

CURRICULUM VITAE

Diane J. Cook

Huie-Rogers Chair Professor

School of Electrical Engineering and Computer Science

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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

- Distinguished Alumni Educator Award, University of Illinois, 2013
- 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 Na-
tional 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. K. Feuz and D. Cook. Transfer learning via feature-space remapping. *ACM Transactions on Intelligent Systems and Technology*, to appear.
2. 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.
3. N. Krishnan and D. Cook. Activity recognition on streaming sensor data. *Pervasive and Mobile Computing*, 10:138-154, 2014.
4. B. Thomas, A. Crandall, and D. Cook. An exploration of motion detector sensor placement in smart environments. *Journal of Artificial Intelligence and Smart Environments*, to appear.
5. D. Cook and N. Krishnan. Mining the home environment. *Journal of Intelligent Information Systems*, to appear.
6. E. Nazerfard and D. Cook. CRAFFT: An activity prediction model based on Bayesian networks. *Journal of Ambient Intelligence and Humanized Computing*, 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*, 101(12):2470-2494, 2013.
8. L. Callejo, C. Baladron, J. Aguiar, B. Carro, A. Sanchez-Esguivillas, J. Lloret, J. Gomez-Sanz, and D. Cook. A multi-agent system architecture for smart grid management and forecasting of energy demand in virtual power plants. *IEEE Communications Magazine*, 51(1), 106-113, 2013.
9. 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: Part B*, 43(6):1302-1313, 2013.

10. P. Dawadi, D. Cook, M. Schmitter-Edgecombe, and C. Parsey. Automated assessment of cognitive health using smart home technologies. *Technology and Health Care*, 21(4):323-343, 2013.
11. 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*, 4(4), 64:1-64:20, 2013.
12. 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*, 10(3):632-644, 2013.
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*, 9(1):161-175, 2013.
14. D. Cook, K. Feuz, and N. Krishnan. Transfer learning for activity recognition: A survey. *Knowledge and Information Systems*, 36(3):537-556, 2013.
15. D. Cook, A. Crandall, B. Thomas, and N. Krishnan. CASAS: A smart home in a box. *IEEE Computer*, 46(7):62-69, 2013.
16. D. Cook, N. Krishnan, and P. Rashidi. Activity discovery and activity recognition: A new partnership. *IEEE Transactions on Systems, Man, and Cybernetics, Part B*, 43(3):820-828, 2013.
17. A. Seelye, M. Schmitter-Edgecombe, D. Cook, and A. Crandall. Naturalistic assessment of everyday activities and prompting technologies in mild cognitive impairment. *Journal of the International Neuropsychological Society*, 19(4):442-452, 2013.
18. D. Cook and L. Holder. Automated activity-aware prompting for activity initiation. *Geron-technology*, 11(4):534-544, 2013.
19. J. Lloret, C. Zorita, J. Aguiar, B. Carro, A. Sanchez-Esguevillas, 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*, 51(1):106-113, 2013.
20. D. De, W.Z. Song, S. Tang, D. Cook, and S. Das. ActiSen: Activity-aware sensor network in smart environments. *Pervasive and Mobile Computing*, 8(5):730-750, 2012.
21. 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*, 12:1492-1506, 2012.
22. 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.
23. 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.
24. 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*, 12(9):11571-11591, 2012.

25. 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.
26. A. Aztiria, J. Augusto, and D. Cook. Discovering frequent user-environment interactions in intelligent environments. *Personal and Ubiquitous Computing*, 16(1):91-103, 2012.
27. D. Cook. How smart is your home? *Science*, 335:1579-1581, 2012.
28. D. Cook. Learning setting-generalized activity models for smart spaces. *IEEE Intelligent Systems*, 27(1):32-38, 2012.
29. D. Cook and S. Das. Pervasive computing at scale: Transforming the state of the art. *Pervasive and Mobile Computing*, 8(1):22-35, 2012. PMC “Hottest Articles” list 2012.
30. H. Fang, R. Srinivasan, and D. Cook. Feature selection for human activity recognition in smart home environments. *International Journal of Innovative Computing, Information and Control*, 8(5):3525-3535, 2012.
31. D. Cook, M. Schmitter-Edgecombe, and L. Holder. Gerontechnology education: Beyond the barriers. *IEEE Pervasive Computing*, 10(4):59-63, 2011.
32. M. Schmitter-Edgecombe, C. Parsey, and D. Cook. 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(5):853-864, 2011.
33. S. Helal, R. Bose, C. Chen, A. Smith, S. Deugd, and D. Cook. Stepstone: An intelligent integration architecture for personal tele-health. *Journal of Computing Science and Engineering*, 5(3):269-281, 2011.
34. P. Rashidi and D. Cook. Activity knowledge transfer in smart environments. *Pervasive and Mobile Computing*, special issue on activity recognition, 7(3):331-343, 2011.
35. D. Cook and L. Holder. Sensor selection to support practical use of health-monitoring smart environments. *Data Mining and Knowledge Discovery*, 1(4):339-351, 2011.
36. P. Rashidi, D. Cook, L. Holder, and M. Schmitter-Edgecombe. Discovering activities to recognize and track in a smart environment. *IEEE Transactions on Knowledge and Data Engineering*, 23(4):527-539, 2011.
37. L. Chen, C. Nugent, D. Cook, and Z. Yu. Knowledge-driven activity recognition in intelligent environments. *Pervasive and Mobile Computing*, 7(3):285-286, 2011.
38. S. Deleawe, J. Kuszniir, B. Lamb, and D. Cook. Predicting air quality in smart environments. *Journal of Ambient Intelligence and Smart Environments*, 2(2):145-154, 2010.
39. D. Cook, A. Crandall, G. Singla, and B. Thomas. Detection of social interaction in smart spaces. *Journal of Cybernetics and Systems*, special issue on social awareness in smart spaces, 41(2):90-104, 2010.
40. C. Corley, D. Cook, A. Mikler, and K. Singh. Text and structural data mining of influenza mentions in web and social media. *International Journal of Environmental Research and Public Health*, special issue on public health informatics, 7(2):596-615, 2010.

41. C. Corley, D. Cook, A. Mikler, and K. Singh. Using web and social media for influenza surveillance. *Advances in Experimental Medicine and Biology*, 680:559-564, 2010.
42. E. Kim, S. Helal, and D. Cook. Human activity recognition and pattern discovery. *IEEE Pervasive Computing*, 9(1):48-53, 2010.
43. G. Singla, D. Cook, and M. Schmitter-Edgecombe. Recognizing independent and joint activities among multiple residents in smart environments. *Ambient Intelligence and Humanized Computing Journal*, 1(1):57-63, 2010.
44. A. Crandall and D. Cook. Coping with multiple residents in a smart environment. *Journal of Ambient Intelligence and Smart Environments*, 1(4):323-334, 2009.
45. D. Cook, J. Augusto, and V. Jakkula. Ambient intelligence: Technologies, applications, and opportunities. *Pervasive and Mobile Computing*, 5(4):277-298, 2009. PMC “Hottest Articles” list 2010-2012.
46. P. Rashidi and D. Cook. Keeping the resident in the loop: Adapting the smart home to the user. *IEEE Transactions on Systems, Man, and Cybernetics, Part A: Systems and Humans*, 39(5):949-959, 2009.
47. D. Cook, L. Holder, S. Thompson, P. Whitney, and L. Chilton. Graph-based analysis of nuclear smuggling data. *Journal of Applied Security Research*, 4(4):501-517, 2009.
48. G. Singla, D. Cook, and M. Schmitter-Edgecombe. Tracking activities in complex settings using smart environment technologies. *International Journal of BioSciences, Psychiatry and Technology*, 1(1):25-35, 2009.
49. D. Cook, H. Hagaras, V. Callaghan, and A. Helal. Making our environments intelligent. *Pervasive and Mobile Computing*, 5:556-557, 2009.
50. S. Szewczyk, K. Dwan, B. Minor, B. Swedlove, and D. Cook. Annotating smart environment sensor data for activity learning. *Technology and Health Care*, special issue on Smart Environments: Technology to support health care, 17:161-169, 2009.
51. D. Cook and M. Schmitter-Edgecombe. Assessing the quality of activities in a smart environment. *Methods of Information in Medicine*, 48(5):480-485, 2009.
52. D. Cook and W. Song. Ambient intelligence and wearable computing: Sensors on the body, in the home, and beyond. *Journal of Ambient Intelligence and Smart Environments*, 3:1-4, 2009.
53. D. Cook. Multi-agent smart environments. *Journal of Ambient Intelligence and Smart Environments*, 1:47-51, 2009.
54. H. Hagaras, V. Callaghan, D. Cook, and A. Helal. The Fourth International Conference on Intelligent Environments (IE 08): A Report. *AI Magazine*, 30(1):124-125, 2009.
55. D. Brezeale and D. Cook. Learning video preferences using visual features and closed captions. *IEEE Multimedia*, 16(3):39-47, 2009.
56. A. Helal, M. Schmalz, and D. Cook. Smart home-based health platform for behavioral monitoring and alteration of diabetes patients. *Journal of Diabetes Science and Technology*, 3(1):1-8, 2008.

57. C. Corley, A. Mikler, D. Cook, and K. Singh. Dynamic intimate contact social networks and epidemic interventions. *International Journal of Environmental and Healthcare Biotechnology*, 1(2):171-188, 2008.
58. J. Kukluk, L. Holder, and D. Cook. Inferring graph grammars by detecting overlap in frequent subgraphs. *International Journal of Applied Mathematics and Computer Science*, 18(2):241-250, 2008.
59. J. Kukluk, L. Holder, and D. Cook. Inference of edge replacement graph grammars. *International Journal on Artificial Intelligence Tools*, 17(3):539-554, 2008.
60. C. D. Corley, A. R. Mikler, D. Cook, and K. Singh. Dynamic intimate contact social networks and epidemic interventions. *International Journal of Functional Informatics and Personalized Medicine*, 2008.
61. V. Jakkula and D. Cook. Anomaly detection using temporal data mining in a smart home environment. *Methods of Information in Medicine*, 47(1):70-75, 2008.
62. D. Brezeale and D. Cook. Automatic video classification: A survey of the literature. *IEEE Transactions on Systems, Man, and Cybernetics, Part C*, 38(3):416-430, 2008.
63. D. Cook, L. Holder, and G. M. Youngblood. Graph-based analysis of human transfer learning using a game testbed. *IEEE Transactions on Knowledge and Data Engineering*, 19(11):1-14, 2007.
64. D. Cook. Making sense of sensor data. *IEEE Pervasive Computing*, 6(2):105-108, 2007.
65. J. Kukluk, L. Holder, and D. Cook. Inference of node replacement graph grammars. *Intelligent Data Analysis*, 11(4):377-400, 2007.
66. G. M. Youngblood and D. Cook. Data mining for hierarchical model creation. *IEEE Transactions on Systems, Man, and Cybernetics, Part C*, 37(4):561-572, 2007.
67. D. Cook and S. K. Das. How smart are our environments? An updated look at the state of the art. *Journal of Pervasive and Mobile Computing*, 3(2):53-73, 2007.
68. K. Gopalratnam and D. Cook. Online sequential prediction via incremental parsing: The Active LeZi algorithm. *IEEE Intelligent Systems*, 22(1):52-58, 2007.
69. J. Coble, D. Cook, and L. Holder. Structure discovery in sequentially-connected data streams. *International Journal on Artificial Intelligence Tools*, 15(6):917-944, 2006.
70. D. Cook. Health monitoring and assistance to support aging in place. *Journal of Universal Computer Science*, 12(1):15-29, 2006.
71. L. Holder, D. Cook, J. Coble and M. Mukherjee. Graph-based relational learning with application to security. *Fundamenta Informaticae Special Issue on Mining Graphs, Trees and Sequences*, 66(1-2):83-101, 2005.
72. N. Ketkar, L. Holder, and D. Cook. Comparison of graph-based and logic-based multi-relational data mining. *SIGKDD Explorations Special issue on Link Mining* 7(2), 2005.
73. G. M. Youngblood, D. Cook, and L. Holder. Managing adaptive versatile environments. *Pervasive and Mobile Computing*, 1(4):373-403, 2005.

74. J. Kukluk, L. Holder, and D. Cook. Algorithm and experiments in testing planar graphs for isomorphism. *Journal of Graph Algorithms and Applications*, 8(2):313-356, 2005.
75. J. Coble, D. Cook, R. Rathi, and L. Holder. Iterative structure discovery in graph-based data. *International Journal of Artificial Intelligence Tools*, 14(1-2):101-124, 2005.
76. D. Cook and S. K. Das. MavHome: Work in progress. *IEEE Pervasive Computing*, 2004.
77. D. Cook, L. Holder, M. Huber, and R. Yerraballi. Enhancing computer science education with a wireless intelligent simulation environment. *Journal of Computing in Higher Education*, 16(1), 2004.
78. K. Gopalratnam and D. Cook. Active LeZi: An incremental parsing algorithm for sequential prediction. *International Journal of Artificial Intelligence Tools*, 14(1-2):917-930, 2004.
79. I. Jonyer, L. Holder and D. Cook. MDL-based context-free graph grammar induction and applications. *International Journal on Artificial Intelligence Tools*, 13(1):45-64, 2004.
80. A. Rakhshan, L. Holder and D. Cook. Structural web search engine. *International Journal on Artificial Intelligence Tools*, 13(1):27-44, 2004.
81. S. Rao and D. Cook. Predicting inhabitant actions using action and task models with application to smart homes. *International Journal on Artificial Intelligence Tools*, 13(1):81-100, 2004.
82. L. Holder and D. Cook. Graph-based relational learning: Current and future directions. *SIGKDD Explorations special issue on Multirelational Data Mining*, 5(1):90-93, 2003.
83. D. Cook, N. Manocha, and L. Holder. Using a graph-based data mining system to perform web search. *International Journal of Pattern Recognition and Artificial Intelligence*, 17(5):705-720, 2003.
84. P. Sandanayake and D. Cook. ONASI: Online agent modeling using a scalable Markov model. *International Journal of Pattern Recognition and Artificial Intelligence*, 17(5):757-779, 2003.
85. G. Peterson and D. Cook. Incorporating decision-theoretic planning in a robot architecture. *Robotics and Autonomous Systems*, 42(2):89-106, 2003.
86. S. K. Das, D. Cook, A. Bhattacharya, E. O. Heierman, III, and T.-Y. Lin. The role of prediction algorithms in the MavHome smart home architecture. *IEEE Wireless Communications Special Issue on Smart Homes*, 9(6):77-84, 2002.
87. W. Harris, D. Cook, and F. Lewis. A matrix formulation for integrating assembly trees and manufacturing resource planning (MRP) with capacity constraints. *Journal of Intelligent Manufacturing*, 13(4):239-252, 2002.
88. J. Ramirez, D. Cook, L. Peterson, and D. Peterson. Temporal pattern discovery in course-of-disease data. *IEEE Engineering in Medicine and Biology*, 2002.
89. I. Jonyer, D. Cook, and L. Holder. Graph-based hierarchical conceptual clustering. *Journal of Machine Learning Research*, 2:19-43, 2001.
90. D. Cook, L. Holder, S. Su, R. Maglothlin, and I. Jonyer. Structural mining of molecular biology data. *IEEE Engineering in Medicine and Biology special issue on Advances in Genomics*, 20(4):67-74, 2001.

91. L. Holder and D. Cook. A client-server computational tool for integrated artificial intelligence curriculum. *Journal of Computing in Higher Education*, 12(2), 2001.
92. I. Jonyer, L. Holder, and D. Cook. Hierarchical conceptual structural clustering. *International Journal on Artificial Intelligence Tools*, 10(1-2):107-136, 2001.
93. C. Hannon and D. Cook. A parallel approach to modeling language learning and understanding in young children. *International Journal on Artificial Intelligence Tools*, 10(1-2):39-64, 2001.
94. D. Cook, L. Holder, G. Galal, and R. Maglothin. Approaches to parallel graph-based knowledge discovery. *Journal of Parallel and Distributed Computing*, 61(3):427-446, 2001.
95. N. Manocha, D. Cook, and L. Holder. Structural web search using a graph-based discovery system. *Intelligence Magazine*, 12(1):20-29, 2001.
96. D. Cook and L. Holder. Graph-based data mining. *IEEE Intelligent Systems*, 15(2):32-41, 2000.
97. W. Harris, D. Cook, and F. Lewis. Automatically generating plans for manufacturing. *Journal of Intelligent Systems*, 10(3):297-319, 2000.
98. J. Ramirez, D. Cook, L. Peterson, and D. Peterson. An event set approach to sequence discovery in medical data. *Intelligent Data Analysis*, 4(6):513-530, 2000.
99. D. Cook and R. C. Varnell. Adaptable incremental deepening search. *Journal of Artificial Intelligence Research*, 9:167-194, 1999.
100. S. Su, D. Cook, and L. Holder. Knowledge discovery in molecular biology: Identifying structural regularities in proteins. *Intelligent Data Analysis*, 3:413-436, 1999.
101. D. Cook. Preface to the FLAIRS special issue. *International Journal of Pattern Recognition and Artificial Intelligence*, 13(2):1-2, 1999.
102. K. S. Tae, D. Cook, and L. Holder. Experimentation-driven knowledge acquisition for planning. *Computational Intelligence*, 15(3), 1999.
103. G. Galal, D. Cook and L. Holder. Exploiting parallelism in a scientific discovery system to improve scalability. *Journal of the American Society for Information Science*, 50(1):65-73, 1999.
104. W. Harris, F. Lewis, and D. Cook. Machine planning for manufacturing: Dynamic resource allocation and on-line supervisory control. *Journal of Intelligent Manufacturing*, 9(5):413-430, 1998.
105. S. Djoko, D. Cook, and L. Holder. An empirical study of domain knowledge and its benefits to substructure discovery. *IEEE Transactions on Knowledge and Data Engineering*, 9(4):575-586, 1997.
106. D. Cook, P. Gmytrasiewicz and L. Holder. Decision-theoretic cooperative sensor planning. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 18(10), 1996.
107. D. Cook, L. Holder, and S. Djoko. Scalable discovery of informative structural concepts using domain knowledge. *IEEE Expert*, 10:59-68, 1996.

108. K. Woods, D. Cook, L. Hall, K. Bowyer, and L. Stark. Learning combination of evidence functions in object recognition. *Journal of Artificial Intelligence Research*, 3:187-222, 1995.
109. D. Cook, L. Holder, and S. Djoko. Knowledge discovery from structural data. *Journal of Intelligence and Information Sciences*, 5(3):229-245, 1995.
110. K. S. Tae and D. Cook. Learning rules from redundant and incomplete domain theory. *The Journal of Computing in Small Colleges*, 10(5), 1995.
111. D. Cook and L. Holder. Substructure discovery using minimum description length and background knowledge. *Journal of Artificial Intelligence Research*, 1:231-255, 1994.
112. D. Cook, L. Hall, and W. Thomas. Parallel search using Transformation-Ordering Iterative-Deepening A*. *International Journal of Intelligent Systems*, 8(8):855-873, 1993.
113. L. Holder and D. Cook. Discovery of inexact concepts from structural data. *IEEE Transactions on Knowledge and Data Engineering*, 5(6):992-994, 1993.
114. D. Cook and G. Lyons. Massively parallel IDA* search. *International Journal on Artificial Intelligence Tools*, 2(2):163-180, 1993.
115. D. Cook. Parallel techniques for planning by analogy. *International Journal of Expert Systems*, 5(2):169-179, 1992.
116. D. Cook. Application of parallelized analogical planning to engineering design. *International Journal of Applied Intelligence*, 1:133-144, 1991.

Magazine Articles

1. D. Cook. Providing for older adults using smart environments. *IEEE-USA Today's Engineer*, 2007.

Books

1. Human Aspects in Ambient Intelligence (T. Bosse, D. Cook, M. Neerincx, and F. Sadri, editors), Atlantis / Springer, 2013.
2. Mining Graph Data. (D. Cook and L. Holder, editors), John Wiley and Sons, December 2006.
3. Advanced Methods for Knowledge Discovery from Complex Data. (S. Bandyopadhyay, U. Maulik, L. Holder, and D. Cook, editors), Springer, September 2005.
4. Smart Environments: Technologies, Protocols and Applications. (D. Cook and S. Das, editors), John Wiley and Sons, September 2004.

Book Reviews

1. D. Cook, Review of advances in distributed and parallel knowledge discovery. *International Journal of Computational Intelligence and Applications*, 2002.

Book Chapters

1. A. Crandall and D. Cook. Behaviometrics for multiple residents in a smart environment. *Human Aspects in Ambient Intelligence*, pages 55-71, Springer, 2013.
2. D. Cook. Scaling smart environments. *Handbook of Sensor Networks for Sustainable Development*. CRC Press, 2013.
3. A. Crandall and D. Cook. Tracking systems for multiple smart home residents. *Human Behavior Recognition Technologies*, IGI Global, 2013.
4. B. Das, N. Krishnan, and D. Cook. Handling imbalanced and overlapping classes in a smart environments prompting dataset. *Data Mining for Service*, pages 199-219, Springer, 2014.
5. M. Schmitter-Edgecombe, A. Seelye, and D. Cook. 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*. Springer, 2012.
6. D. Cook and L. Holder. Sensor selection to support practical use of health-monitoring smart environments. *Handbook of Ambient Assisted Living for Healthcare, Well-being and Rehabilitation*, IOS Press, 2012.
7. B. Das, N. Krishnan, and D. Cook. Automated activity interventions to assist with activities of daily living. *Agents and Ambient Intelligence*, IOS Press, 2012.
8. C. Chen and D. Cook. Novelty detection in human behavior through analysis of energy utilization. *Human Behavior Recognition Technologies*, IGI Global, 2011.
9. P. Rashidi and D. Cook. An adaptive sensor mining framework for pervasive computing applications. *Lecture Notes in Computer Science*, 5840:154-174, 2010.
10. D. Cook and A. Crandall, Learning activity models for multiple agents in a smart space. *Handbook of Ambient Intelligence and Smart Environments*, N. Hideyuki, H. Aghajan, and J. Augusto, eds., Elsevier, pages 751-769, 2009.
11. 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, 2009.
12. W. Eberle, L. Holder, and D. Cook, Identifying threats using graph-based anomaly detection. *Machine Learning in Cyber Trust - Security, Reliability, Privacy*, Springer, 2008.
13. V. Jakkula, A. Crandall, and D. Cook, Enhancing anomaly detection using temporal pattern discovery. *Advanced Intelligent Environments*, W. Minker, M. Weber, H. Hagraas, V. Callaghan, and A. Kameas, eds., pages 175-194, Springer, 2008.
14. V. Jakkula and D. Cook, Mining temporal relations in smart environment data using TempAl. *Knowledge Discovery from Sensor Data*, Taylor and Francis, 2008.
15. V. Jakkula and D. Cook, Enhancing smart home algorithms using temporal relations. *Technology and Aging*, IOS Press, 2008.
16. V. Jakkula, A. Crandall, and D. Cook, Enhancing anomaly detection using temporal pattern discovery. *Advanced Intelligent Environments*, Springer, 2008.

17. D. Cook, A multi-agent approach to controlling a smart environment. *AI and Smart Homes*, 9.C. Augusto and U. Nehmzow, Editors, Springer Verlag, 2008.
18. D. Cook, G. M. Youngblood, and G. Jain, Algorithms for smart spaces. *The Engineering Handbook on Smart Technology for Aging, Disability and Independence*, A. Helal, M. Mokhtari and B. Abdulrazak, Editors, John Wiley and Sons, 2007.
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153. S. Su, D. Cook, and L. Holder, Application of knowledge discovery to molecular biology: Identifying structural regularities in proteins. Proceedings of the Pacific Symposium on Bio-computing, pages 190–201, 1999.
154. G. Peterson and D. Cook, Learning and planning in a robotic game. Proceedings of the AAAI Fall Symposium on Integrated Planning for Autonomous Agent Architectures, 1998.
155. W. Harris and D. Cook, Using machine planning to design manufacturing processes. Proceedings of the AAAI Fall Symposium on Integrated Planning for Autonomous Agent Architectures, 1998.
156. J. Coble and D. Cook, Fault tolerant coordination of robot teams. Proceedings of the AAAI Fall Symposium on Cognitive Robotics, 1998.
157. S. Whisenhunt and D. Cook, Comparison of techniques to learn agent strategies in adversarial games. Proceedings of the Machine Learning Workshop on the Methodology of Applying Machine Learning, 1998.
158. S. Taylor, D. Levine, K. Kavi, and D. Cook, A comparison of multithreading implementations. Yale Multithreaded Programming Workshop, 1998.

159. L. Holder and D. Cook, Coupling two complementary knowledge discovery systems. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 183–187, 1998.
160. W. Harris and D. Cook, Integrating hierarchical and analogical planning. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 126–130, 1998.
161. R. C. Varnell and D. Cook, Integrating machine learning in parallel heuristic search. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 240–244, 1998.
162. G. Peterson and D. Cook, DFA learning of opponent strategies. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 367–371, 1998.
163. D. Cook, G. Galal, and L. Holder, Exploiting parallelism in knowledge discovery systems to improve scalability. Proceedings of the Thirty-First Hawaii International Conference on System Sciences, 1998.
164. D. Cook and R. C. Varnell, Maximizing the benefits of parallel search using machine learning. Proceedings of the National Conference on Artificial Intelligence, pages 559–564, 1997.
165. G. Galal, D. Cook and L. Holder, Improving scalability in a scientific discovery system by exploiting parallelism. Proceedings of the International Conference on Knowledge Discovery and Data Mining, pages 171–174, 1997.
166. G. Galal and D. Cook, Exploiting parallelism in a scientific discovery system to improve scalability. Proceedings of the Tenth Annual Florida Artificial Intelligence Research Symposium, 1997.
167. D. Cook, Improving the performance of planning systems using parallel hardware and flexible social laws. Proceedings of the NSF Design and Manufacturing Grantees Conference, 1997.
168. K. S. Tae and D. Cook, Experimental knowledge acquisition for planning. Proceedings of the Conference on Machine Learning, 1996.
169. W. Briggs and D. Cook, A clustering approach to resource allocation in multiagent systems. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 127–131, 1996.
170. R. C. Varnell, D. Cook, and L. Peterson, Optimizing the performance of parallel heuristic search. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 385–389, 1996.
171. K. S. Tae and D. Cook, Experimentation-driven incremental operator learning. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 204–208, 1996.
172. D. Cook, P. Gmytrasiewicz and L. Holder, Multi-agent cooperative sensor planning. Proceedings of the Image Understanding Workshop, pages 1321–1332, 1996.
173. D. Cook, E. Mettala, and K. Harbison, Application of the scenario-based engineering process to the unmanned ground vehicle project. Proceedings of the Image Understanding Workshop, pages 627–641, 1996.
174. D. Cook, Scaling up planning systems using parallel hardware and machine learning. Proceedings of the NSF Design and Manufacturing Grantees Conference, 1996.

175. K. S. Tae and D. Cook, Knowledge acquisition for planning with incomplete information. Proceedings of the AAAI Spring Symposium on Planning with Incomplete Information for Robot Problems, 1996.
176. W. Briggs and D. Cook, Flexible social laws. Proceedings of the International Joint Conference on Artificial Intelligence, pages 688–693, 1995.
177. S. Djoko, D. Cook, and L. 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.
178. J. Baumgartner, D. Cook, and B. Shirazi, Genetic solutions to the load balancing problem. Proceedings of the International Conference on Parallel Processing, 1995.
179. S. Nerur and D. Cook, Maximizing the speedup of parallel search using HyPS. Proceedings of the Third International Workshop on Parallel Processing for Artificial Intelligence, pages 40–51, 1995.
180. L. Holder, D. Cook, and S. Djoko, Substructure discovery in the Subdue system. Proceedings of the AAAI Workshop on Knowledge Discovery in Databases, pages 169–180, 1994.
181. D. Cook, Reconfiguration of multi-agent planning systems. Proceedings of the 1994 Conference on AI Planning Systems, pages 225–230, 1994.
182. J. Baumgartner and D. Cook, A genetic algorithm for load balancing in parallel computers. Proceedings of the Seventh International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, pages 619–627, 1994.
183. S. Nerur and D. Cook, A hybrid parallel-window / distributed tree algorithm for improving the performance of search-related tasks. Proceedings of the Seventh International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, pages 629–637, 1994.
184. J. Baumgartner and D. Cook, A genetic-based solution to load balancing in parallel computers. Proceedings of the 1994 ACM Computer Science Conference, 1994.
185. D. Cook and L. Holder, Sensor planning and coordination in multi-agent systems. Proceedings of the Image Understanding Workshop, 1994.
186. M. Kidwell and D. Cook, A genetic algorithm for dynamic task scheduling. Proceedings of the International Phoenix Conference on Computers and Communication, 1993.
187. D. Cook, L. O. Hall, L. Stark and K. W. Bowyer, Learning combination of evidence functions in object recognition, Proceedings of the AAAI Symposium on Machine Learning in Computer Vision, pages 139–143, 1993.
188. L. O. Hall, D. Cook, L. Stark and K. W. Bowyer, Fuzzy set learning in functional object recognition. Proceedings of NAFIPS, 1993.
189. D. Cook, L. O. Hall, L. Stark and K. W. Bowyer, Learning and combining fuzzy values for object recognition. Proceedings of the IJCAI Workshop on Fuzzy Logic in AI, pages 51–61, 1993.

190. D. Cook, Using analytic and genetic methods to learn plans for mobile robots. Proceedings of the Conference on Applications of Artificial Intelligence XI: Machine Vision and Robotics, pages 327–336, 1993.
191. D. Cook, Fast information distribution for massively parallel IDA* search. AAAI Spring Symposium on Innovative Applications of Massive Parallelism in AI, pages 48–53, 1993.
192. L. Holder, D. Cook, and H. Bunke, Fuzzy substructure discovery. Ninth International Machine Learning Conference, Aberdeen, Scotland, pages 218–223, 1992.
193. D. Cook, Adding intelligence to robot arm path planning using a graph-match analogical reasoning system. International Conference on Intelligent Robots and Systems, pages 657–662, 1992.
194. D. Cook, A graph match technique for incremental reuse of robot arm motion plans. Proceedings of the AAAI Spring Symposium, Stanford, CA, pages 1–6, 1992.
195. G. Lyons and D. Cook, A SIMD approach to IDA* search. Proceedings of the Conference on Applications of Artificial Intelligence X, Orlando, FL, pages 126–136, 1992.
196. I. Tello and D. Cook, Parallel heuristic search and potential field methods for robot path planning. Proceedings of Florida Artificial Intelligence Research Symposium, Cocoa Beach, FL, pages 63–67, 1992.
197. D. Cook, The base selection task in analogical planning. Proceedings of the International Joint Conference on Artificial Intelligence, Sydney, Australia, pages 790–795, 1991.
198. L. Hall, D. Cook, and W. Thomas, Window parallel transformation-ordering iterative-deepening A* search. Proceedings of The First International Workshop on Parallel Processing for Artificial Intelligence, Sydney, Australia, 1991.
199. D. Cook, Forming analogical plans for robot arm path planning. Proceedings of the 1991 International Conference on Intelligent Teleoperation, Greensboro, NC, 1991.
200. L. Hall, D. Cook, and W. Thomas, Transformation ordering iterative deepening A* search. Proceedings of The Sixth International Symposium on Methodologies for Intelligent Systems, Charlotte, NC, pages 65–72, 1991.
201. D. Cook and L. Holder, Accelerated learning on the connection machine. Proceedings of the Second IEEE Symposium on Parallel and Distributed Processing, Dallas, TX, pages 448–454, 1990.
202. D. Cook, Analogical planning. Proceedings of the DARPA Workshop on Innovative Approaches to Planning, Scheduling and Control, San Diego, CA, pages 22–27, 1990.
203. D. Cook, Exploring the limits of analogical planning. Proceedings of the Workshop on Computational Learning Theory and 'Natural' Learning Systems Constraints and Prospects, Boston, MA, 1990.
204. D. Cook, Complexity issues in applying analogy to engineering design. Proceedings of the Third International Conference on Industrial and Engineering Applications, Charleston, SC, pages 914–922, 1990.

205. D. Cook, Learning by analogy on the connection machine. Proceedings of the Florida Artificial Intelligence Research Symposium, Cocoa Beach, FL, pages 28–32, 1990.
206. D. Cook, Application of analogical planning to engineering design. Proceedings of the Sixth IEEE Conference on Artificial Intelligence Applications, Santa Barbara, CA, pages 244–249, 1990.
207. D. Cook, ORPHEUS: A music notation program, Proceedings of the 1987 International Computer Music Conference, pages 302–310, 1987.

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 April 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 Kuszniir (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”
- Kyle Feuz (PhD expected 5/14): “Learning home control patterns using sequence analysis”
- Jennifer Williams (PhD expected 5/15): “Trend detection in functional health for older adults”
- Salikh Bagaveyev (PhD expected 5/15): “Active learning for crowd sourcing”
- Bryan Minor (PhD expected 5/15): “Forecasting activity occurrences”
- Chris Cain (PhD expected 5/16): “Studying the effects of automated economic incentives for energy-efficient home automation”
- Jessamyn Dahmen (PhD expected 5/17): “Digital cognitive assessment”
- Gina Sprint (PhD expected 5/16): “Machine learning techniques for automating FIM scores in rehabilitation settings”
- External dissertation committee member or reader for Nitesh Chawla (University of South Florida), Narayanan Krishnan (Arizona State University), Francesco Leotta (University of Rome), Athanasios Bamis (Yale University), Sook Ling Chua (Massey University)
- Also supervised twenty undergraduate projects. Honors from these projects include a UTA CSE award (1997), a Sigma Xi outstanding undergraduate research project award (1997, 1998), a McNair scholarship (1997, 1998), a CSE undergraduate scholarship (1998), an American Minority Program scholarship (1997, 1998), a SURCA Engineering award (1998), a McNair outstanding presentation award (1998), and first place in the Louise Stokes Alliance for Minority Participation (LSAMP) Program competition (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
 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
 International Journal of Computer Vision and Signal Processing, 2011 - present
 International Journal of Information Technology, Communications and Convergence, 2009 - present
 Journal of Intelligent Information Systems, 2010 - present
 Pervasive and Mobile Computing, 2007 - present
 Springer Advanced Information and Knowledge Processing Series, 2013 - 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
 The 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:

IEEE International Conference on Data Mining (with Bhavani Thuraisingham), 2013
 AAAI Fall Symposium on AI for Gerontechnology
 (with Parisa Rashidi, Narayanan Krishnan, Marjorie Skubic, and Alex Mihailidis), 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:

IEEE International Conference on Pervasive Computing and Communications, 2015
 IEEE International Conference on Data Mining (with Jian Pei), 2011
 Special Session on Intelligent Knowledge-Based and Agent-Based Systems at the
 International Conference on Intelligence Environments, 2009
 International Conference on Ambient Assisted Living, 2013
 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 Sharma 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, 2013

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, 2013
(with Franca Delmastro, Marge Skubic, and Paul Lukowitz)
ACM Transactions on Intelligent Systems and Technology,
special issue on intelligent systems for socially aware computing, 2013
(with Zhiwen Yu, Daqing Zhang, and Nathan Eagle)
Journal of Human-Computer Interaction,
special issue on Ambient Assisted Living, 2014
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:

AAAI Tutorial on Ambient Intelligence (with Juan Carlos Augusto and Hans Guesgen), 2008
 IJCAI Tutorial on Ambient Intelligence (with Juan Carlos Augusto), 2007

Panelist:

NIH, 2011, 2012, 2013
 NSF ERC, 2013
 NSF SHB, 2012
 NSF SEES, 2012
 NSF REU, 2011
 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:

AAAI Conference on Artificial Intelligence, 2014
 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 an Aging Population, 2013
 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, 1999-2014
 FLAIRS Special Track on Data Mining, 2007-2014
 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, 2006-2007
 IEEE Symposium on Intelligent Agents, 2009
 ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2005-2012
 Senior Program Committee, ACM SIGKDD International Conference on Knowledge Discovery and Data Mining
 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), 2004-2012
 IEEE International Conference on Pervasive Intelligence and Computing, 2010
 IEEE International Symposium on Intelligent Agents, 2008, 2010
 IEEE International Workshop on Crowdsensing Methods, Techniques, and Applications, 2014
 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, 2013-2014
 IEEE WoWMom Workshop on Interdisciplinary Research on E-Health Services and Systems, 2010
 International Conference on Agents and Artificial Intelligence, 2008-2015
 International Conference on Advanced Data Mining and Applications, 2011-2013
 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 (MobiQuitous), 2011
 International Conference on Intelligent Environments, 2014
 International Conference on Pervasive and Embedded Computing
 and Communication Systems, 2011-2015
 International Conference on Sensor Networks, 2014-2015
 International Conference on Smart Systems, Devices and Technologies, 2012-2014
 International Conference on Ubiquitous Computing and Ambient Intelligence, 2012-2013
 International Symposium on Ambient Intelligence, 2012-2014
 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 Workshop on Recent Advances in Medical Informatics, 2014
 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
 Senior PC Member, Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2007-2014
 Pervasive 2012 Workshop on Recent Advances in Behavior Prediction and
 Pro-Active Pervasive Computing, 2012-2013
 Portuguese Conference on Artificial Intelligence, 2011
 SIAM International Conference on Data Mining, 2010-2014
 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 Journal of Biomedical and Health Informatics
 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, 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, 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, 2008
 WSU Vancouver Chancellor's Seminar Series, 2008
 The Innovators, 2008
 International Conference on Body Area Networks, 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

CI-ADDO-EN: Smart Home in a Box: Creating a large scale, long term repository for smart environment technologies, (PI), NSF, \$900,000, 09/01/13 - 08/31/16.

ICDM student travel support, NSF, \$20,000, 7/1/13 - 6/30/14.

Smart environment technology for longitudinal behavior analysis and intervention, (PI, with M. Schmitter-Edgecombe), 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 - 12/31/13.

SHB: Medium: Collaborative Research: Crafting a human-centric environment to support human health needs (PI, with S. Das, 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, subcontract 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 unstructured 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 programming (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 Supercomputing 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.