlates of functional performance in older adults: comparison of self-report, direct observation and performance-based measures*. Presented at the 31st annual meeting of the National Academy of Neuropsychology, Marco Island, FL.
97. Sanders, C., Kovacs, M., Walton, B., & Schmitter-Edgecombe, M. (November, 2011). *Identifying the nature of impairment in planning ability with normal aging*. Presented at the 31st annual meeting of the National Academy of Neuropsychology, Marco Island, FL.
96. McAlister, C., Tam, J., & Schmitter-Edgecombe, M. (November, 2011). *An ecologically valid assessment of executive function in healthy older adults: the day out task*. Presented at the 31st annual meeting of the National Academy of Neuropsychology, Marco Island, FL.
95. Tam, J., McAlister, C., & Schmitter-Edgecombe, M. (November, 2011). *Prospective memory and everyday memory lapses in individuals with mild cognitive impairment*. Presented at the 31st annual meeting of the National Academy of Neuropsychology, Marco Island, FL. (also presented at WSU showcase, April 2013).
94. Parsey, C., Dawadi, P., Schmitter-Edgecombe, M., & Cook, D. (June, 2011). *Measures of everyday functioning in a smart environment: An evaluation of direct observation and*

data mining techniques. Presented at the Festival of International Conferences on Caregiving, Disability, Aging and Technology, Toronto, Canada.

93. Aguilar, C., Anderson, J. W., & Schmitter-Edgecombe, M. (April, 2011*). The (lack of) relationship between working memory and verbal time estimation.* Presented at the ninety first annual meeting of the Western Psychological Association, Los Angeles, CA.
92. Parsey, C., Schmitter-Edgecombe, M., Hulbert, A., & Cook, D. (February, 2011*). Effects of normal aging on instrumental activities of daily living in a smart environment.* Presented at the thirty-ninth annual meeting of the International Neuropsychological Society, Boston MA.
91. Seeyle, A., Smith, A., Schmitter-Edgecombe, M., & Cook, C. J. (October, 2010). *Cueing technologies for assisting persons with mild cognitive impairment in IADL completion in an experimenter-assisted smart environment.* Presented at the 30th annual meeting of the National Academy of Neuropsychology, Vancouver, BC.
90. Creamer, S., Reynold-Boyle, I., & Schmitter-Edgecombe, M. (October, 2010). *WAIS-III performances of adult ADHD and clinical controls.* Presented at the 30th annual meeting of the National Academy of Neuropsychology, Vancouver, BC.
89. Barsuglia, J. P., Woo, E., Yi, D., Schmitter-Edgecombe, M., Wright, M. J., Andersh, L., Lu, P. (July, 2010). *The role of attention in story memory in mild cognitive impairment.* Presented at the Alzheimer's disease International Conference, Honolulu, Hawaii.
88. Parsey, C., Srinivasan, R., Schmitter-Edgecombe, M., & Cook, D. (May, 2010). *Monitoring activity with actigraph and motion-sensor data in a smart environment*. Presented at the 7th annual work conference of the International Society for Gerontechnology, Vancouver, CA.
87. Parsey, C., Schmitter-Edgecombe, M., Foltz, L., Hansen, N., Cook, D., & Belenky, G. (June, 2010). *Sleep/wake patterns in Mild Cognitive Impairment: A preliminary study of sleep disturbance in transitional cognitive decline*. Presented at the 24th Annual Meeting of the Associated Professional Sleep Societies, San Antonio, TX.
86. Schmitter-Edgecombe, M., Rashida, P., Cook, D., & Holder, L. (March, 2010). *Discovering and tracking activities of daily living using smart environment technologies.* Presented at the annual meeting of the American Association for Geriatric Psychiatry, Savannah, GA.
85. Barsuglia, J. P., Yi, D., M., Woo, E., Schmitter-Edgecombe, M., Wright, Lu, P.H. & Andersh, L. (March, 2010). *Thematic cueing for story recall in mild cognitive impairment.* Presented at the twenty-first annual meeting of the American Neuropsychiatric Association, Tampa, FL.
84. Wright, M. J., Schmitter-Edgecombe, M., Woo, E., Kim, H & Mikael, M. (March, 2010). *Verbal Memory Impairment in Severe Closed-Head Injury: The Role of Encoding and Consolidation.* Presented at the twenty-first annual meeting of the American Neuropsychiatric Association, Tampa, FL.
83. Pavawalla, S., Schmitter-Edgecombe, M., Smith, R. E., Auger, R., Green, S., Summerville, J., & Pooni, H. (February, 2010). *Prospective memory following moderate to severe traumatic brain injury: A formal multinomial modeling approach.* Presented at the Thirty-eight annual meeting of the International Neuropsychological Society, Acapulco, Mexico.
82. Cook, D., & Schmitter-Edgecombe, M. (August, 2009). *Smart home-based platform for functional monitoring and intervention.* Presented at the Second annual Life Sciences Discovery Fund and the Washington Biomedical and Biotechnology Association open house, Seattle, WA.
81. Seeyle, A. M., & Schmitter-Edgecombe, M. (June, 2009). *Memory self-awareness and self-monitoring in persons with Alzheimer's disease.* Presented at the Seventh annual meeting

of the American Academy of Clinical Neuropsychology, San Diego, California. **received student poster award

80. Wright, M. J., Woo, E., Schmitter-Edgecombe, M., Hinkin, C. H., Miller, E. N. & Gooding, A. L. (February, 2009). *To introduce and evaluate the Item-Specific Deficit Approach (ISDA), a novel method for characterizing memory deficits*. Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
79. Seelye, A., Flores, J. & Schmitter-Edgecombe, M. (February, 2009). *Episodic memory predictions in persons with amnestic and non-amnestic mild cognitive impairment*. Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
78. Schmitter-Edgecombe, M., Sanders, C., Andersh, L. & Cook, D. (February, 2009). *Profiling Activities of Daily Living using Pervasive Sensing in a Smart Environment*. Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
77. Creamer, S. & Schmitter-Edgecombe, M. (February, 2009). *Narrative Comprehension in Mild Cognitive Impairment: Assessing Inferences and Memory Operations with a Think-aloud Procedure*. Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
76. Rueda, A., Parsey, C. & Schmitter-Edgecombe, M. *Clock Drawing in Healthy Aging and Mild Cognitive Impairment.* (February, 2009). Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
75. McDonald, R., Mytinger, A., Hulbert, A. & Schmitter-Edgecombe, M. *Analysis of Verbal Fluency in Alzheimer's disease.* (February, 2009). Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
74. Anderson, J., Coukoulis, V. & Schmitter-Edgecombe, M. (February, 2009). *The Recovery of Time Estimation following Moderate to Severe Traumatic Brain Injury.* Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
73. Livengood, M. Anderson, J. & Schmitter-Edgecombe, M. (February, 2009). *Memory Self-Awareness following TBI: Evaluating "offline assessment" and "online assessment" methodologies.* Presented at the Thirty-seventh annual meeting of the International Neuropsychological Society, Atlanta, Georgia.
72. Singla, G., Cook, D., & Schmitter-Edgecombe, M. (July, 2008). *Incorporating temporal reasoning into activity recognition for smart home residents.* Presented at the AAAI Workshop on Spatial and Temporal Reasoning, Chicago, IL.
71. Howard, J. & Schmitter-Edgecombe, M. (April, 2008). *Memory Awareness in a Mild Cognitive Impairment Sample*. Presented at the 10th Annual Rehabilitation Psychology Conference, Tucson, AZ.
70. McDonald, R. & Schmitter-Edgecombe, M. (April, 2008). *Analysis of verbal fluency in early recovery from Traumatic Brain Injury.* Presented at the 10th Annual Rehabilitation Psychology Conference, Tucson, AZ.
69. Schmitter-Edgecombe, M., Woo, E., & Greeley, D. (April, 2008). *Memory deficits, everyday functioning, and mild cognitive impairment.* Presented at the 10th Annual Rehabilitation Psychology Conference, Tucson, AZ.
68. Rueda, A., & Schmitter-Edgecombe, M. (February, 2008). *Time Estimation in Alzheimer's Disease.* Presented at the Thirty-sixth annual meeting of the International Neuropsychological Society, Waikoloa, Hawaii.
67. Creamer, S., & Schmitter-Edgecombe, M. (February, 2008). *Narrative Comprehension in Alzheimer's Disease: Assessing Inferences and Memory Operations with a Think-aloud*

Procedure. Presented at the Thirty-sixth annual meeting of the International Neuropsychological Society, Waikoloa, Hawaii.

66. Anderson, J., & Schmitter-Edgecombe, M. (February, 2008). *Attentional Control and Variability Following Closed-head Injury*. Presented at the Thirty-sixth annual meeting of the International Neuropsychological Society, Waikoloa, Hawaii.
65. Schmitter-Edgecombe, M., Pavawalla, S., Howell, L., Howard, J., & Rueda, A. (February, 2008). *Efficacy of a Memory Notebook Intervention for Persons with Early-Stage Dementia*. Presented at the Thirty-sixth annual meeting of the International Neuropsychological Society, Waikoloa, Hawaii.
64. McWilliams, J., & Schmitter-Edgecombe, M. (February, 2008). *Access to Semantic Knowledge during Early Stage Recovery from Traumatic Brain Injury*. Presented at the Thirty-sixth annual meeting of the International Neuropsychological Society, Waikoloa, Hawaii.
63. Cook, D., Schmitter-Edgecombe, E., & Crandall, A. (November, 2007). *Smart environment support to assist elder adults and people with disabilities*. Presented at the Assisted Cognition Workshop, Rochester, New York.
62. Langill, M., & Schmitter-Edgecombe, M. (May, 2007). *Memory notebook training for very mild dementia: A case stud*y. Presented at the Thirty-third annual meeting of the Association for Behavioral Analysis International, San Diego, CA.
61. Rueda, A. & Schmitter-Edgecombe, M. (February, 2007). *Time Estimation in Healthy Older Adults and Very Mild Dementia.* Presented at the Thirty-fifth annual meeting of the International Neuropsychological Society, Portland, Oregon.
60. Anderson, M. & Schmitter-Edgecombe, M. (February, 2007). *Memory predictions for episodic memory tasks in early recovery following severe traumatic brain injury.* Presented at the Thirty-fifth annual meeting of the International Neuropsychological Society, Portland, Oregon.
59. Schmitter-Edgecombe, M., Anderson, J., & Creamer, S. (February, 2007). *Very Mild Dementia and Feeling-of-knowing in Episodic Memory.* Presented at the Thirty-fifth annual meeting of the International Neuropsychological Society, Portland, Oregon.
58. Langill, M., Sanders, C., & Schmitter-Edgecombe, M. (February, 2007). *Task switching in Very Mild Dementia.* Presented at the Thirty-fifth annual meeting of the International Neuropsychological Society, Portland, Oregon.
57. Pavawalla, S., Wiems, J. & Schmitter-Edgecombe, M. (February, 2007). *Monitoring Behavior on a Time-based Prospective Memory Task Following Traumatic Brain Injury.* Presented at the Thirty-fifth annual meeting of the International Neuropsychological Society, Portland, Oregon.
56. Kayne-Langill, M., & Schmitter-Edgecombe, M. (April, 2006). *Investigation of Articulatory Suppression and Response Set Interval in Task Switching.* Presented at the Thirteenth annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
55. Rueda, A., Schmitter-Edgecombe, M., & Nugen, M. (April, 2006). *Time Estimation Following Closed Head Injury*. Presented at the Thirteenth annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
54. Pavawalla, S., & Schmitter-Edgecombe, M. (April, 2006). *Activity-Based Prospective Memory Following Closed-Head Injury*. Presented at the Thirteenth annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
53. Anderson, J., & Schmitter-Edgecombe, M. (April, 2006). *Severe Closed-head Injury and Feeling-of-knowing in Episodic Memory*. Presented at the Thirteenth annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
52. Woo, E., Schmitter-Edgecombe, M., Hollenback, E., Benegas, J., & Curren, A. (February, 2006). *Cognitive support for verbal episodic memory in older adults*. Presented at the

Thirty-fourth annual meeting of the International Neuropsychological Society, Boston, MA.

51. Wright, M., Schmitter-Edgecombe, & Curren, A. (February, 2006). *Investigating the foundations of verbal memory dysfunction following high-velocity closed-head injury: An application of the Item Specific Deficit Approach to the CVLT*. Presented at the Thirty-fourth annual meeting of the International Neuropsychological Society, Boston, MA.
50. Schmitter-Edgecombe, M., & Kayne-Langill, M. (October, 2005). *Set shifting following severe closed-head injury*. Presented at the Twenty-fifth annual meeting of the National Academy of Neuropsychology, Tampa, Florida.
49. Schmitter-Edgecombe, M. (April, 2005). *Implications of basic science research for brain injury remediation: a focus on intact learning mechanisms.* Invited presentation at the Galveston Brain Injury Conference, Galveston, Texas.
48. Pavawalla, S. & Schmitter-Edgecombe, M. (February, 2005). *Long-term retention of skilled visual search following severe closed-head injury*. Presented at the Thirty-third annual meeting of the International Neuropsychological Society, St. Louis, Missouri.
47. Schmitter-Edgecombe, M., & Kayne, M. (February, 2005). *Costs of predictable switch between simple cognitive tasks following severe closed-head injury*. Presented at the Thirty-third annual meeting of the International Neuropsychological Society, St. Louis, Missouri.
46. Schmitter-Edgecombe, M., Woo, E., & Kayne, M. (November, 2004). *Cross-sectional and Longitudinal Analyses of Everyday Memory Lapses in Older and Younger Adults*. Presented at the Fifty-seventh annual meeting of the The Gerontological Society of America, Washington, D.C.
45. Chaytor, N. S., Schmitter-Edgecombe, M., & Burr, R. November, 2004). *Improving the ecological validity of executive functioning tests*. Presented at the Twenty-fourth annual meeting of the National Academy of Neuropsychology, Seattle, WA.
44. Bales, J., Ramirez, C., Ames, C., & Schmitter-Edgecombe, M. (April, 2004). *Understanding text: on-line inferences and memory operations after severe closed-head injury*. Presented at to the Eleventh annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
43. Kayne, M., Woo, E., & Schmitter-Edgecombe, M. (April, 2004). *Memory self-awareness and memory self-monitoring after severe closed-head injury*. Presented at the Eleventh annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
42. Schmitter-Edgecombe, M., & Wright, M. (April, 2004). *Event-based prospective memory following severe closed-head injury*. Presented at the Eleventh annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
41. Nissley, H. M., & Schmitter-Edgecombe, M. (February, 2004). *The effects of divided attention on encoding and retrieval in severe closed-head injury patients*. Pesented at the Thirty-second annual meeting of the International Neuropsychological Society, Baltimore, Maryland.
40. Woo, E., & Schmitter-Edgecombe, M. (February, 2004). *Memory prediction accuracy in younger and older adults*. Presented at the Thirty-second annual meeting of the International Neuropsychological Society, Baltimore, Maryland.
39. Wright, E., & Schmitter-Edgecombe, M. (February, 2004). *Content, source, and temporal order memory for performed and observed activities following severe closed-head injury*. Presented at the Thirty-second annual meeting of the International Neuropsychological Society, Baltimore, Maryland.
38. Schmitter-Edgecombe, M., Marks, W., Wright, M. & Ventura, M. (February, 2003). *Retrieval inhibition in directed forgetting following severe closed-head injury*. Paper

presented at the Thirty-first annual meeting of the International Neuropsychological Society, Honolulu, Hawaii.

37. Woo, E. & Schmitter-Edgecombe, M. (February, 2003). *Effects of age and divided attention on memory components of a conceptual task*. Presented at the Thirty-first annual meeting of the International Neuropsychological Society, Honolulu, Hawaii.
36. Wright, M. J., Schmitter-Edgecombe, M., & Nissley, H. M. (April, 2002). *Content memory and temporal order memory for performed activities following severe closed head injury*. Presented at the Ninth annual meeting of the Cognitive Neuroscience Society, San Francisco, California.
35. Schmitter-Edgecombe, M., Woo, E., & Chaytor, N. (April, 2002). *Self-ordered pointing performance following severe closed-head injury*. Presented at the Ninth annual meeting of the Cognitive Neuroscience Society, San Francisco, California.
34. Chaytor, N., & Schmitter-Edgecombe, M. (February, 2002). *Working memory and aging: A cross-sectional and longitudinal analysis.* Presented at the Thirtieth annual meeting of the International Neuropsychological Society, Toronto, Ontario.
33. Chaytor, N., Nissley, H. M., & Schmitter-Edgecombe, M. (October, 2001). *Impact of strategy use on measures of list learning and recall in older adults*. Presented at the Twenty-first annual meeting of the National Academy of Neuropsychology, San Francisco, CA.
32. Nissley, H. M., & Schmitter-Edgecombe, M. (February, 2001). *Perceptually based implicit learning following closed head injury*. Paper presented at the Twenty-ninth annual meeting of the International Neuropsychological Society, Chicago, Illinois.
31. Schmitter-Edgecombe, M., & Nissley, H. M. (October, 2000). *Effects of divided attention on automatic and controlled components of memory following severe closed-head injury*. Paper presented at the Thirty-first annual meeting of the Psychonomic Society.
30. Whitney, P., & Schmitter-Edgecombe, M. (April, 2000). *Memory deficits and language comprehension: Discourse processing following severe closed-head injury.* Presented at the Seventh annual meeting of the Cognitive Neuroscience Society, San Francisco, California.
29. Simpson, A., & Schmitter-Edgecombe, M. (February, 2000) *Evaluation of inhibitory attentional mechanisms following severe closed-head injury.* Presented at the Twenty-eighth annual meeting of the International Neuropsychological Society, Denver, Colorado.
28. Chaytor, N., & Schmitter-Edgecombe, M. (February, 2000). *The influence of strategy use on working memory performance in older adults.* Presented at the Twenty-eighth annual meeting of the International Neuropsychological Society, Denver, Colorado. **received student poster award
27. Schmitter-Edgecombe, M., Beglinger, L., & Rogers, W. (February, 2000). *Acquisition of skilled visual search performance following severe closed-head injury.* Presented at the Twenty-eighth annual meeting of the International Neuropsychological Society, Denver, Colorado.
26. Nissely, H., & Schmitter-Edgecombe, M. (October, 1999). *Strategy use of older adults on the Ruff Figural Fluency Test*. Presented at the Nineteenth annual meeting of the National Academy of Neuropsychology, San Antonio, TX.
25. Schmitter-Edgecombe, M. (1998, October). *Age-differences in the use of everyday memory strategies*. Presented at the Eighteenth annual meeting of the National Academy of Neuropsychology, Washington, D.C.
24. Schmitter-Edgecombe, M., & Simpson, A. (1998, February). *Age differences in the effects of divided attention on automatic and controlled aspects of memory: An application of the process dissociation framework*. Paper presented at the Twenty-sixth annual meeting of the International Neuropsychological Society, Honolulu, Hawaii.

23. Karl, T. F., & Schmitter-Edgecombe, M. (1998, February). *Relevancy and reasoning: Changes across the lifespan*. Presented at the Twenty-sixth annual meeting of the International Neuropsychological Society, Honolulu, Hawaii.
22. Simpson, A., & Schmitter-Edgecombe, M. (1998, February). *Memory for the recall and temporal order of activities: Aging and automaticity*. Presented at the Twenty-sixth annual meeting of the International Neuropsychological Society, Honolulu, Hawaii.
21. Schmitter-Edgecombe, M., & Karl, T. (1997, November). *Unconscious acquisition and processing of covariations in older adults.* Presented at the Thirty-eighth annual meeting of the Psychonomic Society, Philadelphia, Pennsylvania.
20. Vesneski, M., Schmitter-Edgecombe, M., & Jones, D. (1997, November). *Aging and word finding: A comparison of discourse and nondiscourse tests.* Presented at the Seventeenth annual meeting of the National Academy of Neuropsychology, Las Vegas, Nevada.
19. Karl, T., Schmitter-Edgecombe, M., & Simpson, A. (1997, November). *Everyday memory failures reported by older and younger adults*. Presented at the Seventeenth annual meeting of the National Academy of Neuropsychology, Las Vegas, Nevada.
18. Schmitter-Edgecombe, M., & Rogers, W. A. (1997, February). *Automatic process development following severe closed head injury*. Presented at the Twenty-fifth annual meeting of the International Neuropsychological Society, Orlando, Florida.
17. Schmitter-Edgecombe, M. (1996, October). *Effects of divided attention on perceptual and conceptual memory test performance: A process dissociation framework.* Presented at the Thirty-seventh annual meeting of the Psychonomic Society, Chicago, Illinois.
16. Schmitter-Edgecombe, M. (1996, August). *The effects of traumatic brain injury on automatic processing.* Paper presented at the One-hundred and fourth annual meeting of the American Psychological Association as part of a symposium entitled "Cognitive Neuroscience Applications to the study of Traumatic Brain Injury".
15. Schmitter-Edgecombe, M. & McConnell, J. (1995, November). *The effects of divided attention on conceptual and perceptual memory tests.* Presented at the Fifteenth annual meeting of the National Academy of Neuropsychology, San Francisco, California.
14. McConnell, J., & Schmitter-Edgecombe, M. (1995, November). *Effects of severe closed head injury on metamemory.* Presented at the Fifteenth annual meeting of the National Academy of Neuropsychology, San Francisco, California.
13. Kibby, M. Y., Schmitter-Edgecombe, M., & Long, C. J. (1995, November). *The relationships between measures of auditory verbal learning and executive functioning in closed head injury.* Presented at the Fifteenth Meeting of the National Academy of Neuropsychology, San Francisco, California.
12. Schmitter-Edgecombe, M. (1995, February). *The effects of divided attention on the implicit and explicit memory performance following severe closed head injury.* Paper presented at the Twenty-third annual meeting of the International Neuropsychological Society, Seattle, Washington.
11. Fahy, J. F., Marks, W., Schmitter-Edgecombe, M., & Long, C. J. (1995, February). *Dissociations among memory tests following severe closed head injury: Memory system theory versus a processing framework.* Paper presented at the Twenty-third annual meeting of the International Neuropsychological Society, Seattle, Washington.
10. Kibby, M. Y., Schmitter-Edgecombe, M. E., & Long, C. J. (1994, November). *The California Verbal Learning Test as a measure of memory functioning in severely head-injured adults and neurologically normal controls.* Presented at the Fourteenth annual meeting of the National Academy of Neuropsychology, Orlando, Florida.
9. Schmitter-Edgecombe, M., (1994, February). *The effects of divided attention on implicit and explicit memory performance.* Paper presented at the Twenty-second annual meeting of the International Neuropsychological Society, Cincinnati, Ohio.

8. Schmitter-Edgecombe, M., Kibby, M., & Long, C. J. (1993, October). *Visual selection following severe closed head injury: Focused and divided attention.* Presented at the Thirteenth annual meeting of the National Academy of Neuropsychology, Phoenix, Arizona.
7. Kibby, M., Schmitter-Edgecombe, M., & Long, C. J. (1993, October). *The relationship between neuropsychological tests and measures of activities of daily living and work performance.* Presented at the Thirteenth annual meeting of the National Academy of Neuropsychology, Phoenix, Arizona.
6. Schmitter-Edgecombe, M., Fahy, J. F., Whelan, J. P., & Long, C. J. (1992, November). *Memory remediation after severe head trauma: Notebook training versus supportive therapy.* Presented at the Twelfth annual meeting of the National Academy of Neuropsychology, Pittsburgh, Pennsylvania.
5. Schmitter, M. E., Fahy, J. F., Marks, W., & Long, C. J. (1991, November). *Semantic priming following severe closed-head trauma: Automatic and attentional process.* Presented at the Eleventh annual meeting of the National Academy of Neuropsychology, Dallas, Texas.
4. Schmitter, M. E., Fahy, J. F., Marks, W., & Long, C. J. (1990, November). *The effects of severe closed-head trauma on three stages of information processing.* Presented at the Tenth annual meeting of the National Academy of Neuropsychology, Reno, Nevada.
3. Fahy, J. F., Schmitter, M. E., Turgeon, A. L., & Long, C. J. (1990, November). *Prospective memory after traumatic brain injury.* Presented at the Tenth annual meeting of the National Academy of Neuropsychology, Reno, Nevada.
2. Schmitter, M. E., Jones, C. L., & Long, C. J. (1989, November). *A conceptualization of the neuropsychological functions measured by simple and choice reaction time.* Presented at the Ninth annual meeting of the National Academy of Neuropsychology, Washington, D. C.
1. Jones, C. L., Schmitter, M. E., & Long, C. J. (1989, November). *The role of demographic variables in the interpretation of simple and choice reaction time.* Presented at the Ninth annual meeting of the National Academy of Neuropsychology, Washington, D. C.

RECENT INVITED TALKS

Aging in place: Developing interventions for individuals experiencing memory problems and their care-partner. Presented to the Alzheimer's Association Board of Eastern Washington (January, 2013, Spokane, WA).

A cognitive rehabilitation multi-family group intervention for individuals with mild cognitive impairment and their care-partner. Presented to the Alzheimer's Association Research Roundtable (AARR; September, 2012, Washington DC). Selected as the 2010 International Research Grant awardee by the AARR.

Aging in place: Developing smart environment technologies for health assessment and assistance. (June, 2012; Seattle, WA). Presentation made to Horizon House retirement community in Seattle.

Aging in place: Interventions for individuals experiencing memory difficulties and their families. (May, 2012; Pullman, WA). Presentation made to the Kiwanis Club of Pullman.

Update on treatment and research in dementia. (May, 2012; Pullman, WA). Presentation made as part of the Alzheimer Association series, Eastern WA.

Aging in place: Developing smart environment technologies for health assessment and assistance. (March, 2012; Birmingham Alabama, WA). Presentation made at the University of Alabama Grand Round series.

Multi-family group interventions for individuals with mild cognitive impairment and traumatic brain injury. (February, 2012; Spokane, WA). Presentation made at the WSU Spokane Chancellors' Research Breakfast Series.

The future of aging in place: Living independently longer. (November, 2011; Pullman, WA). Presentation made to the Pullman Rotary Club.

The future of aging in place. (May, 2011; Ellensburg, WA). Presentation made at the Washington State Association of Senior Centers Conference (WSASC).

Latest treatment and research in dementia. (April, 2011; Moscow, Idaho). Presentation made as part of the Alzheimer Association series, Eastern WA.

Aging in place: Interventions for individuals experiencing memory difficulties and their families. (March, 2011; Spokane, WA). Presentation made to National Active and Retired Employees Association (NARFE).

The future of aging in place: Living independently longer. (March, 2011; Pullman, WA). Presentation made to the Pullman Senior Center.

The future of aging in place: Living independently longer. (March, 2011; Pullman, WA). Presentation made to Prostate Cancer Support Group.

Interventions for individuals experiencing memory difficulties and their families. (January, 2011; Clarkston, WA). Presentation made to Aging and Long-term Care and the Area Association on Aging.

The future of aging in place: Merging of psychology and technology to help us live independently longer. (December, 2010; Seattle, WA). WSU Innovators Series.

Development of smart environment technologies for health monitoring and assistance. (October, 2010; Vancouver, BC). Continuing Education Special Topics Presentation at the 40th annual meeting of the National Academy of Neuropsychology.

Managing mild cognitive impairment and retaining safe and independent living. (June, 2010; Bethesda, MD). Workshop on Personal Motion Technologies for Healthy Independent Living. Sponsored by NIH: NIA & NIBIB.

Aging and dementia: memory, everyday activities, and intervention. (April, 2010; Pullman, WA). Keynote presenter at the annual WSU psychology research forum.

Characterizing dementias and discussing WSU smart home research. (March 2010, Spokane WA). Presentation made to the Spokane Parkinson's disease Association.

Alzheimer's disease and mild cognitive impairment (June 2009; Moscow ID). Interview segment for Go Cognitive Educational Tools for Cognitive Neuroscience on line at: goCognitive.net.

Specific memory impairments in dementia and mild cognitive impairment. (June 2009; Moscow ID). Interview segment for Go Cognitive Educational Tools for Cognitive Neuroscience on line at: goCognitive.net.

Intervention strategies for patients with mild cognitive impairment and dementia. (June 2009; Moscow ID). Interview segment for Go Cognitive Educational Tools for Cognitive Neuroscience on line at: goCognitive.net.

Characterizing dementias and a memory notebook interventions. (December, 2008; Pullman, WA). Alzheimer's dementia speaker series. Spokane Alzheimer's Association.

Dementias and communicating with people with cognitive disorders. (October, 2007; Spokane, WA). Washington State continuing education series.

Early stage dementia: multiple memory deficits and intervention. (September, 2007; Fargo, ND). University of North Dakota psychology forum speaker's series.

COMMITTEE WORK

Member, CMS Community-based Care Transitions Technical Expert Panel (Spring, 2013-)
Member, Graduate School Scholarship Review Committee (Spring, 2013-)
Board Member, Association of Doctoral Training in Clinical Neuropsychology (2012-)
Chair, Health Search Committee (Fall, 2012)
Member, Clinical Search Committee (Fall, 2012)
Member, Provost's Advisory Committee on Tenure and Promotion (Fall, 2011 -)
Chair, Marianna Merritt and Donald S. Matteson Distinguished Professorship in Foreign Language and Cultures (2011-2012)
Member, Clinical Search Committee, Psychology Clinic (Fall, 2011-12)
Member, CLA Grants Committee (Fall, 2010 -)
Member, CO Johnson Awards Selection Committee, Spring 2011
Member, Nominating Committee, Faculty Status Committee, Spring 2011
Member, CLA Initiative for Global Innovative Studies (Fall, 2010 -)
Member, Program Committee, INS Mid Winter Meeting 2010
Member, Clinical Search Committee (Fall, 2009)
Reviewer, WSU Spokane Seed Grants (Summer, 2007)
Member, Seed Grant Review Panel, WSU, Pullman (Spring, 2007)
Member, CLA Committee for Research and Arts (Fall 2006-present)
Member, CLA Mission Statement Committee (Fall 2005)
Member, CLA Grant Development Committee (Fall 2005-present)
Member, Tri-Cities Search Committee (Fall 2005-present)
Member, Clinical Search Committee (Fall 2005-Spring 2006)
Chair, Meyer Professorship Awards Committee (Spring, 2005)
Member, Graduate Mentor Academy (Fall 2004 – present)
Member, Safety Committee (Fall 2004-present)
Director of Clinical Training (Fall 2003-Summer 2004)
Member, Dean's Advisory Committee on Tenure and Promotion (Fall 2003-Spring, 2005)
Co Director of Clinical Training (Fall 2002-Summer 2003)
Interim Director of Clinical Training (Fall 2000 – Summer 2001)
Member, Graduate, Research and Professional Education University Strategic Planning Design Team (Fall 2000-Spring 2001)
Graduate Teaching Mentor (Fall 2000-Spring 2001)
Chair, Tenure Guidance Committees (Fall 2000 – Fall 2001; Fall 2002-Summer 2004)
Member, Tenure Guidance Committees (Fall 2004-present)
Member, Undergraduate Studies Committee (Fall 2000 – Fall 2001; Fall 2002-present)
Chair, Clinical Search Committee (Fall 1999 – Fall 2001; Fall 2003-Fall 2004)
Member, Clinical Search Committee (Fall 1994 - Spring 1998)
Member, Community Service Learning Center Advisory Board (Fall, 1998 – present)
Colloquium Committee, Co-Chair (Summer 1997 – Fall 2000)
Chair, Student Awards Committee (Spring, 1996 – present)
Chair, Departmental Ethics Committee (Fall 1995 – Fall 2001)
Member, Departmental Ethics Committee (Fall 1994-1995; Fall 2002-present)
Chair, Clinical Graduate Student Recruitment (Spring 2002- Spring 2004)
Member, Clinical Graduate Student Recruitment (Spring 1995 – Spring 2001; Spring 2005-present)
Executive Committee (Fall 1996 - Fall 1997; Fall 2000-Fall 2001; Fall 2002-Fall 2004)

TEACHING EXPERIENCE

Graduate Courses Taught

Gerontechnology
Professional, Ethical, and Legal Issues in Clinical Psychology
Foundations of Neuropsychology
Clinical Practicum Supervision
Neuropsychological Assessment Practicum Supervision

Undergraduate Courses Taught

Cognition and Memory
Honors Introductory Psychology
Psychology and Aging

BEHROOZ A. SHIRAZI's CURRICULUM VITA

A. Biographical Data

1. Personal data:

- **Date of Birth:** 1954.
- **Married, one daughter.** **Citizenship:** U.S.A.
- **Business Contact Information:**
  Washington State University
  School of Electrical Engineering and Computer Science (EECS)
  P.O. Box 642752
  Pullman, Washington 99164-2752

  Office: 509-335-8520
  Fax: 509-335-3818
  6257
  E-mail: shirazi@wsu.edu
  URL: www.eecs.wsu.edu

  Personal Contact Information:
  P.O. Box 1410
  Pullman, WA 99163

  Cell Phone:
  509-432-

  Personal email:
  shirazi54@gmail.com

2. Education:

- **Ph.D.**, Computer Science, School of Electrical Engineering and Computer Science, University of Oklahoma, Jan 1981 to Aug 1985, Supervising Professor: A. R. Hurson.
- **M.S.**, Computer Science, School of Electrical Engineering and Computer Science, University of Oklahoma, Aug 1977 to Dec 1980, Supervising Professor: B. K. Walker.
- **B.S.**, Business Administration, Tehran, Iran, August 1972 to May 1976.

3. Professional experience:

- **Washington State University**, School of Electrical Engineering and Computer Science (EECS), Huie-Rogers Endowed Chair Professor and Director, 2005 – present.
  - Annual state operating budget of $4M, approx. $500K in private funds expenditures, and $6M in research expenditures (total of approx. $10M).
  - **2005 – present performance measures:**
    - Increase in annual research expenditures: from $2.5M to $6M

(140% increase)

- Increase in number of graduate students: from 113 to 177 (60% increase; also, going from 40% PhD students to 60% PhD students now)

- Increase in number of undergraduate students: from 552 to 822 (50% increase)

While during the same time, due to budget cuts, we have had a:

- Decrease in number of faculty: from 44 to 39 (12% decrease)
- Decrease in number of staff: from 11.5 to 8.5 (26% decrease)

- **Major Fundraising and Development:**
  - A $200K donation to an endowed scholarship fund, 2013
  - A $150K donation to complete a $1M living trust Endowed Chair, June 2006
  - A $2.1M gift (in hardware, software, and services) over 3 years by Proofpoint, Inc., May 2008
  - A $150K gift by Puget Sound Energy to establish a new "Renewable Energy" course, Aug. 2008
  - The $900K John and Anna Scott Scholarship and Fellowships endowment, Sept. 2008
  - A $500K gift by Avista Utilities to promote the Power Engineering program, Jan. 2011
  - Establishing Director's Excellence Fund (approx. $100K annually)
  - Formation of a power industry consortium to (financially) help revitalize the electric power program at WSU

- **Accomplishments as the School Director:**
  - Have lead in defining the vision of becoming a top-tier EECS program providing experience-enhanced education and conducting interdisciplinary research in engineering and computing.
  - Have lead in defining a 4-pillar strategic plan for achieving the EECS vision based on:
    - Focusing on high priority areas of Power Engineering in EE and AI and Smart Environments in CS
    - Establishing strategic partnerships with industry and national labs to promote internships, job opportunities, and collaborative research
    - Promoting experience-enhanced undergraduate education
    - Focusing our graduate programs on recruiting high quality PhD students.
  - Received full 6-yr ABET accreditation for all EECS programs (Electrical Engineering, Computer Science, and Computer Engineering) in 2008.

- **University of Texas at Arlington**, Department of Computer Science and Engineering (CSE), *Professor and Chairperson*, 1999 – 2005.

  - **CSE@UTA Department Snapshot Profile in Fall 2004:**
    - 26 tenure/tenure-track faculty members (research, teaching, service.)
    - 14 full-time, non-tenure track faculty members (teaching, service.)
    - 4 part-time, adjunct faculty members.
    - 472 Undergraduate, 398 Masters, 89 PhD students.
    - Annual research grants in 2003-04: $3.8M (3 year average: $3.2M).
    - Active research grants 2003-04: $6.32M.

  - **Accomplishments as the Department Chair:**
    - Initiated the "*Top 25 Initiative*" to improve the quality and stature of the CSE@UTA Department (secured $2M commitment from UTA), 2000.
    - Increased number of faculty by 60% since 2000.
    - Tripled the number of PhD students since 2000.
    - More than tripled the departmental annual research funding since 2000.
    - Helped secure a $0.5M Federal Appropriation (earmark) funding for research in security.
    - Established IRIS: Institute for Research In Security.
    - Established Pervasive computing, Security, and Bioinformatics stems in the department.
    - Initiated the CSE@UTA *Industry Advisory Board Endowed Student Fellowship* (currently $120K raised), 2001.
    - Principle investigator on an $840,000 grant from the UT System to establish a joint *UTA/UTD on-line CS/EE Masters degree* through the UT System virtual university, the TeleCampus, 1999. The program has ranked as one of the top *on-line* engineering degree offerings by the US News and World Report.
    - Established MavPad, a smart home showcase/ laboratory, in a university apartment on UTA campus, 2002.
    - Obtained full accreditation for the B.S. CSE degree by both the Engineering Accreditation Commission (EAC) and Computing Accreditation Commission (CAC) of the ABET, 2001.
    - Initiated the CSE@UTA *High School Robot Programming Contest* to promote computer science and engineering disciplines at high schools (and as a recruiting tool), 2000.
    - Established Chairman's Scholarship for *National Merit Scholars* (2001) and Chairman's *PhD Students Fellowship* (2000).

  - Helped in establishing two new Bachelor of Science degrees: *B.S. in Computer Science* (in addition to the existing B.S. in Computer Science and Engineering) and *B.S. in Software Engineering*, 2001.
  - Obtained full accreditation for the B.S. CS and B.S. SE degrees by the CAC and EAC ABET commissions, respectively, 2004.

- **Consultant to Johns Hopkins University**, DARPA Project on Distributed Real-time Systems, Jan. 1, 2004 to May 31, 2005.
- **University of Texas at Arlington**, Department of CSE, *Professor and Associate Chairperson*, 1996 -1999.
- **University of Texas at Arlington**, Department of CSE, *Professor* (1996 - Present), *Associate Professor* (1990 - 1996).
- **AFOSR, Rome Lab**, Summer Research *Faculty Fellow*, 1990.
- **Southern Methodist University**, Department of Computer Science and Engineering, *Assistant Professor*, 1985 - 1990.
- **Southern Methodist University**, Coordinator and Advisor for the Computer Engineering Program, 1989 - 1990.
- **SGS-Thomson, Inc.**, Consultant, 1988.
- **University of Oklahoma**, Graduate Teaching Assistant, 1982 - 1985.

4. Research experience and interest:

Sustainable Computing and use of computing for sustainability; Pervasive Computing (system design and formalization, middle-ware support); Distributed systems (real-time systems, dynamic resource and QoS management); Parallel processing (software tools for multi-threaded systems, scheduling and allocation); and Computer architecture (dataflow systems and memory management).

B. Teaching Activities

1. Undergraduate courses taught:

- **CptS 421 and 423** (senior), Software Design Project I and II (Senior Design Projects)
- **CptS 402** (senior), Social and Professional Issues in Computer Science, Washington State University.
- **CSE 2441** (Sophomore), Computer Organization and Logic Design, University of Texas at Arlington.
- **CSE 3322** (Junior), Computer Architecture I (including Distance Delivery), University of Texas at Arlington.
- **CSE 4316** (Senior), Senior Design Projects I, University of Texas at Arlington.
- **CSE 4317** (Senior), Senior Design Projects II, University of Texas at Arlington.
- **CSE 4392** (Senior), Parallel Processing, University of Texas at Arlington.
- **CSE 2340** (Sophomore), Assembly Language Programming and Machine Organization, Southern Methodist University.
- **CSE 2441** (Sophomore), Computer Organization, Southern Methodist University.
- **CSE 3381** (Junior), Digital Logic Design, Southern Methodist University.
- **CSE 3358** (Junior), Data Structures, Southern Methodist University.
- **CS 1314** (Freshman), Scientific Programming in Fortran, University of Oklahoma.

2. Graduate courses taught:

- **CSE 5350** (Low-Grad.), Computer System Architecture, University of Texas at Arlington.
- **CSE 5440** (Low-Grad.), Digital Logic and Computer Organization, University of Texas at Arlington.
- **CSE 5391** (Low-Grad.), Individual Study in Computer Science, University of Texas at Arlington.
- **CSE 5395** (Low-Grad.), Master's Project, University of Texas at Arlington.
- **CSE 5398** (Low-Grad.), Master's Thesis, University of Texas at Arlington.
- **CSE 6350** (High-Grad.), Advanced Topics in Computer Architecture, University of Texas at Arlington.
- **CSE 6397** (High-Grad.), Research in Computer Science, University of Texas at Arlington.
- **CSE 6399** (High-Grad.), Dissertation, University of Texas at Arlington.
- **CSE 5381** (Low-Grad.), Computer Architecture, Southern Methodist University.
- **CSE 5390** (Low-Grad.), Individual Study, Southern Methodist University.
- **CSE 5399** (Low-Grad.), Master's Thesis, Southern Methodist University.
- **CSE 6380** (High-Grad.), Advanced Computer Architecture, Southern Methodist University.
- **CSE 6385** (High-Grad.), Microprocessor Architecture and Interfacing, Southern Methodist University.
- **CSE 7389** (High-Grad.), VLSI Design and Systolic Arrays, Southern Methodist University.
- **CSE 7398** (High-Grad.), Research in Computer Science, Southern Methodist University.
- **CSE 7399** (High-Grad.), Dissertation, Southern Methodist University.

3. New courses or curricula developed:

- Developed a new parallel processing laboratory for the Senior Design Courses (CSE 4316/17) with support from E-Systems, Inc. and the National Science Foundation.
- Developing CSE 5350 (Computer Architecture II) for distance delivery via the UT System TelCampus (web delivery).

4. Participation in organizations or activities concerned primarily with teaching:

- Participated in the NSF/TCPP Planning Workshop on Curriculum Standards for Parallel and Distributed Computing, Washington DC, Feb. 2010.
- Behrooz Shirazi, "A Senior Design Project Laboratory: Experiments in Parallel Processing," *American Society of Engineering Education Conference and Exposition*, 1995.
- B. Weems, K. Kavi, and B. Shirazi, "HIPP: An Honors Program in Parallel Processing," *The International Journal of Engineering Education,* Vol. 11, Nos 4 and 5, 1995, pp. 329-335.
- Member of the Education Committee of the Texas Computer Industry Council (1985-1987).

5. Supervision of graduate theses and dissertation:

List of Ph.D. students, dissertation titles, and graduation dates:

1. **Shervin Hajiamini:** "Models for Evaluating Power Efficiency in Multi-Core Systems," School of EECS, WSU, Expected date of graduation: Dec 2014.
2. **Jacob Murray**: "Combined Processor and Network Power Efficiency in Multi-Core Systems," School of EECS, WSU, Expected date of graduation: May 2014.
3. **Teng Lu**: "Power-aware High Performance Computing," School of EECS, WSU, Expected date of graduation: Dec 2013.
4. **Nina Picone**: "Adaptive Context Modeling And Situation Awareness in Wireless Sensor Networks," School of EECS, WSU, Dec 2010, Currently at Lewis and Clark State College, ID.
5. **Swaroop Kalasapur**: "Graph Theoretic Modeling of Community Computing," Co-advisor with Mohan Kumar, Dept. of CSE, UTA, May 2005, Currently at Samsung America.
6. **Meo-jim Kim**: "Service Discovery in Ad hoc Networks," Co-advisor with Mohan Kumar, Dept. of CSE, UTA, May 2005, currently at Ubiquitous Sensor Networks, South Korea.
7. **Charles Cavanaugh**: "QoS Management in Dynamic Distributed Real-time Systems," Co-advisor with L. Welch, Dept. of CSE, UTA, Aug. 2000, Currently Assistant Professor of Computer Science at University of Louisiana.
8. **Eui-Nam Huh**: "Resource Management in Dynamic Distributed Real-time Systems," Co-advisor with L. Welch, Dept. of CSE, Ohio University, Aug. 2000, Currently Assistant Professor of Computer Science at Sahmyook University, Korea.
9. **Binoy Ravindran**: "Middle-ware Support for Adaptive QoS and Resource Management in Dynamic Distributed Real-time Systems," Co-advisor with L. Welch, Dept. of CSE,

UTA, May 1998, Currently Assistant Professor of Electrical and Computer Engineering at Virginia Tech.

10. **Gyungleen Park**: "Modeling and Evaluation of Task Scheduling Techniques in Parallel and Distributed Systems," Dept. of CSE, UTA, Aug. 1997, Currently Associate Professor of Computer Science at Cheju National University, Korea.
11. **Swu Yih**: "A Model for Analysis and Design of Licensable Safety-Critical Computing Systems," Dept. of CSE, SMU, Aug. 1996, Currently Member of Technical Staff, Institute of Nuclear Energy Research, Atomic Energy Commission, Taiwan, Republic of China.
12. **Hsing Bung Chen**: "A General Software Development Environment for Parallel Task Scheduling and Performance," Dept. of CSE, UTA, Aug. 1994, Currently Member of Technical Staff, Lucent Technologies, Denver, Colorado.
13. **Chungching Wang**: "A Dataflow-Based Neural Net Engine," Dept. of CSE, SMU, Aug. 1994, Currently: Member of Technical Staff, NEC, Dallas, Texas.
14. **Jentien Yen**: "A Combined Memory Management and Address Translation Scheme," Dept. of CSE, SMU, Dec. 1991, Currently: Member of Technical Staff, IBM Corp., Austin, Texas.
15. **S. Krishnaprasad**: "Concurrent Processing with Result Sharing: A Unified View of Efficient Computations," Dept. of CSE, SMU, July 1991, Currently: Professor of Computer Science at Jacksonville State University, Alabama.
16. **David Lin**: "Efficient Environmental Support for Heterogeneous Computing," Dept. of CSE, SMU, Dec. 1990, Currently: Member of Technical Staff, IBM Corp., Austin, Texas.
17. **Mingfang Wang**: "A Generalized Approach to the Task Scheduling Problem," Dept. of CSE, SMU, August 1989, Currently: Professor of Math & Computer Science, University of Central Arkansas, Conway, Arkansas.

List of M.S. students, thesis titles, and graduation dates:

1. **Rajath Hedge**: “Evaluation of Sustainability in High Performance Computing Systems,” School of EECS, WSU, Expected graduation date: May 2012.
2. **Rashmi Parthasarathy**: "Secured Over The Air Programming (OTAP) in iMote2-based Sensor Networks,” School of EECS, WSU, May 2010.
3. **Lohith Anusuya Rangappa**: "Context-awareness and Network Priority Management in Sensor Networks,” School of EECS, WSU, August 2009.
4. **Animesh Dalakoti**: "Priority-based QoS Management in Network Routing,” School of EECS, WSU, May 2007.
5. **Kamran Shafiei**: " A Framework for Standardized Communications and Formal Specification and Modeling of Entities in Community-based Computing using XML,” Dept. of CSE, UTA, December 2003.
6. **Shahzad Nazar**: "Performance/Energy Efficiency Analysis of Register Files in Superscalar Processors," Dept. of CSE, UTA, December 2003.
7. **Chirag Pandya**: "Deconfliction and Uneven Load Distribution in DeSiDeRaTa," Dept. of CSE, UTA, May 2002.

8. **Victor Visuasuresh Govindaswamy**: "A Process to Provide Scalability, survivability, Timeliness and Profiling Features to Applications," Co-Advisor with Lonnie Welch, Dept. of CSE, UTA, Aug 2001.
9. **Kannan Bhoopathy**: "A Software Development Methodology to Support Distributed Computing Clusters," Dept. of CSE, UTA, Aug 2000.
10. **Padma Pidaparthy**: "Cooperative Resource Management in DeSiDeRaTa," Co-Advisor with Lonnie Welch, Dept. of CSE, UTA, May 2000.
11. **Prasanna Anantha-Raju**: "Design and Implementation of an Object-Oriented, CORBA- Enabled Sensing Path of Dynamic Real-time Benchmark for DeSiDeRaTa Middleware," Co-Advisor with Lonnie Welch, Dept of CSE, UTA, May 2000.
12. **Hyung-Bung Ban**: "A Graphical User Interface and File Management System for PARSA Environment," Dept. of CSE, UTA, May 1999.
13. **Jayandraw Gowishankar**: "A Generalized Technique for Generating and Executing High Performance Applications," Dept. of CSE, UTA, May 1999.
14. **Byung Yong Sung**: "A General Purpose Framework for Executing High Performance Software in Java," Dept. of CSE, UTA, Aug. 1998.
15. **Suresh Basireddy**: "Effect of Communication Delays on Static Scheduling," Dept. of CSE, UTA, May 1995.
16. **Shami Ahuja**: "A Comparative Study of Working Set Cache Models," Dept. of CSE, UTA, Aug. 1994.
17. **Yogesh Mehta**: "Deterministic Execution Time Prediction of Programs/Tasks on the Intel i860 Architecture," Dept. of CSE, UTA, May 1994.
18. **Mihir Maniar**: "C2IF1 - A Compiler to Convert a Subset of C Language to IF1," Dept. of CSE, UTA, Dec. 1993.
19. **Rama Krishna Nalla**: "Performance Visualization," Dept. of CSE, UTA, Dec. 1992.
20. **Jessica Yeh**: "Dataflow vs. Superscalar Pipelined Processing," Dept. of CSE, UTA, Dec. 1992.
21. **Kamalesh Ruparel**: "A Built-in Self Test for a Pipelined Multiplier," Dept. of CSE, SMU, Dec. 1989.
22. **Shahab Abdullah**: "A SISAL Compiler for a Hypercube-based Dataflow Machine," Dept. of CSE, SMU, May 1989.
23. **Daniel Locey**: "A Comparison of the Architectures of Commercially Available Central Office Switches for an Integrated Services Digital Network," Dept. of CSE, SMU, May 1989.
24. **Young-Deok Song**: "A Parallel Exchange Sort Algorithm and Its VLSI Design," Dept. of CSE, SMU, May 1988.
25. **Pradipto Mukherjee**: "A VLSI Implementation of a Pipelined Multiplier for Systolic Convolution," Dept. of CSE, SMU, Nov. 1987.
26. **Leticia Furin**: "The Simulation of a Hypercube-Based Dataflow Machine," Dept. of CSE, SMU, Sept. 1987.

List of M.S. students, project titles, and graduation dates:

1. **Sandeep U Menon**: "Implementation of RC-EDF Scheduler and Its Comparison with FQ Scheduling Techniques," Co-Advisor with David Levine, Dept. of CSE, UTA, May 2001.
2. **Krishna Somu**: "Development of a Test Tool for Auto Installation and Testing," Co-Advisor with David Levine, Dept. of CSE, UTA, Dec 2000.
3. **Bilal Wahid**: "A Policy Based Framework for Protection of Mobile Agents," Co-Advisor with David Levine, Dept. of CSE, UTA, Dec 2000.
4. **Sudhir Kothagunda**: "Design and Development of an Automatic GSM Phone Feature Testing Tool," Dept. of CSE, UTA, Aug 2000.
5. **Kishore Thota**: "Performance Evaluation Tool for GPRS," Dept. of CSE, UTA, Aug 2000.
6. **Md Manmunul Islam**: "Enhancements to a Software Development Tool for Developing Software for Multi-Threaded Systems," Dept. of CSE, UTA, May 2000.
7. **Hossain Tauhidur Rahman**: "Generation and Implementation of a Software Testing Methodolgoy," Dept. of CSE, UTA, May 2000.
8. **Zubair Saifullah**: "Online Incident Management System," Dept. of CSE, UTA, Dec 1999.
9. **Ajay Honnur**: "Design and Implementation of a Synchronous Replication Algorithm for Maintaining Consistency in Replicated Databases ," Dept. of CSE, UTA, Dec 1999.
10. **Mohammad Hasan Khan**: "Location Management Algorithms in Mobile Wireless Network," Dept. of CSE, UTA, Dec 1999.
11. **Sathyanarayanan Thiruvallarari**: "NetInspector," Dept. of CSE, UTA, Dec 1999.
12. **Asha R. Talasila: "**A Methodology for Developing Distributed, Multithreaded Objects Using PARSA," Dept. of CSE, UTA, Dec 1999.
13. **Anil K. Dara**: "Protocol Analyzer," Co-Advisor with Ramesh Yerraballi, Dept. of CSE, UTA, Aug. 1999.
14. **Masud Karim Khan**: "Study and Evaluation of Dynamic Channel Allocation Algorithms in Wireless Mobile Communication Systems," Dept. of CSE, UTA, Aug. 1999.
15. **Madhu Ganta**: "A Web-Based Virtual Memory System," Dept. of CSE, UTA, Aug. 1999.
16. **Vamsee K. Pitchuka**: "A Graphical User Interface for the STRAS Tool," Dept. of CSE, UTA, Aug. 1999.
17. **Santosh Thammi**: "Memory Analysis Using a Dimensioning Tool - STRAS," Dept. of CSE, UTA, Aug. 1999.
18. **Javid Kamal**: "Testing of Central Office ADSL CODEC's," Dept. of CSE, UTA, Aug. 1999.
19. **Narayan Bethmangalkar**: "A Communication Infrastructure for Web-enabling C Applications using PARSA," Dept. of CSE, UTA, Dec. 1998.
20. **Prathiba Cochin**: "A User Interface for Web-enabling C Applications using PARSA," Dept. of CSE, UTA, Dec. 1998.
21. **Suryanarayanan Gobichettipalayam**: "An External Interface Module for an Embedded Gateway Device," Dept. of CSE, UTA, Aug. 1998.

22. **Srividya Subramanyam**: "Java Support for Internet Resource Sharing and Web-based Learning," Co-Supervised with Dr. L. Peterson, Dept. of CSE, UTA, Aug. 1998.
23. **Xiaojun Yan**: "QoS Management in Distributed Real-time Systems," Co-Supervised with Dr. L. Peterson, Dept. of CSE, UTA, Aug. 1998.
24. **Bharath Yanamula**: "A Dynamic Benchmark Suite for Distributed Real-time Systems," Co-Supervised with Dr. L. Peterson, Dept. of CSE, UTA, Aug. 1998.
25. **Kavita Rao**: "User Interface for a Dynamic Resource Management System," Co-Supervised with Dr. L.R. Welch, Dept. of CSE, UTA, May 1998.
26. **Jin Song**: "A Measurement and Metrics Toolset for Unix," Co-Supervised with Dr. L.R. Welch, Dept. of CSE, UTA, May 1998.
27. **Hari Kishore Polisetty**: "An Enhanced Implementation of the PARSA Performance Assessment Tool," Dept. of CSE, UTA, Aug. 1997.
28. **Venugopal Reddy Sathu**: "A Method for Generating Multi-Threaded Applications from the PARSA Parallel Program Development Environment," Dept. of CSE, UTA, Aug. 1997.
29. **Ranjeet Verma**: "A Method for Generating Multi-Threaded Applications from the PARSA Parallel Program Development Environment," Dept. of CSE, UTA, Dec. 1997.
30. **Jianhua Su**: "A Control Panel for the PARSA Performance Assessment Tool," Dept. of CSE, UTA, Dec. 1995.
31. **Chandava Ramana**: "A Performance Animation Tool for the PARSA Tool Set," Dept. of CSE, UTA, Dec. 1995.
32. **Honggen Qi**: "A Scheduling Editing Tool for the PARSA Tool Set," Dept. of CSE, UTA, Dec. 1995.
33. **Vinay Gadiyar**: "A Parallel Graphical C Compiler for the PARSA Tool Set," Dept. of CSE, UTA, Dec. 1995.
34. **Wei-Bin Lai**: "Architecture Specification Tool," Dept. of CSE, UTA, Dec. 1995.
35. **Sameer Vadakke**: "An Evaluation of Parallel Languages for the PARSA Project," Dept. of CSE, UTA, Aug. 1995.
36. **Chin-Shun Lin**: "Two Static Scheduling Methods for the PARSA Project: LCTD and DSC Algorithms," Dept. of CSE, UTA, May 1995.
37. **Zhaokun Cheng**: "Extensions to the G-PAR-C Graphical Language," Dept. of CSE, UTA, May 1995.
38. **Battepati Chittibabu**: "Terminal User Interface to an AIN Based Service," Dept. of CSE, UTA, May 1995.
39. **Ying Hong**: "Implementation of Sarkar Static Scheduling Method in PARSA," Dept. of CSE, UTA, May 1995.
40. **Li-Jiuan Huang**: "A Graphical Clustering Editor for Evaluation of Load Balancing Policies in Distributed Networks," Dept. of CSE, UTA, May 1995.
41. **Yuan Huang**: "A Network Topology Animation Tool," Dept. of CSE, UTA, May 1995.
42. **Shao-Min Juan**: "A Graphical Parallel Language," Dept. of CSE, UTA, May 1995.

43. **Shylaja Nagenhalli**: "A Performance Analysis Tool for PARSA," Dept. of CSE, UTA, May 1995.
44. **Lei Zhou**: "A Network Topology Editor for Distributed Systems," Dept. of CSE, UTA, May 1995.
45. **Jack Jijie Liu**: "PARSA Scheduling Environment and HNF Scheduling," Dept. of CSE, UTA, Dec. 1994.
46. **Shun-Hsin Chang**: "G-PAR-C: A Graphical Parallel C Language," Dept. of CSE, UTA, Dec. 1994.
47. **Ken-Ju Jung**: "A Performance Animation Tool for Evaluation of Load Balancing Policies," Dept. of CSE, UTA, Dec. 1994.
48. **Chao-Jen Pan**: "AST: Architecture Specification Tool," Dept. of CSE, UTA, Dec. 1994.
49. **Jie Yuan**: "A Distributed Network Performance Animation Tool," Dept. of CSE, UTA, Dec. 1994.
50. **Guor-Shyong Hwang**: "A Demo Tool for PARSA," Dept. of CSE, UTA, Aug. 1994.
51. **Hua-Chieh Chiu**: "A Mercury Architecture in PAE," Dept. of CSE, UTA, Aug. 1994.
52. **Jan-San Jue**: "A Graphical Animation Tool for Evaluation of Load Balancing Policies in Distributed Multiprocessor Systems," Dept. of CSE, UTA, Aug. 1994.
53. **Stefan Ronngren**: "Static Multiprocessor Scheduling of Periodic Real-Time Tasks with Predecessor Constraints and Communication Costs," Dept. of CSE, UTA, May 1994.
54. **Ming-Jen Chiou**: "A Performance Analysis Tool for Evaluation of Load Balancing Policies in Distributed Multiprocessor Systems," Dept. of CSE, UTA, May 1994.
55. **Ruei-Chiang Huang**: "A Computer Architecture Specification Database Tool," Dept. of CSE, UTA, Dec. 1993.
56. **Mei-Ling Chen**: "Architecture Topology Visualization Tool in PARSA," Dept. of CSE, UTA, Dec. 1993.
57. **Yi-Hwun Wu**: "IF1-Graph: A Visualized Parallel Programming Tool for Dataflow Graph Display," Dept. of CSE, UTA, Dec. 1993.
58. **Ping-Fen Hsieh**: "Visualization Demo Tool in PARSA," Dept. of CSE, UTA, Dec. 1993.
59. **Jinn-Yi Yeh**: "A Visual Task Graph Tool in PARSA," Dept. of CSE, UTA, Dec. 1993.
60. **Larry Lin**: "Real-Time Scheduling in PARSA Environment," Dept. of CSE, UTA, Aug. 1993.
61. **H. L. Chen**: "A Visual Performance Assessment Tool," Dept. of CSE, UTA, May 1993.
62. **Jun Gao**: "An IF1 Interpreter," Dept. of CSE, UTA, May 1993.
63. **Yen-min Chen**: "A Graphical IF1 Tool," Dept. of CSE, UTA, Dec. 1992.

c. Awards and Citations

- **AcademicKeys Who's Who** in Engineering Education, 2007.
- **International Who's who** of Professional Management, Who's Who Historical Society, 2001-02, pp. 1-487.
- **Recipient** of the "*1998 Outstanding Research Award*," College of Engineering, UTA - each year only one awarded at the college level (approximately 100 faculty members in the college).
- **Recipient** of the "*IEEE Computer Society Meritorious Service Award for his distinguished services in organizing the Symposium on Parallel and Distributed Processing for over 8 years*," IEEE 1996.
- **Recipient** of the "*1995 Lockheed Robert Q. Lee Award in recognition of Excellence in Engineering Teaching*," College of Engineering, UTA - each year only one awarded at the college level (approximately 100 faculty members in the college).
- **Distinguished Lecturer:** IEEE Computer Society Distinguished Visitors Program, 1993 - 1996.
- **Distinguished Lecturer:** ACM Lectureship Series, 1993 - 1997.
- **Recipient** of the "*IEEE Outstanding Service to Computer Society Award*," IEEE Dallas Section, 1990 and 1993.
- **Recipient** of the "*Outstanding Graduate Faculty Award- Computer Science and Engineering 1989-1990*," School of Engineering and Applied Science, Southern Methodist University.
- **Nominated** for the 1990 *Alumni Association Faculty Award for Excellence*, Southern Methodist University, April 1990.
- **Recipient** of the "*Outstanding Graduate Faculty Award- Computer Science and Engineering 1987-1988*," School of Engineering and Applied Science, Southern Methodist University.
- **Selected** as the "*1985 Outstanding Graduate Teaching Assistant" in the College of Engineering*, University of Oklahoma.
- **Recipient** of the "*1984 Outstanding Graduate Student Award*," University of Oklahoma, School of Electrical Engineering and Computer Science.
- **Winner** of the *Graduate Research Presentation* contest for the Engineering College, January 1984, University of Oklahoma.

D. Publications and Seminars

Life-time citation count of 1000+ (Google Scholar)

1) Books and Book Chapters:

1. Medha Bhadkamkar and Behrooz Shirazi, "Power Efficient Strategies for Storage Systems," Handbook of Energy-Aware and Green Computing, Editors: Sanjay Ranka and Ishfaq Ahmad, Chapman and Hall/CRC Press, 2012.
2. E. Jean, S. Sedigh, A. R. Hurson, and B. A. Shirazi, "Tools and Techniques for Dynamic Reconfiguration and Interoperability of Pervasive Systems," Chapter 2 in Pervasive Computing and Networking, Mohammad S. Obaidat, Mieso Denko, and Isaac Woungang (Eds.), John Wiley & Sons, Ltd., UK, 2012.
3. Nina Peterson , Lohith Anusuya-Rangappa1, Behrooz A. Shirazi, WenZhan Song, Renjie Huang, Daniel Tran, Steve Chien, and Rick LaHusen. "Volcano Monitoring: A Case Study in Pervasive Computing" in Pervasive Computing: Innovations in Intelligent Multimedia and Applications in Computer Communications and Networks series published by Springer Verlag, Germany, 2008, edited by Aboul Ella Hassanien, Ajith Abraham, and Hani Hagras.
4. A.R. Hurson, Y. Jiao, and B. Shirazi, "Broadcasting a Means to Disseminate Public Data in a Wireless Environment – Issues and Solutions," in *Advances in Computers*, Editor: Marvin Zelkowitz, Vol. 67, May 2006, pp. 1-85.
5. H. Alex, M. Kumar and B. Shirazi, "Service Discovery in Wireless and Mobile Networks," *Wireless Information Highways*, Editors: Dimitrios Katsaros, Alexandros Nanopoulos and Yannis Manolopoulos, Idea Group Inc. Publisher, 2006.
6. B. Sung, M. Kumar, and B. Shirazi, "Flexible and Adaptive Services in Pervasive Computing," in *Advances in Computers, 63: Parallel, Distributed, and Pervasive Computing*, Editors: Marvin Zelkowitz and Ali Hurson, Elsevier, 2005.
7. L.R. Welch, P.A. Shirolkar, S.M. Anwar, T. Sergeant, B.A. Shirazi, C. Bruggeman, B. Ravindran, P. Werme, M.W. Masters, R.D. Harrison, W. Mills, T. Do, J. Lafratta, S. Sharp, G. Bilowus, M. Swick, J. Hoppel, and J. Caruso, "Real-time Resource Management Middleware: Open Systems and Applications," chapter in High Performance Cluster Computing: Programming and Applications, Vol. 2, pages 418-439, Printice Hall PTR, NJ, 1999.
8. L.R. Welch, M.W. Masters, L.A. Madden, D.T. Marlow, P.M. Irey IV, P.V. Werme, and B. Shirazi, "A Distributed System Reference Architecture for Adaptive QoS and Resource Management," *Lecture Notes in Computer Science*, #1586, Springer Verlag, Parallel and Distributed Processing, April 1999, pp. 1317-1326.
9. B. Shirazi, LR. Welch, B. Ravindran, C. Cavanaugh, B. Yanamula, R. Brucks, E. Huh, " DynBench: A Dynamic Benchmark Suite for Distributed Real-Time Systems," *Lecture Notes in Computer Science*, #1586, Springer Verlag, Parallel and Distributed Processing, April 1999, pp. 1335-1342.
10. B. Ravindran, L.R. Welch, C. Bruggeman, B. Shirazi, C. Cavanaugh, "A Resource Management Model for Multidimensional, Dynamic Real-Time Systems," *Lecture Notes in Computer Science*, #1388, Springer Verlag, Parallel and Distributed Processing, March 1998, pp. 931-936.

11. G.L. Park, B. Shirazi, J. Marquis, "A Comparative Study of Static Scheduling with Task Duplication for Distributed Systems," *Lecture Notes in Computer Science*, #1253, Springer Verlag, Solving Irregularly Structured Problems in Parallel, June 1997, pp. 123-134.
12. B. Shirazi, A.R. Hurson, and K. Kavi, "Scheduling and Load Balancing in Parallel and Distributed Systems," *IEEE Press*, 1995.
13. B. Shirazi (Editor), "Proceedings of the First Annual IEEE Symposium on Parallel and Distributed Processing," *SMU Printing Services*, 1989.
14. A.R. Hurson, L. Miller, S. Pakzad, M. Eich, and B. Shirazi, "Architectural Aspects of Database Machines," *Advances in Computers*, Academic Press, Vol. 28, 1989, pp. 107-151.
15. B. Shirazi, "WDDM - A Wafer-Scale Data Driven Multiprocessor", Ph.D. Dissertation, University of Oklahoma, August 1985.
16. B. Shirazi, "Associative Memory Machines", Master's Thesis, University of Oklahoma, December 1980.

2) Journal Articles:

1. Renjie Huang, Wen-Zhan Song, Mingsen Xu, Nina Peterson, Behrooz Shirazi, Richard LaHusen, "Real-World Sensor Network for Long-Term Volcano Monitoring: Design and Findings," *IEEE Trans. on Parallel and Distributed Systems*, Vol 23, Issue 2, 2012.
2. Renjie Huang, Wen-Zhan Song, Mingsen Xu, Behrooz Shirazi, Guoliang Xing, "Localized QoS-Aware MAC Protocol for Real-time Dynamic Sensor Networks," *Ad Hoc & Sensor Wireless Networks*, Vol 13, Issue 1, 2011.
3. Rashmi Parthasarathy, Behrooz A. Shirazi, Nina Peterson, WenZhan Song, Ali Hurson, "Management and Security of Remote Sensor Networks in Hazardous Environments using Over the Air Programming," *Information Systems and e-Business Management*, 2011.
4. Wen-Zhan Song, Behrooz Shirazi, Rick LaHusen, Sharon Kedar, Steve Chien, Frank Webb, Ashley Davies, Aaron Kiely, Joshua Doubleday, Renjie Huang, Mingsen Xu, David Pieri, Nina Peterson, John Pallister, Dan Dzurisin, Seth Moran, Mike Lisowski, "Optimized Autonomous Space In-situ Sensor-Web for Volcano Monitoring," *IEEE Journal of Selected Topics in Earth Observations and Remote Sensing* (*JSTARS*), 2010.
5. WenZhan Song, Renjie Huang, Mingsen Xu, Behrooz Shirazi, and Rick Lahusen, "Design and Deployment of Sensor Network for Real-time High-fidelity Volcano Monitoring," *IEEE Trans. On Parallel and Distributed Systems*, 2010.
6. Aaron.B.Kiely, Mingsen Xu, WenZhan Song, Renjie Huang, Behrooz Shirazi, "Adaptive Linear Filtering Compression on Realtime Sensor Networks," *The Computer Journal*, 2010.
7. Mingsen Xu, Yang Peng, Renjie Huang, Wenzhan Song, Behrooz Shirazi, Richard Lahusen, Aaron Kiely, Nina Peterson, Andy Ma, Lohith Anusuya-Rangappa, Michael Miceli, Devin McBride, "Design and Evaluation of Smart Sensing Components in a Volcanic Monitoring Sensor Network," *Pervasive and Mobile Computing Journal*, 2009.

8. WenZhan Song, Renjie Huang, Behrooz Shirazi, Richard LaHusen, "TreeMAC: Localized TDMA MAC Protocol for High-throughput and Fairness in Sensor Networks," *Pervasive and Mobile Computing Journal*, PMC, 2009, Vol 5, No 6, PP: 750-765.
9. Swaroop Kalasapur, Mohan Kumar, Behrooz Shirazi, "Dynamic Service Composition in Pervasive Computing," *IEEE Trans. On Parallel and Distributed Systems*, July 2007, pp. 907-918.
10. Yu Jiao, Ali R. Hurson, Behrooz Shirazi, "Online Adaptive Application-Driven WLAN Power Management," *Pervasive and Mobile Computing Journal*, Elsevier, Vol. 3, No. 3, June 2007, pp. 254-275.
11. Wen-Zhan Song, Fenghua Yuan, Richard LaHusen and Behrooz Shirazi, "Time-Optimum Packet Scheduling for Many-to-One Routing in Wireless Sensor Networks," *International Journal of Parallel, Emergent and Distributed Systems* (JPEDS), Volume 22, Issue 5 January 2007 , pages 355 - 370.
12. Mijeom Kim, Mohan Kumar, and Behrooz Shirazi, "Service Discovery using Volunteer Nodes in Heterogeneous Pervasive Computing Environments Pervasive and Mobile Computing," *Pervasive and Mobile Computing Journal*, Elsevier, Vol.2, Issue 3, 2006, pp. 313-343.
13. Ali R. Hurson, Angela Maria Muñoz-Avila, Neil Orchowski, Behrooz Shirazi, and Yu Jiao, "Power-aware Data Retrieval Protocols for Indexed Broadcast Parallel Channels," *Pervasive and Mobile Computing Journal*, Elsevier, Vol 2, No. 1, Feb 2006, pp. 85-107.
14. H. Alex, M. Kumar, and B. Shirazi, "MidFusion: An Adaptive Middleware for Information Fusion in Sensor Network Applications", *Information Fusion Journal*, Special Issue on Information Fusion in Distributed Sensor Networks, Elsevier, July 2005.
15. Mohan Kumar, Behrooz Shirazi, Sajal K. Das, Byung Sung, David Levine, and Mukesh Singhal, "PICO: A Framework for Pervasive Computing," *IEEE Pervasive Computing*, July-Sept 2003, pp. 72-79.
16. Binoy Ravindran, Ravi K. Devarasetty, and Behrooz Shirazi, "Adaptive Resource Management Algorithms for Periodic Tasks in Dynamic Real-Time Distributed Systems," *Journal of Parallel and Distributed Computing*, Volume 62, Issue 10, October 2002, Pages 1527-1547.
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21. L.R. Welch, B. Shirazi, B. Ravindran, F. Kamangar, "Instrumentation, Modeling, and Analysis of Dynamic, Distributed Real-time Systems," *Int'l Journal of Parallel and*

Distributed Systems and Networks (*IJPDSN*), *Special issue on Measurement of Program and System Performance*, Vol. 2, No. 2, 1999.

22. S.M. Yoo, H.Y. Youn, and B. Shirazi, "An Efficient Task Allocation Scheme for 2D Meshes and Tori," *IEEE Trans. On Parallel and Distributed Systems*, Vol. 8, No. 9, Sept. 97, pp. 934-942.
23. A.R. Hurson, K. Kavi, B. Shirazi, and B. Lee, "Cache Memories for Dataflow Systems," *IEEE Parallel and Distributed Technology*, Vol. 4, no. 4, Winter 1996, pp. 50-64.
24. K. Kavi, B. Wyatt, and B. Shirazi, "Evaluation of Dynamic Inheritance in Distributed Environments," *Journal of Microcomputer Applications*, Vol. 15, no. 1, 1996, pp. 26-37.
25. B. Weems, K. Kavi, and B. Shirazi, "HIPP: An Honors Program in Parallel Processing," *International Journal of Engineering Education,* Vol. 11, Nos 4 and 5, 1995, pp. 329-335.
26. B. Shirazi, H.Y. Youn, and D. Lorts, "Evaluation of Static Scheduling Heuristics for Real-Time Multiprocessing," *Parallel Processing Letters*, Special Issue on Partitioning and Scheduling, Vol. 5, No. 4, 1995, pp. 599-610.
27. S. Yih, C.F. Fan, and B. Shirazi, "Anatomy of Safety-Critical Computing Problems," *Journal of Reliability Engineering and System Safety*, Vol. 50, No. 1, Oct. 1995, pp. 69-78.
28. B. Shirazi, H.B. Chen and J. Marquis, "Comparative Study of Task Duplication Static Scheduling vs. Clustering and Non-Clustering Techniques," *Journal of Concurrency: Practice and Experience*, John Wiley & Sons, Aug. 1995, Vol. 7, No. 5, pp. 371-389.
29. K.T. Johnson, A.R. Hurson, and B. Shirazi, "General Purpose Systolic Arrays: A Survey," *IEEE Computer*, Nov. 1993, pp. 20-31.
30. C.N. Zhang, B. Shirazi, and D.Y.Y. Yun, "Parallel Designs for Binary/Residue Number Conversions," *Journal of Symbolic Computation*, August 1993, pp. 451-462.
31. B. Shirazi and A.R. Hurson, "Scheduling and Load Balancing," *Journal of Parallel and Distributed Computing*, Dec. 1992, pp. 271-275.
32. K. Kavi and B. Shirazi, "Dataflow Architectures: Are They Commercially Viable?" *IEEE Potentials*, Oct. 1992, pp. 28-32.
33. B. Lee, A.R. Hurson, and B. Shirazi, "A Hybrid Scheme for Processing Data Structures in a Dataflow Environment," *IEEE Trans. on Parallel and Distributed Systems*, Vol. 3, No. 1, January 1992, pp. 83-96.
34. B. Shirazi, M.F. Wang, and G. Pathak, "Analysis and Evaluation of Heuristic Methods for Static Task Scheduling," *Journal of Parallel and Distributed Computing*, Vol. 10, No. 3, 1990, pp. 222-232.
35. B. Shirazi, D. Lin, S. Abdullah, and L. Furin, "Performance Evaluation of a Hypercube-Based Dataflow Machine," *Int'l Journal of Mini and Microcomputers*, Vol. 11, No. 3, 1989, pp. 1-12.
36. B. Shirazi, P. Mukherjee, and Y.H. Hu, "VLSI Implementation of a Pipelined Multiplier for Systolic Convolution," *Int'l Journal of Computer Aided VLSI Design*, Vol. 1, No. 2, 1989, pp. 183-202.
37. B. Shirazi and M. F. Wang, "Heuristic Functions for Static Task Allocation," *Journal of Microprocessing and Microprogramming*, Vol. 27, 1989, pp. 187-194.

38. T. Gralewicz, B. Shirazi, and A.R. Hurson, "GIF1: A Graphical Parallel Language," *Journal of Microcomputer Applications*, Vol. 8, No. 3, 1989, pp. 82-87.
39. A.R. Hurson, L. Miller, B. Shirazi, and S. Pakzad, "Performance Evaluation of an Associative Parallel Join Module," *Journal of Computer Systems Science and Engineering*, Vol. 4, No. 3, July 1989, pp. 131-146.
40. B. Shirazi, D.Y.Y. Yun, and C.N. Zhang, "RBCD: A Redundant Binary-Coded Decimal Adder," *IEE Proceedings Part E, Computers and Digital Techniques*, Vol. 136, No. 2, March 1989, pp. 156- 160.
41. B. Shirazi and A.R. Hurson, "A Data Driven Multiprocessor- Its Architecture and Performance Evaluation," *Journal of Microprocessing and Microprogramming*, Vol. 26, 1988, pp. 97-112.
42. A.R. Hurson, B. Shirazi, and S. H. Pakzad, "Layout Design Of A Systolic Multiplier Unit For 2's Complement Numbers," *VLSI Systems Design*, Vol. 7, no. 2, Feb. 1986, pp. 78-84.
43. A.R. Hurson and B. Shirazi, "A Class of Systolic Multiplier Units for VLSI Technology," *Int'l Journal of Computer & Information Sciences*, Vol. 14, no. 5, Oct. 1985, pp. 261-275.

3) Peer Reviewed Conference Papers:

1. Jacob Murray, Partha Pratim Pande and Behrooz Shirazi, "DVFS-Enabled Sustainable Wireless NoC Architecture", Proceedings of *IEEE International System-on-Chip Conference* (SOCC), September 2012.
2. Jacob Murray, John Klingner, Partha Pande and Behrooz Shirazi, "Sustainable Multi-Core Architecture with on-chip Wireless Links", *Proceedings of ACM Great Lake Symposium on VLSI*, GLSVLSI 2012, pp. 263-266.
3. Somak Das, Silvia Chita, Nina Peterson, Behrooz Shirazi, Medha Bhadkamkar, "Home Automation and Security for Mobile Devices," *IEEE PerCom Workshop on Pervasive Communities and Service Clouds,* March 2011.
4. Sahra Sedigh, Ali Hurson, Les L Miller, Behrooz Shirazi, "'Enriching STEM Education through Personalization and Teaching Collaboration," *7th IEEE International Workshop on PervasivE Learning, Life, and Leisure*, March 2011.
5. Nina Peterson, Behrooz Shirazi, Medha Bhadkamkar, "Data Reliability and Data Selection in Real-time High Fidelity Sensor Networks," *International Conference on Pervasive and Embedded Computing and Communication Systems* (PECCS), March 2011.
6. Renjie Huang, Wen-Zhan Song, Mingsen Xu and Behrooz Shirazi, "Localized QoS-Aware Media Access Control in High-Fidelity Data Center Sensing Networks," *Workshop on Work-in-progress in Green Computing*, Aug 2010.
7. Rashmi Parthasarathy, Nina Peterson, WenZhan Song, Ali Hurson, Behrooz Shirazi, "Over the Air Programming on Imote2-based Sensor Networks," *Hawaii International Conference on System Sciences* (HICSS 2010).
8. WenZhan Son, Renjie Huang, Andy Ma, Mingsen Xu, Behrooz Shirazi, Rick LaHusen, "Air-dropped Sensor Network for Real-time High-fidelity Volcano Monitoring," *The 7th*

Annual International Conference on Mobile Systems, Applications and Services (MobiSys, acceptance ratio 20%), June 2009.

9. Renjie Huang, WenZhan Song, Behrooz Shirazi, "TreeMAC: Localized TDMA MAC Protocol for Real-time High-data-rate Sensor Networks," the *7th (2009) IEEE International Conference on Pervasive Computing and Communication (PerCom 2009, acceptance ratio 13%) – best paper candidate*.
10. Aaron Kiely, Mingsen Xu, Renjie Huang, Wen-Zhan Song, Behrooz Shirazi, "Linear Predictive Compression on Seismic Sensor Networks," the *7th (2009) IEEE International Conference on Pervasive Computing and Communication (PerCom 2009, acceptance ratio 13%)*.
11. Yang Peng, Wen-Zhan Song, Renjie Huang, Mingsen Xu, Behrooz Shirazi, Rick LaHusen, "Cascades: A Reliable Dissemination Protocol for Data Collection Sensor Network," *IEEE Aerospace* 2009.
12. Nina Peterson, Lohith Anusuya-Rangappa, Behrooz A. Shirazi, Renjie Huang, Wen-Zhan Song, Michael Miceli, Devin McBride, Ali Hurson, and Rick LaHusen, "TinyOS-based Quality of Service Management in Wireless Sensor Networks," in *Hawaii Int'l Conference on System Sciences (HICSS) 2009*.
13. Peng, Y, Song, W, Lahusen, R, Shirazi, B, "Smart Sensing Component for Volcano Monitoring," *The 4th IET International Conference on Intelligent Environments* (IE 08), July 2008.
14. Fenghua Yuan, Wen-Zhan Song, Nina Peterson, Yang Peng, Lei Wang, Behrooz Shirazi, Rick LaHusen, "Design of Lightweight and Transparent Sensor Network Management System," *Fourth IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing* (IEEE PerSeNS 2008).
15. WenZhan Song, Behrooz Shirazi, Rick Lahusen, Sharon Kedar, Steve Chien, Frank Webb, John Pallister, Dan Dzurisin, Seth Moran, Mike Lisowski, Danny Tran, Ashley Davis, David Pieri, "Optimized Autonomous Space In-situ Sensor-Web for Volcano Monitoring," *IEEE Aerospace* 2008.
16. Animesh Dalakoti, Nina Picone, Behrooz A. Shirazi, Wen-Zhan Song and Ali Hurson, "Priority-based Network Quality of Service," The *10th International Conference on Computer Science and Informatics* (CSI 2007).
17. Mijeom Kim, M. Kumar, B. Shirazi, "A Novel Architecture for Provisioning Basic Services in Heterogeneous Pervasive Environments," *IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks* (WoWMoM 2007), June 2007.
18. WenZhan Song, Behrooz Shirazi, Rick LaHusen, Steve Chien, Sharon Kedar, Frank Webb, "An Optimized Autonomous Space In-situ Sensorweb (OASIS) for Volcano Monitoring," *The American Geophysical Union Fall Meeting* (AGU 2006)
19. Swaroop Kalasapur, Mohan Kumar, and Behrooz Shirazi, "Evaluating Service Oriented Architectures (SOA) in Pervasive Computing," *Int'l Conf on Pervasive Computing and Communication*, PerCom 2006, March 2006, pp. 276-285.
20. Mijeom Kim, Mohan Kumar, Behrooz Shirazi, "An Integrated Scheme for Address Assignment and Service Location in Pervasive Environments," *The 2005 IFIP International Conference on Embedded and Ubiquitous Computing* (EUC-05), Japan, Dec. 2005.

21. Swaroop Kalasapur, Mohan Kumar, and Behrooz Shirazi, “Seamless Service Composition (SeSCo) in Pervasive Environments,” *Workshop on Multimedia Service Composition*, ACM Multimedia 2005, pp. 11-20.
22. A.R. Hurson, Y. Jiao, and B. Shirazi, “Online Adaptive Application-Driven WLAN Power Management,” *IEEE Global Telecommunications Conference, GLOBECOM 2005*, Nov. 2005.
23. Mijeom Kim, M. Kumar, B. Shirazi, “Service Discovery using Volunteer Nodes for Pervasive Environments,” *IEEE International Conference on Pervasive Services (ICPS) 2005*, July 2005.
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25. H. Alex, M. Kumar, and B. Shirazi, “Collaborating Agent Communities for Information Fusion and Decision-making,” *International Conference on Knowledge Integration and Multi Agent Systems* (KIMAS 05), April 2005.
26. Mijeom Kim, M. Kumar, and B. Shirazi, “A Lightweight Scheme for Auto-configuration in Mobile Ad Hoc Networks,” *5th IEEE International Workshop on Algorithms for Wireless, Mobile, Ad Hoc and Sensor Networks* (WMAN 05), April 2005.
27. H. Alex, M. Kumar, B. Shirazi, “MidFusion: Middleware for Information Fusion in Sensor Network Applications”, *International Conference on Intelligent Sensors, Sensor Networks and Information Processing* (ISSNIP), Melbourne, Australia, December 2004.
28. M. Kumar, B. Shirazi, and B.Y. Sung, “A Novel Approach to Compose Services in Pervasive Computing,” *Dagstuhl Seminar on Ubiquitous Computing*, Oct. 2004.
29. Shahzad Nazar, B. Shirazi, and Sungyong Jung, “Performance/Energy Efficiency Analysis of Register Files in Superscalar Processors,” *2004 Int’l Conf. on VLSI* (*VLSI- 04)*, July 2004.
30. B. Shirazi, M. Kumar, and B. Sung, “QoS Middleware Support for Pervasive Computing Applications,” Minitrack on Quality of Service in Mobile and Wireless Networks, Proc. of the *Thirty-Seventh Annual Hawaii International Conference on Systems Sciences* (HICSS), CDROM, January 2004.
31. B. Shirazi, M. Kumar, B. Sung and S. Kalaspur, “Effective Communication and Collaboration among Heterogeneous Pervasive Computing Devices Using Software Communities,” *International Conference on Advances in Internet, Processing, Systems, and Interdisciplinary Research*, Montenegro, CDROM, Oct. 2003.
32. M. Kumar, J. Priest, B. Shirazi, B. Huff, and M. Johnson, “Revolutionizing Manufacturing Systems with Pervasive Computing: P-RoMS,” *International Workshop on Ambient Intelligence Computing*, Santorini, Greece, July 2003, pp. 33-48.
33. Cavanaugh, Charles D., Lonnie R. Welch, and Behrooz A. Shirazi, “Diagnosing Quality of Service Problems in Distributed, Real-time Systems,” In Proceedings of the 2003 *Information Systems Technology Workshop* (IST 2003), CDROM, May 2003.
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4) Invited Papers, Workshops and other Conference Papers:

1. Gang Lu, Debraj De, Mingsen Xu, Behrooz Shirazi and Wen-Zhan Song, "Demo: A Wake-on Sensor Network," *ACM SenSys* 2009.
2. Wen-Zhan Song, Behrooz Shirazi, Rick LaHusen, Steve Chien, Sharon Kedar, Frank Webb, "An Optimized Autonomous Space In-situ Sensorweb (OASIS) for Volcano Monitoring," The American Geophysical Union (AGU) Fall Meeting (AGU 2006).
3. M. J. Kim, M. Kumar, and B. Shirazi, "An Integrated Scheme for Address Assignment and Service Location in Ad Hoc Networks," Tech Report: CSE-2004-6, UTA.
4. S. K. Das, M. Kumar and B. Shirazi, ``Pervasive Community Computing (PCC) Paradigm with Application to Healthcare," *Proceedings of the 1st International Conference on Ubiquitous Computing*, Seoul, Korea, pp. 3-8, Oct 20-22, 2003.
5. M. Kumar, B. Shirazi, S. Das, "Pervasively Secure Inftrastructures (PSI) Through Community Computing," *Texas Workshop on Security of Information Systems*, April 2003, pp. 5-11.

6. B. Shirazi and J. Marquis, "A Scheduling Tool for Parallel and Distributed Systems," Invited Paper, *IEEE Aerospace Applications Conference*, Feb. 1996, Vol. 3, pp. 247-259.
7. J. Baumgartner, D. Cook, and B. Shirazi, "Genetic Solutions to the Load Balancing Problem," Invited Paper, *Int'l Conference on Parallel Processing Workshop on Challenges for Parallel Processing*, Aug. 1995, pp. 72-78.
8. B. Shirazi, H.B. Chen, and S. Thrane, "A Software Development Tool for Parallel Program Scheduling and Assessment," Invited Paper, *Int'l Mathematics And Computer Science World Conference*, July 1994, pp. 1473-1476.
9. K. Kavi, B. Wyatt, B. Shirazi, and A.R. Hurson, "Evaluation of Dynamic Object Inheritance in Distributed Environments," *Second Engineering Systems Design and Analysis Conf.*, Vol. 5, ASME, NY, July 1994, pp. 525-532.
10. B.U. Jun, A.R. Hurson, and B. Shirazi, "Handling Logic Programs in Multithreaded Dataflow Environments," *Second Engineering Systems Design and Analysis Conf.*, Vol. 5, ASME, NY, July 1994, pp. 533-540.
11. A.R. Hurson and B. Shirazi, "A Mini-track on Scheduling and Load Balancing: Track Coordinator's Introduction," *Hawaii Int'l Conf. on System Sciences (HICSS-26)*, January 1993, pp. 484-486.
12. J.T. Yen and B. Shirazi, "Modeling Memory Access times," *The First Engineering Systems Design and Analysis Conf.*, PD-Vol. 47-4, June 1992, pp. 73-78.
13. B. Shirazi and J.T. Yen, "A New Cache Coherency and Address Translation Consistency Protocol in Shared Memory Multiprocessors," *ISMM-Parallel Computing*, Sept. 1991, pp. 17-20.
14. V. Vijayaraghavan, K. Kavi, and B. Shirazi, "Control Flow Extensions to The Dataflow Language SISAL," *IEEE/ACM Symp. on Applied Computing*, April 1991, pp. 130-138.
15. B. Shirazi and T. Gralewicz, "Towards Visual Parallel Programming," *ACM South Central Regional Conference*, Nov. 1989, pp. 97-98.
16. T. Gralewicz, B. Shirazi, and A.R. Hurson, "A Visual Programming Environment for Parallel Processing," *ISMM '89*, June 1989, pp. 148-152.
17. B. Shirazi, S. Yih, and D.Y.Y. Yun, "Neural Network for Control System Modeling and Design," *20th Annual Pittsburgh Conf. on Modeling and Simulation*, May 1989, pp. 2193-2197.
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20. B. Shirazi and L. Furin, "Performance Evaluation of a Hypercube-Based Dataflow Machine," *ISMM Int'l Conf. on Computer Applications in Design, Simulation, and Analysis*, February 1988, pp. 92-95.
21. A.R. Hurson and B. Shirazi, "A Design for An Associative Memory Chip," *Proc. of Workshop on Memory Technology*, NCR Corporation, Dayton, OH, April 1987.
22. B. Shirazi, "Future Directions of Associative Memories," *IEEE Region V Conf.*, March 1987, pp. 57-62.

23. B. Shirazi and A. R. Hurson, "A Back-end Hybrid Module for Dataflow and Array Processing," *Int'l Computer Symposium*, Dec. 1986, Taiwan, pp. 1004-1010.
24. B. Shirazi and A. R. Hurson, "A Microprocessor Based Data Driven Architecture," *MNCC '85*, Malaysia, 1985, pp. 223-242.
25. B. Shirazi and A.R. Hurson, "A Wafer-Scale Data Driven Multiprocessor," *The 29th Int'l Symp. on Mini & Micro Computers (MIMI '85)*, Spain, June, 1985, pp. 115-119.

E. Professional Activities

• Journal Editorship

- **Editor-in-Chief for Special Issues**, *Sustainable Computing: Informatics and Systems Journal*, 2010 – Present.
- **Editor-in-Chief for Special Issues**, *Pervasive and Mobile Computing Journal*, 2004 – Present.
- **Field Editor**, *Computing Journal*, 2010 – Present.
- **Member of the Editorial Board**, *IEEE Transactions on Computers*, 1999 - 2004.
- **Member of the Editorial Board**, *Journal of Parallel and Distributed Computing*, 1994 - 2004.
- **Member of the Advisory Board**, The *CSI Journal on Computer Science and Engineering* (CSIJCSE), 2000 – Present.

• Founding of Conferences

- **Co-founder and Steering Committee Co-Chair**, *International Green Computing Conference* (IGCC), 2010 – Present.
- **Co-founder and Steering Committee Member**, *IEEE International Conference on Pervasive Computing and Communication* (PerCom), 2003 – Present.
- **Founder and Steering Committee Member,** IEEE Symposium on Parallel and Distributed Processing (Joined IEEE International Parallel Processing Symposium to form *IEEE International Parallel and Distributed Processing Symposium* in 1996), 1989 – Present.

• Conference Chairmanship

- **General Chair**, *21st International Heterogeneity in Computing Workshop*, 2012.
- **Technical Program Chair**, 9th *IEEE Consumer Communications and Networking Conference* (CCNC) 2012.
- **Technical Program Chair,** *20th International Heterogeneity in Computing Workshop*, 2011.
- **Co-Technical Program Chair,** *International Conference on Cloud and Green Computing*, 2011.
- **Technical Program Vice-Chair** for the Seventh (2010) *IEEE Consumer Communications and Networking Conference* (CCNC 2010) track on "Smart spaces and personal area networks for CE".
- **Technical Program Vice-Chair** for the Sixth (2009) *IEEE Consumer Communications and Networking Conference* (CCNC 2009) track on "Personal Ad Hoc and Sensor Networks".
- **Tutorial Co-Chair** for the 2008 International CSI Computer Conference.
- **Program Committee Co-Chair and Steering Committee Member**, *11th International CSI Computer Conference*, January 2006.

- **Track Chair for Software and Applications**, *IEEE International Conference on Computer Systems and Applications* (AICCSA) 2005.
- **General Chair**, *10th Heterogeneous Computing Workshop, 2001 (HCW '01).*
- **General Co-Chair,** *The Joint Int'l Parallel Processing Symposium And IEEE Symposium on Parallel and Distributed Processing*, Orlando, Florida, 1998.

• Program Committee Member:

- *41st International Conference on Parallel Processing* (ICPP) 2012.
- *9th IEEE International Conference on Pervasive Computing and Communications* (PerCom) 2012.
- *International Conference on Pervasive and Embedded Computing and Communication Systems* (PECCS) 2012.
- *40th International Conference on Parallel Processing* (ICPP) 2011.
- *International Workshop on Sustainable Internet and Internet for Sustainability* (SustaInet) 2011.
- *The First International Conference on Mobile Services, Resources, and Users* (Mobility) 2011.
- First NSF/TCPP *Workshop on Parallel and Distributed Computing Education* (EduPar) 2011.
- *International Conference on Pervasive and Embedded Computing and Communication Systems* (PECCS) 2011.
- *9th IEEE International Conference on Pervasive Computing and Communications* (PerCom) 2011.
- *High Performance Computing* (HiPC) 2010.
- *Workshop on Sensor Networks for Earth and Space Science Applications,* 2009.
- *Intelligent Environments,* 2008.
- *International Workshop on Pervasive Systems (PerSys)* 2008.
- *Workshop on Mobile Ad-hoc and Sensor Systems (MASS) for Global and Homeland Security*, 2007.
- *4th International Conference on Ubiquitous Intelligence and Computing (UIC)* 2007.
- *International Workshop on Pervasive Systems (PerSys)* 2007.
- *3rd International Conference on Ubiquitous Intelligence and Computing (UIC)* 2006.
- *International Workshop on Pervasive Systems (PerSys)* 2006.
- IASTED *International Conference on Advances in Computer Science and Technology* (ACST) 2004.
- *10th IEEE/ACM Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS)*, 2002.
- *International Conference on Parallel and Distributed Computing* (ICPADS), 2002.
- *5th IEEE International Conference on Algorithms and Architecture for Parallel Processing (ICA3PP)*, 2002.
- *4th IEEE International Conference on Algorithms and Architecture for Parallel Processing (ICA3PP)*, 2001.
- *Workshop on Distributed Computing*, 2000.
- *9th Heterogeneous Computing Workshop (HCW '00),* 2000.
- *6th Annual Australasian Conference on Parallel and Real-time Systems,* 1999 (PART '99).
- *6th Int'l Conf. On Parallel Architectures and Compilation Techniques*, 1999.
- *Embedded High Performance Computing Workshop*, 1999.
- *Heterogeneous Computing Workshop*, 1998.

- *3rd Int'l Conf. on Algorithms and Architectures for Parallel Processing (ICA3PP),* 1997.
- *4th Int'l Conf. On Parallel Architectures and Compilation Techniques*, 1997.
- *Int'l Conference on Parallel and Distributed Processing Techniques and Applications*, 1997.
- *3rd Int'l Conf. On Parallel Architectures and Compilation Techniques*, 1996.
- *International Parallel Processing Symposium*, 1996.
- *Int'l Conference on Parallel and Distributed Processing Technology and Applications*, 1996.
- *29th Int'l Symp. on Automative Technology and Automation*, 1996.
- *2nd Int'l Conf. On Parallel Architectures and Compilation Techniques*, 1995.
- *Third Workshop on Parallel and Distributed Real-time Systems*, April 1995.
- *1995 ISMM Int'l Conf. on Intelligent Information Management Systems*, June 1995.
- *1994 ISMM Int'l Conf. on Intelligent Information Management Systems*, June 1994.
- *Seventh Int'l Conference on Parallel and Distributed Computing and Systems*, Oct. 1994.
- *Second Workshop on Parallel and Distributed Real-time Systems*, April 1994.
- *37th Midwest Symposium on Circuits and Systems*, 1994.
- *The Second Int'l Conference on Parallel and Distributed Systems*, Taiwan, Dec. 1993.
- *International Conference on Distributed Computing Systems*, 1991, 1992, and 1993.

• Steering Committee Member:

- Chair of Steering Committee, Heterogeneity in Computing Workshop (HCW), 2012 – Present.
- IEEE Technical Area of Green Computing – IEEE-TAGC, 2011 – Present.
- *Int'l Parallel and Distributed Processing Symposium (IPDPS),* 2000 – Present.
- *Workshop on Parallel and Distributed Real-time Systems*, 1999 – Present.
- *Hawaii International Conference on System Sciences, Software Track*, 2003.
- *Workshop on Advances in Parallel and Distributed Computational Models (APDCM),* Cancun, Mexico, 2000.
- *Heterogeneous Computing Workshop, (HCW),* Cancun, Mexico, 2000.
- *The Joint Int'l Parallel Processing Symposium And IEEE Symposium on Parallel and Distributed Processing*, San Juan, Porto Rico, 1999.
- *The Joint Int'l Parallel Processing Symposium And IEEE Symposium on Parallel and Distributed Processing*, Orlando, Florida, 1998.
- *The Joint Int'l Parallel Processing Symposium And IEEE Symposium on Parallel and Distributed Processing,* 1998+.
- *Fourth Workshop on Parallel and Distributed Real-time Systems*, April 1996.
- *IEEE Symposium on Parallel and Distributed Processing*, Dallas, Texas, 1989-present, Chair of the Steering Committee: 1991 and 1995.

• Other Activities

- **Distinguished Lecturer:** IEEE Computer Society Distinguished Visitors Program, 1993 - 1996.
- **Distinguished Lecturer:** ACM Lectureship Series, 1993 - 1997.
- **Panel Coordinator** - "Is Scheduling a Solved Problem?" at Int'l Conf. on Parallel Processing, Aug. 1994 (Panelists: Drs. Raghavandra, Ramkumar, McCreary, Hamidzadeh, and P. Yew).
- **Workshop or Track Coordinator:**

  - *The Third Engineering Systems Design and Analysis Conf., France* - Neural Net Symposium Track, June 1996.
  - *The Second Engineering Systems Design and Analysis Conf., London, England* - Parallel Computing Track, June 1994.
  - *26th Hawaii International Conference on Systems Sciences* - Parallel Programming Track: Scheduling and Load Balancing, January 1993.
  - *Supercomputing Conference* -Task Scheduling, Oct. 1992.
  - *The First Engineering Systems Design and Analysis Conf., Istanbul, Turkey* - Parallel and Distributed Systems Track, June 1992.

- **Guest Editor -** Special Issue of *IEEE Transactions on Computers* on Quality of Service Issues in Internet Web Services, with Mohan Kumar, Sajal Das, Marco Conti 2002.
- **Guest Editor -** Special Issue of *Journal of Parallel and Distributed Computing* on Scheduling and Load Balancing, December 1992.
- **Registration Chair**, 1991 *International Conference on Distributed Computing Systems*.
- **Chair** - Region 5 Area Committee of the Computer Society Area Activities Board, 1989-1990.
- **Chair** of the Computer Society, IEEE Dallas Chapter, 1988 - 1989.
- **Session Chair** in many technical conferences (ICPP, IPPS, SPDP, ISMM, etc.)
- **External reviewer** for tenure and promotion cases.
- **Panelist** on many NSF proposal review panels.
- **Referee** for many Conferences, Journals, and Books; and, an NSF reviewer.
- **Membership:**
  - Tau Beta Pi.
  - IEEE Computer Society.
  - Association for Computing Machinnery
  - Education Committee of the Texas Computer Industry Council (1985-1987).

F. Funded Grants (total of $11M+ in External Funds)

- **National Science Foundation**, EAGER: Design and Implementation of a Fine-Grained Appliance Energy Profiling System for Green Building, PI: Nirmalya Roy, Co-PI: Behrooz Shirazi, $265,292, Jan 2013 – Jan 2015.

- **National Science Foundation**, IGERT: Integrative Research Training in Health-Assistive Smart Environments, PI: Diane Cook, Co-PIs: Lawrence Holder, Maureen Schmitter-Edgecombe and Behrooz Shirazi, NSF, $3.2M, Sept 2009 – Sept 2014.

- **National Science Foundation**, Research Experiences for Undergraduates in Smart Environments," PI: D. Cook, Co-PI: B. Shirazi, ($325,000), May 2010 – Dec 2013.

- **National Science Foundation,** Research Experiences for Underrepresented Undergraduates in Smart Environments, PI: B. Shirazi, Co-PI: D. Cook, ($277,768), May 2007 - May 2010.

- **NASA,** Optimized Autonomous Space - In-situ Sensorweb, PI: WenZhan Song (WSU), Co-PIs: Behrooz Shirazi (WSU), Richard Lahusen (USGS), Sharon Kedar, Frank Webb, and Steve Chien (JPL); ($1.6M), Jan. 2007 – Jan. 2010.

- **Department of Justice,** A Wireless Audio-Visual Collaboration System for Police and Law Enforcements Agencies, PI: I. Ahmad, Co-PIs: B. Shirazi, S. Das and K. Basu ($500,000), Nov. 2004 – Dec. 2005.

- **National Science Foundation,** Contract no. IIS-0326505, Pervasively Secure Infrastructures (PSI): Integrating Smart Sensing, Data Mining, Pervasive Networking, and Community Computing, PI: S. Das, Co-PIs: B. Shirazi, M. Kumar, D. Cook, L. Holder, S. Chakravarthy, K. Basu, I Ahmad, F. Lewis, M. Singhal, R. A. Finkel, and A. Hurson, ($1,600,000), Aug. 2003 – July 2008.

- **National Science Foundation,** Contract no. STI-0129682, Pervasive Information Communities Organization (PICO): A Framework for Internet Services of the Future, PI: M. Kumar, Co-PIs: B. Shirazi, S. Das, F. Kamangar, D. Levine, ($426,361), June 02 - May 05.

- **National Science Foundation,** Contract no. EIA-0139564**,** Research Experiences for Undergraduates in Distributed Rational Agents, PI: B. Shirazi, Co-PIs: M. Huber and D. Cook, ($191,111), May 02 - May 05.

- **National Science Foundation, ILI,** Contract no. DUE-9950697, A Senior Design Project Laboratroy: Platform Independent Remote Data Acquisition and Control Over the Internet, PI: F. Kamangar, Co-PI's: B. Shirazi, H.Y. Youn, ($55,154: $24,294 from NSF, $30,860 matching from UTA and National Instruments), Sept. 99 - Aug. 02.

- **Nichols Research**, A Feasibility Study to Investigate Extending the PARSA Software Development Environment to Use Fortran Pthread APIs, PI: B. Shirazi, Co-PI: J. Marquis, ($85,800), March 2000 to Dec. 2000.

- **National Science Foundation**, Contract no. EIA-9820440, Research Experiences for Undergraduates in Dynamic Distributed Real-Time Systems, PI: B. Shirazi, Co-PIs: D. Cook and L.R. Welch, ($124,800), June 99 - May 02.

- **DARPA/ITO**, Contract no. N66001-97-C-8250, DeSiDeRaTa: QoS Management Tools for Dynamic, Scalable, Dependable, Real-Time Systems, PI: Lonnie R. Welch, Co-PI: B. Shirazi, ($1,488,394), June 97 to Dec. 01.

- **U.S. Naval Air Systems Command (NAVAIR)**, Research & Development of Jewel Compression: Advanced Data Compression Architecture & Algorithm, PI: T.C. Yih, Co-PI's: B. Shirazi, S. Das, A. Reyes, ($35,000), June 2000 to June 20001.

- **National Science Foundation**, Contract no. MIPS-9622593, Research in Multithreaded Dataflow and Hybrid Architectures, PI: K. Kavi, Co-PI's: B. Shirazi and A.R. Hurson, ($150,353 + $20,000 REU Supplement), June 96 to Dec. 97.

- **National Science Foundation, ILI,** Contract no. DUE-9650119, A Microkernel-Based Operating Systems Laboratory, PI: D. Cook, Co-PI's: B. Shirazi, K. Kavi, D. Umbaugh, D. Levine, ($186,300: $81,500 from NSF, $104,800 matching from UTA and IBM), Jan. 96 - Dec. 97.

- **National Science Foundation**, Contract no. CDA-9531535, Research Experiences for Undergraduates in Software Tools for Concurrent Programming, PI: B. Shirazi, Co-PI: K. Kavi, ($113,691), June 96 - May 99.

- **National Science Foundation, CISE Research Instrumentation,** Contract no. CDA-9529561, Design of a Distributed Computing Environment using Microkernels, PI: D. Cook, Co-PI's: B. Shirazi, K. Kavi, ($149,200: $62,000 from NSF and 87,200 matching from UTA), Jan. 96 - Feb. 99.

- **State of Texas Advance Technology Program (ATP)**, Contract no. 003656-087, A Software Development Tool for Portable Parallel Programming, PI: B. Shirazi, ($208,000), Jan. 96 - Dec. 97.

- **E-Systems Inc., Greenville Division**, PARSA: a PARallel program Scheduling and Assessment environment, PI: B. Shirazi, ($200,000), June 94 - May 96.

- **National Science Foundation,** Contract no. DUE-9351001, A Senior Design Project Laboratory: Experiences in Parallel Processing, NSF-ILI program, PI: B. Shirazi, Co-PI's: B.D. Carroll and E.W. Banios, ($108,290: $40,590 from NSF, $27,840 from E-Systems, $20,060 from Mercury Computer Systems, and $20,200 from UTA), June 93 - Nov. 95.

- **National Science Foundation**, Contract no. CDA-9300252, Research Experiences for Undergraduates in Software Tools for Parallel Program Development and Assessment, PI: B. Shirazi, Co-PI's: B.D. Carroll and K. Kavi, ($119,375), June 93 - May 96.

- **International Computing Technology,** Study of Parallel Power Plant Control Simulations, PI: B. Shirazi, Co-PI: K. Kavi, ($11,025), May 94 - Aug. 94.

- **Mercury Computer Systems,** Equipment Grant, PI: B. Shirazi, (4-processor Mercury VS board and software license valued at $62,000), September 93.

- **University of Texas at Arlington, Office of the Dean of the College of Engineering,** Research Equipment Grant, PI: B. Shirazi, ($10,000), Sept. 92 - Aug. 93.

- **State of Texas Advance Technology Program (ATP)**, Contract no. 003656-080, PI: B. Shirazi, PARSA: A scheduling environment for PARallel Systems programming and Assessment, ($115,656), Jan. 92 - Aug. 94.

- **State of Texas Advance Technology Program (ATP)**, Supplemental Grant for Under-Represented Minorities, PARSA: A scheduling environment for PARallel Systems programming and Assessment, PI: B. Shirazi, ($8,875), Sep. 92 - May 94.

- **Texas Instruments**, Round Robin Load Balancing for a Shared Memory Multiprocessor System, PI: B. Shirazi, ($33,552), May 91 - Dec. 92.

- **Texas Instruments**, Heterogeneous Distributed Processing Laboratory, PI: B. Shirazi, Equipment: TI Explorer, ($15,600), Feb. 91.

- **Air Force Office of Scientific Research**, Contract no. S-210-11MG-064, Parallel Architectures for AI and Knowledge-Base Systems, PI: B. Shirazi, ($31,348), Jan. 91 - Jan. 92.

- **University of Texas at Arlington**, Research Initiation Grant, PI: B. Shirazi, ($20,000), Sept. 90 - Aug. 91.

- **Lightbus Technology**, Efficient Data Structures for Network Routing, PI: B. Shirazi, ($5,982), Sept. 89- Sept. 90.

- **Texas Instruments**, A Hybrid Method for Task Allocation and Load Balancing, PI: B. Shirazi, ($33,952), Jan. 89 - Dec. 1990.

- **DARPA**, Contract no. MDA903-86-C-8012, Optimization Algorithms for New Computer Architectures, Faculty Research Associate (B. Shirazi) Responsible for ($245,882), (PI: Dean Robert Fossum, SMU, Total Grant: $2.8M), Sept. 86 - Aug. 89.

- **SMU Instructional Development Grant**, PI: M. Tanik, Co-PI's: B. Shirazi and D.Y.Y. Yun, ($3,000), Summer of 1987.

- **Southern Methodist University Seed Grant**, PI: B. Shirazi, ($1,800), Summer of 1986.

G. University Services

1. UTA Committee activities (Department, College, and University):

- **Member** of the Provost Review Committee, 2001-02.
- **Member** of the University Cost Saving Committee, 2000.
- **Chair** of the CSE Department Graduate Studies Committee, UTA, 1996- 2005.
- **Chair** of the Faculty Recruitment Committee, CSE Department, UTA, 1997 – 1999; member of this committee: 1993-94 and 1996-97.
- **Member** of the College TxTEC Consertium Committee, College of Engineering, UTA, 1998 - 2000.
- **Member** of the Graduate Student Recruitment Committee, College of Engineering, UTA, 1996-1999.
- **Member** of the University Faculty Developmental Leave, UTA, 1997 - 1998.
- **Member** of the Faculty Workload Committee, CSE Department, UTA, 1996 - 1997.
- **Member** of the Student Affairs Committee, CSE Department, UTA, 1991 - 1995.
- **Member** of the Graduate Admissions Committee, CSE Department, UTA, 1991 - 1996.
- **Chair** of the Publicity Committee, CSE Department, UTA, 1991 - 1993.
- **Chair** of the Faculty Workload Guideline Committee, CSE Department, UTA, 1991.
- **Chair** of UTA CSE Department Seminar Program, Spring Semester 1991.
- **Member** of the CSE Department Tenure and Promotion Committee, UTA, 1990- 2005.
- **Member** of the CSE Department Graduate Studies Committee, UTA, 1990- 2005.
- **Prepared** the Volume II ABET accreditation report for the Computer Engineering Program, Department of CSE, SMU, 1989-90.
- **Chair** of the CSE Department Accreditation Committee, SMU, 1988-1990.
- **Chair**, CSE Department Faculty Recruitment Committee, SMU, 1988-1989.
- **Member** of the School of Engineering and Applied Sciences Academic Priorities Task Force as well as the Chairman of its Educational Enterprise Sub-committee, SMU, 1988.
- **Prepared** the SMU CSE Departmental Annual Report for the 1987 academic year.
- **Chair** of the CSE Department Seminar Program, SMU, 1986-1988.
- **Member** of the CSE Department Admission Committee, SMU, 1985-1990.
- **Member** of the CSE Dept Graduate Policy and Exam Committee, SMU, 1985-1990.
- **CSE Department Representative** to the School of Engineering and Applied Sciences' Academic Affairs Committee, SMU, 1985-1989.

2. Student academic advising:

- **Graduate Advisor**, CSE Department, UTA, 1994 - 1996.

- **Undergraduate Advisor**, Computer Engineering Program, CSE Department, SMU, 1988-1990.
- **Faculty Advisor**, SMU IEEE Computer Society Student Chapter, 1988-1990.