

Diane J. Cook

Curriculum Vitae

*Regents Professor
School of Electrical Engineering and Computer Science
Washington State University*

Research Interests

- artificial intelligence
- behavior modeling
- biomedical informatics
- machine learning
- smart environments
- digital health

Education

- 1987–1990 **Doctor of Philosophy**, *University of Illinois*, Urbana-Champaign, IL, Advisor: Robert Stepp.
Base selection in analogical planning
- 1985–1987 **Master of Science**, *University of Illinois*, Urbana-Champaign, IL, Advisors: William Kubiz and Sever Tipei.
Automated modern music notation
- 1981–1985 **Bachelor of Science**, *Wheaton College*, Wheaton, IL, Major: Math / Computer Science, Minor: Music.

Professional Experience

- 2006–Present **Regents Professor and Huie-Rogers Chair**, SCHOOL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, WASHINGTON STATE UNIVERSITY, Pullman, WA.
- 2019–Present **Chief Research Officer**, LIFEADAPT, Pullman, WA.
- 1992–2006 **Professor**, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF TEXAS AT ARLINGTON, Arlington, TX.
- Assistant Professor, 1992–1996
 - Associate Professor, 1996–2001
 - Professor, 2001–2004
 - University Distinguished Scholar Professor, 2004–2006
- 2000–2002 **Research Associate**, INTERNATIONAL BUSINESS MACHINES, ALMADEN RESEARCH CENTER, Dallas, TX.

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- 1992–2006 **Faculty Associate**, AUTOMATION AND ROBOTICS RESEARCH INSTITUTE, Fort Worth, TX.
- 1991–1992 **Research Faculty Fellow**, NASA AMES RESEARCH CENTER, Moffett Field, CA.
- 1991–1992 **Assistant Professor**, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF SOUTH FLORIDA, Tampa, FL.
- 1989–1991 **Student Consultant**, NATIONAL CENTER FOR SUPERCOMPUTING APPLICATIONS, Urbana, IL.
- 1990 **Co-Instructor**, NCSA SCIENTIFIC VISUALIZATION COURSE, Urbana, IL.
- 1990 **Instructor**, NCSA CONNECTION MACHINE GRAPHICS WORKSHOP, Urbana, IL.
- 1988–1989 **Teaching Assistant**, UNIVERSITY OF ILLINOIS, Urbana, IL.
- 1988–1989 **Research Associate in Computer Science**, INTERNATIONAL BUSINESS MACHINES, ALMADEN RESEARCH CENTER, San Jose, CA.
- 1986–1987 **Research Assistant**, COMPUTER MUSIC PROJECT, UNIVERSITY OF ILLINOIS, Urbana, IL.
- 1984–1985 **Software Consultant**, DR. WILLIAM F. NOWLIN, Merrillville, IN.
- 1985 **Software Consultant**, GARY METHODIST HOSPITAL, Gary, IN.
- 1985 **Software Consultant**, WILLIAM JAMES AND ASSOCIATES, Wheaton, IL.
- 1985 **Teaching Assistant**, WHEATON COLLEGE, Wheaton, IL.

Consultant

Amazon, Blue Origin, Bosch, C. Grant and Company, Cisco, Control4, Eaton, Engage, H. Lundbeck, Huawei, International Business Machines, King Saud University, Latham & Watkins, Rewire Neuroscience, Qualcomm, Sensorium, Touchmark, University of Tennessee at Chattanooga, US Environmental Protection Agency, Zemply

Honors and Awards

- 2025 Fellow, Association of Computing Machinery
- 2025 Outstanding Editor, IEEE Journal of Behavioral and Health Informatics
- 2025 Mentor, Sandia Engineering Design Award Competition Finalist (with UC Davis)
- 2024 Fellow, American Institute for Medical and Biomedical Engineering
- 2024 Fellow, International Artificial Intelligence Industry Alliance
- 2021 Fellow, Asia-Pacific Artificial Intelligence Association
- 2016 Fellow, National Academy of Inventors
- 2016 Sahlin Faculty Excellence Award for Research, Scholarship, and the Arts
- 2016 Douglas D. Dankel II Award for Service to FLAIRS
- 2016 Finalist, Geek of the Year, GeekWire
- 2015 IEEE ICDM Outstanding Service Award
- 2013 Distinguished Alumni Educator Award, University of Illinois

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2010 Anjan Bose Outstanding Researcher of the Year Award
 2010 WSU/EECS Excellence in Research Award
 2009 WSU/EECS Excellence in Research Award
 2010 FTRA Fellow
 2007 IEEE Fellow
 2007 IEEE Systems, Man, and Cybernetics Society, Outstanding Contribution Award
 2005 Best Paper Award, Florida Artificial Intelligence Research Symposium
 2004 Charter Member, Academy of Distinguished Scholars, University of Texas at Arlington
 2004 UTA College of Engineering Research Excellence Award
 2002 UTA Outstanding Research Achievement Award
 2002 UTA Keeper of the Vision Award
 2001 CSE Outstanding Teacher Award
 2000 Lockheed Martin Award for Excellence in Teaching
 1998 Sponsored student team with winning entry at AAAI Life On Mars robot competition
 1995 NSF Career Development Award
 1995 Halliburton Outstanding Young Faculty Award
 1993 NSF Research Initiation Award

Courses Taught

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

Patents Issued

- 2023 D. J. Cook, B. Minor, and J. Doppa. Data-driven activity prediction. U.S. Patent 11551103, filed September 26, 2019, issued January 10, 2023.
- 2021 D. J. Cook and M. Schmitter-Edgecombe. Environmental sensor-based cognitive assessment. U.S. Patent 10,896,756, filed June 1, 2018, issued January 19, 2021.
- 2016 D. J. Cook and A. Crandall. Activity recognition in multi-entity environments. U.S. Patent 9,460,350, filed June 29, 2012, issued October 4, 2016.
- 2015 D. J. Cook. Knowledge transfer in smart environments. U.S. Patent 9,251,463, filed January 3, 2013, issued February 2, 2016.
- 2015 D. J. Cook and P. Rashidi. Knowledge transfer for streamlined activity model development. U.S. Patent 9,251,463, filed January 3, 2013, issued February 2, 2016.
- 2015 D. J. Cook. Knowledge transfer in smart environments. U.S. Patent 13/538,932, filed January 3, 2013, issued October 19, 2015.
- 2014 D. J. Cook and P. Rashidi. Systems and methods for adaptive smart environment automation. U.S. Patent 8,880,378, filed April 16, 2013, issued November 4, 2014.
- 2013 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.

Publications

Citations: 42,905
H-index: 89
I10-index: 359

Journal articles

1. R. Fritz and D. Cook. Detecting older adults' behavior changes during adverse external events using ambient sensing: A longitudinal observational study. *JMIR Nursing*, to appear.
2. L. Holder, B. Eaves, P. Shafto, C. Pereyda, B. Thomas, and D. Cook. Detecting and reacting to smart home novelties, *Data Mining and Knowledge Discovery*, to appear.
3. D. Cook, A. Walker, B. Minor, C. Luna, S. Farias, L. Wiese, R. Weaver, and M. Schmitter-Edgecombe. Understanding the relationship between EMA methods, sensed behavior, and responsiveness: A cross-study analysis. *JMIR mHealth and uHealth*, 13(e57018):1-15, 2025.
4. C. DeSmet, C. Greeley, and D. Cook. Hydra-TS: Enhancing human activity recognition with multi-objective synthetic time series data generation. *IEEE Sensors*, 25(1):763-772, 2025.
5. L. Wiese, C. Luna, D. Cook, B. Minor, and M. Schmitter-Edgecombe. A multi-generational approach to introducing technologies for assessing and supporting cognitive health in a rural, underresourced setting. *Educational Gerontology*, to appear.

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6. L. Besser, L. Wiese, D. Cook, J. Holt, S. Magzamen, B. Minor, D. Mitsova, J. Park, O. Sablan, M. Tourelle, and C. Williams. Rural Roads to Cognitive Resilience (RRR): A prospective cohort study protocol. *PLoS One*, 20(1):e0312660, 2025.
7. G. Sprint, M. Schmitter-Edgecombe, R. Weaver, L. Wiese, and D. Cook. CogProg: Utilizing large language models to forecast in-the-moment health assessment. *ACM Transactions on Computing for Healthcare*, to appear.
8. M. Schmitter-Edgecombe, C. Luna, S. Dai, and D. Cook. Predicting daily cognition and lifestyle behaviors for older adults using smart home data and Ecological Momentary Assessment. *The Clinical Neuropsychologist*, 2025.
9. M. Schmitter-Edgecombe, C. Luna, S. Dai, and D. Cook. Capturing cognitive capacity in the everyday environment across a continuum of cognitive decline using a smartwatch n-back task and Ecological Momentary Assessment. *Neuropsychology*, 39(1):28-43, 2025. *Editor's Choice paper*.
10. G. Sprint, M. Schmitter-Edgecombe, and D. Cook. HDTwin: Building a human digital twin using large language models for cognitive diagnosis. *JMIR Formative Research*, 8:63866, 2024.
11. C. DeSmet and D. Cook. HydraGAN: A cooperative agent model for multi-objective data generation. *ACM Transactions on Intelligent Systems and Technology*, 15(3):1-21, 2024.
12. R. Fritz, C. Nguyen-Truong, K. Wuestney, T. May and D. Cook. Bioethics principles in machine learning - healthcare application design: Achieving health justice and health equity. *BCPHR Journal*, 79, 2024.
13. C. Luna, D. Cook, and M. Schmitter-Edgecombe. But will they use it? Predictors of adoption of an electronic memory aid in individuals with amnesic mild cognitive impairment. *Neuropsychology*, 37(8):955-965, 2023.
14. C. Luna, S. Dai, S. Farias, D. Cook, and M. Schmitter-Edgecombe. Ecological momentary assessment of the fluctuations in cognitive performance and contextual states of community-dwelling older adults. *Journal of the International Neuropsychological Society*, 29(s1):483-484, 2023.
15. G. Wilson, J. Doppa, and D. Cook. CALDA: Improving multi-source time series domain adaptation with contrastive adversarial learning. *IEEE Transactions on Pattern Analysis and Machine Learning*, 45(12):14208-14221, 2023.
16. T. Wang, T. Fischer, and D. Cook. The indoor predictability of human mobility. *IEEE Transactions on Emerging Topics in Computing*, 11(1):182-193, 2023.
17. M. Wilson, R. Fritz, M. Finley, and D. Cook. Piloting smart home sensors to detect overnight respiratory and withdrawal symptoms in adults prescribed opioids. *Pain Management Nursing*, 12(11):4-11, 2023.
18. B. Thomas, L. Holder, and D. Cook. Automated cognitive health assessment using partially-complete time series sensor data. *Methods of Information in Medicine*, 61(3/4):99-110, 2022.

19. S. Fritz, K. Wuestney, G. Dermody, and D. Cook. Nurse-in-the-loop smart home detection of health events associated with diagnosed chronic conditions: A case-event series. *International Journal of Nursing Studies Advances*, 4:100081, 2022.
20. D. Cook, M. Strickland, and M. Schmitter-Edgecombe. Detecting smartwatch-based behavior change in response to a multi-domain brain health intervention. *ACM Transactions on Computing for Healthcare*, 3(3):1-18, 2022.
21. T. Wang and D. Cook. Multi-person activity recognition in continuously monitored smart homes. *IEEE Transactions on Emerging Topics in Computing*, 10(2):1130-1141, 2022.
22. G. Sprint, M. Schmitter-Edgecombe, L. Holder, and D. Cook. Multimodal fusion of smart home and text-based behavior markers for clinical assessment prediction. *ACM Transactions on Computing for Healthcare*, 3(4):1-25, 2022.
23. A. Ghods and D. Cook. PIP: Pictorial Interpretable Prototype learning for time series classification. *IEEE Computational Intelligence*, 17(1):34-45, 2022.
24. M. Schmitter-Edgecombe and D. Cook. Partnering a compensatory application with activity-aware prompting to improve use in individuals with amnesic mild cognitive impairment: A randomized controlled pilot clinical trial. *Journal of Alzheimer's Disease*, 85(1):73-90, 2022.
25. E. Ashari, N. Chaytor, D. Cook, and H. Ghasemzadeh. Memory-aware active learning in mobile sensing systems. *IEEE Transactions on Mobile Computing*, 21(1):181-195, 2022.
26. S. Mirzadeh, A. Arefeen, J. Ardo, R. Fallahzadeh, B. Minor, J. Lee, J. Hildebrand, D. Cook, H. Ghasemzadeh, and L. Evangelista. Use of machine learning to predict medication adherence in individuals at risk for atherosclerotic cardiovascular disease. *Smart Health*, 2022.
27. M. Schmitter-Edgecombe, C. Luna, K. Brown, R. Cunningham, C. Sumida, L. Holder, and D. Cook. Pilot clinical trial: Electronic memory and management aid / smart home partnership increases aid use at three-month follow-up in individuals with mild cognitive impairment. *Alzheimer's & Dementia*, 17:e056497, 2021.
28. C. DeSmet and D. Cook. Recent developments in privacy-preserving mining of clinical data. *ACM/IMS Transactions on Data Science*, 2(4):1-32, 2021.
29. A. Ghods, A. Shahrokni, H. Ghasemzadeh, and D. Cook. Remote monitoring of the performance status and burden of symptoms of patients with gastrointestinal cancer via a consumer-based activity tracker: Quantitative cohort study. *Journal of Medical Internet Research*, 7(4):e22931, 2021.
30. T. Wang and D. Cook. sMRT: Multi-resident tracking in smart homes with sensor vectorization. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 43(8):2809-2821, 2021.

31. D. Cook and M. Schmitter-Edgecombe. Fusing ambient and mobile sensor features into a behaviorome for predicting clinical health scores. *IEEE Access*, 2:65033-65043, 2021.
32. J. Dahmen and D. Cook. Indirectly-supervised anomaly detection of clinically-meaningful health events from smart home data. *ACM Transactions on Intelligent Systems and Technology*, 12(2):1-18, 2021.
33. A. Ghods and D. Cook. A survey of deep network techniques all classifiers can adopt. *Data Mining and Knowledge Discovery*, 35:46-87, 2021.
34. G. Sprint, D. Cook, and R. Fritz. Behavioral differences between subject groups identified using smart homes and change point detection. *IEEE Journal of Biomedical and Health Informatics*, 25(2):559-567, 2021.
35. N. Raghunath, M. Schmitter-Edgecombe, and D. Cook. Learning-enabled robotic assistive support for persons with memory impairment: Comparing older and younger adults' perceptions of the system. *Gerontechnology*, 19(3), 2020.
36. G. Wilson and D. Cook. A survey of unsupervised deep domain adaptation. *ACM Transactions on Intelligent Systems and Technology*, 11(5):1-46, 2020.
37. V. Tseng, J. Ying, S. Wong, D. Cook, and J. Liu. Computational intelligence techniques for combating COVID-19: A survey. *IEEE Computational Intelligence Magazine*, 15(4):10-11, 2020.
38. Y. Zhang, A. Srivastava, and D. Cook. Machine learning algorithm for activity-aware demand response considering energy savings and comfort requirements. *IET Smart Grid*, 3(5):730-737, 2020.
39. Y. Hu, D. Cook, and M. Taylor. Study of effectiveness of prior knowledge for a smart home kit installation. *Sensors*, 20(21):6156, 2020.
40. M. Schmitter-Edgecombe, C. Sumida, and D. Cook. Bridging the gap between performance-based assessment and self-reported everyday functioning: An ecological momentary assessment approach. *The Clinical Neuropsychologist*, 34(4):678-699, 2020.
41. N. Raghunath, J. Dahmen, K. Brown, M. Schmitter-Edgecombe, and D. Cook. Creating a digital memory notebook application for individuals with mild cognitive impairment to support everyday functioning. *Disability and Rehabilitation: Assistive Technology*, 4:421-431, 2020.
42. B. Lin and D. Cook. Using continuous sensor data to formalize a model of in-home activity patterns. *Journal of Ambient Intelligence and Smart Environments*, 12(3):183-201, 2020.
43. B. Lin and D. Cook. Analyzing sensor-based individual and population behavior patterns via inverse reinforcement learning. *Sensors*, 20(18):5207, 2020.
44. A. Fellger, D. Weeks, E. Crooks, G. Sprint, and D. Cook. Wearable device-independent next day activity and next night sleep prediction for rehabilitation populations. *IEEE Journal of Translational Engineering in Health and Medicine*, 8:1-9, 2020.

45. S. Aminikhanghahi, M. Schmitter-Edgecombe, and D. Cook. Context-aware delivery of ecological momentary assessment. *IEEE Journal of Biomedical and Health Informatics*, 4(4):1206-1214, 2020.
46. C. Culman, S. Aminikhanghahi, and D. Cook. Easing power consumption of wearable activity monitoring with change point detection. *Sensors*, 20(1):310, 2020.
47. R. L. Fritz, M. Wilson, G. Dermody, M. Schmitter-Edgecombe, and D. Cook. Automated smart home assessment to support pain management. *Journal of Medical Internet Research*, 22(11):e23943, 2020.
48. C. Pereyda, N. Raghunath, B. Minor, G. Wilson, M. Schmitter-Edgecombe, and D. Cook. Cyber-physical support of daily activities: A robot / smart home partnership. *ACM Transactions on Cyber Physical Systems*, 21:1-24, 2019.
49. A. Ghods, K. Caffrey, B. Lin, K. Fraga, R. Fritz, M. Schmitter-Edgecombe, C. Hundhausen, and D. Cook. Iterative design of visual analytics for a clinician-in-the-loop smart home. *IEEE Journal of Biomedical and Health Informatics*, 23(4):1742-1748, 2019. Highlight at <https://jbhi.embs.org/2019/07/01/medical-informatics-july-2019/>.
50. S. Aminikhanghahi, T. Wang, and D. Cook. Real-time change point detection with application to smart home time series data. *IEEE Transactions on Knowledge and Data Engineering*, 31(5):1010-1023, 2019.
51. S. Aminikhanghahi and D. Cook. Enhancing activity recognition using CPD-based activity segmentation. *Pervasive and Mobile Computing*, 53:75-89, 2019. *Best Research Paper, 2018, 2019, 2020*.
52. G. Wilson, C. Pereyda, N. Raghunath, G. de la Cruz, S. Goel, S. Nesaei, B. Minor, M. Schmitter-Edgecombe, M. Taylor, and D. Cook. Robot-enabled support of daily activities in smart home environments. *Cognitive Systems Research*, 54:258-272, 2019.
53. J. Dahmen and D. Cook. SynSys: A synthetic data generation system for healthcare applications. *Sensors*, 19:1181, 2019.
54. Y. Huangfu, N. Lima, P. O’Keeffe, W. Kirk, B. Lamb, S. Pressley, B. Lin, D. Cook, V. Walden, B. Jobson. Diel variation of formaldehyde levels and other VOCs in homes driven by temperature dependent infiltration and emission rates. *Building and Environment*, 159:106-153, 2019.
55. D. Cook, M. Schmitter-Edgecombe, L. Jonsson, and A. Morant. Technology-enabled assessment of functional health. *IEEE Reviews in Biomedical Engineering*, 12:319-332, 2018.
56. D. Weeks, G. Sprint, J. Dahmen, A. La Fleur, and D. Cook. Implementing wearable sensors for continuous assessment of daytime heart rate response in inpatient rehabilitation. *Telemedicine and e-Health*, 24(12):1014-1020, 2018.
57. A. Aramendi, A. Weakley, M. Schmitter-Edgecombe, D. Cook, A. Aztiria, A. Basarab, and M. Barrenechea. Smart home-based prediction of multi-domain symptoms related

- to Alzheimer's disease. *IEEE Journal of Biomedical and Health Informatics*, 22(6):1720-1731, 2018.
58. J. Dahmen, B. Minor, D. Cook, T. Vo, and M. Schmitter-Edgecombe. Design of a smart home-driven digital memory notebook to support self-management of activities for older adults. *Gerontechnology*, 17(2):113-123, 2018.
 59. A. Mokhtari, S. Aminikhanghahi, Q. Zhang, and D. Cook. Fall detection in smart home sensors using UWB sensors and unsupervised change detection. *Journal of Reliable Intelligent Environments*, 4(3):131-139, 2018.
 60. A. Aramendi, A. Goenaga, D. Cook, and A. Basarab. Using smart offices to predict occupational stress. *International Journal of Industrial Ergonomics*, 67:13-26, 2018.
 61. A. Aramendi, A. Weakley, A. Goenaga, M. Schmitter-Edgecombe, and D. Cook. Automatic assessment of functional health decline in older adults based on smart home data. *Journal of Biomedical Informatics*, 81:119-130, 2018.
 62. D. Cook, G. Sprint, R. Fritz, and G. Duncan. Using smart city technology to make healthcare smarter. *Proceedings of the IEEE*, 106(4):708-722, 2018.
 63. W. M. Kirk, M. Fuchs, Y. Huangfu, N. Lima, P. O'Keeffe, B. Lin, T. Jobson, S. Pressley, V. Walden, D. Cook, and B. Lamb. Indoor air quality and wildfire smoke impacts in the Pacific Northwest. *Science and Technology for the Built Environment*, 24(2), 2018.
 64. S. Panchanathan, D. Cook, F. Golshani, T. McDaniel, and S. Chakraborty. Technologies for disabilities, *Technology and Innovation*, 20(1-2):1-2, 2018.
 65. P. Alinia, C. Cain, R. Fallahzadeh, A. Shahrokni, D. Cook, and H. Ghasemzadeh. How accurate is your activity tracker? A comparative study of step counts in low-intensity physical activities. *Journal of Medical Internet Research*, 5(8):e106, 2017.
 66. G. Sprint, D. Cook, D. Weeks, J. Dahmen, and A. La Fleur. Analyzing sensor-based time series data to track changes in physical activity during inpatient rehabilitation. *Sensors*, 17:2219-2238, 2017.
 67. B. Minor, J. Doppa, and D. Cook. Learning activity predictors from sensor data: Algorithms, evaluation, and applications. *IEEE Transactions on Knowledge and Data Engineering*, 29(12):2744-2757, 2017.
 68. B. Lin, Y. Huangfu, N. Lima, T. Jobson, M. Kirk, P. O'Keeffe, S. Pressley, V. Walden, B. Lamb, and D. Cook. Analyzing the relationship between human behavior and indoor air quality. *Journal of Sensor and Actuator Networks*, 6(13), 2017.
 69. K. Feuz and D. Cook. Collegial activity learning between heterogeneous sensors. *Knowledge and Information Systems*, 53(2):337-364, 2017.
 70. B. Minor and D. Cook. Forecasting occurrences of activities. *Pervasive and Mobile Computing*, 38(1):77-91, 2017.
 71. J. Dahmen, B. Thomas, D. Cook, and X. Wang. Activity learning as a foundation for security monitoring in smart homes. *Sensors*, 17:737, 2017.

72. J. Dahmen, D. Cook, X. Wang, and W. Honglei. Smart secure homes: A survey of smart home technologies that sense, assess, and respond to security threats. *Journal of Reliable Intelligent Environments*, 3(2):83-98, 2017.
73. L. Chen, D. Cook, B. Guo, L. Chen, and W. Leister. Guest editorial: Special issue on situation, activity, and goal awareness in cyber-physical human-machine systems. *IEEE Transactions on Human-Machine Systems*, 47(3):305-309, 2017.
74. J. Dahmen, R. Fellows, D. Cook, and M. Schmitter-Edgecombe. An analysis of a digital variant of the Trail Making Test using machine learning techniques. *Technology and Health Care*, 25(2):251-264, 2017.
75. S. Aminikhanghahi and D. Cook. A survey of methods for time series change point detection. *Knowledge and Information Systems*, 51(2):339-367, 2017. *KAIS Best Paper Award, 2020*.
76. J. Williams and D. Cook. Forecasting behavior in smart homes based on past sleep and wake patterns. *Technology and Health Care*, 25:89-110, 2017.
77. R. Fellows, J. Dahmen, D. Cook, and M. Schmitter-Edgecombe. Multicomponent analysis of a digital trail making test. *The Clinical Neuropsychologist*, 31(1):154-167, 2017.
78. D. Weeks, G. Sprint, A. La Fleur, J. Dahmen, V. Stilwill, A. Meisen-Vehrs, and D. Cook. Continuous assessment of daytime heart rate response during inpatient rehabilitation. *Archives of Physical Medicine and Rehabilitation*, 98:e177, 2017.
79. G. Sprint, D. Cook, R. Fritz, and M. Schmitter-Edgecombe. Using smart homes to detect and analyze health events. *Computer*, 49(11):29-37, 2016.
80. Y. Hu, D. Tilke, T. Adams, A. Crandall, D. Cook, and M. Schmitter-Edgecombe. Smart home in a box: Usability study for a large scale self-installation of smart home technologies. *Journal of Reliable Intelligent Environments*, 2:93-106, 2016.
81. G. Sprint, D. Cook, and M. Schmitter-Edgecombe. Unsupervised detection and analysis of changes in everyday physical activity data. *Journal of Biomedical Informatics*, 63:54-64, 2016.
82. E. Van Etten, A. Weakley, M. Schmitter-Edgecombe, and D. Cook. Subjective cognitive complaints and objective memory performance influence prompt preference for instrumental activities of daily living. *Gerontechnology*, 14(3):169-176, 2016.
83. P. Dawadi, D. Cook, and M. Schmitter-Edgecombe. Automated cognitive assessment from smart home-based behavior data. *IEEE Journal of Biomedical and Health Informatics*, 20(4):1188-1194, 2016.
84. B. Das, D. Cook, N. Krishnan, and M. Schmitter-Edgecombe. One-class classification-based real-time activity error detection in smart homes. *IEEE Journal of Selected Topics in Signal Processing*, 10(5):914-923, 2016.
85. P. Dawadi, D. Cook, and M. Schmitter-Edgecombe. Modeling patterns of activities using activity curves. *Pervasive and Mobile Computing*, 28:51-68, 2016.

86. B. Thomas and D. Cook. Activity-aware energy-efficient automation of smart buildings. *Energies*, 9(8):624-640, 2016.
87. R. Fritz, C. Corbett, R. Vandermause, and D. Cook. The influence of culture on older adults' adoption of smart home monitoring. *Gerontechnology*, 14(3):146-156, 2016.
88. B. Thomas, A. Crandall, and D. Cook. A genetic algorithm approach to motion sensor placement in smart environments. *Journal of Reliable Intelligent Environments*, 2:3-16, 2016.
89. N. Roy, A. Misra, and D. Cook. Ambient and smartphone sensor assisted ADL recognition in multi-inhabitant smart environments. *Journal of Ambient Intelligence and Humanized Computing*, 7(1):1-19, 2016.
90. K. Robertson, C. Rosasco, K. Feuz, M. Schmitter-Edgecombe, and D. Cook. Prompting technologies: A comparison of time-based and context-aware transition-based prompting. *Technology and Healthcare*, 23:745-756, 2015.
91. J. Bravo, D. Cook, and G. Riva. Ambient intelligence for health environments. *Journal of Biomedical Informatics*, 64:207-210, 2016.
92. D. Cook, P. Dawadi, and M. Schmitter-Edgecombe. Analyzing activity behavior and movement in a naturalistic environment using smart home techniques. *IEEE Journal of Biomedical and Health Informatics*, 19(6):1882-1892, 2015.
93. G. Sprint, D. Cook, D. Weeks, and V. Borisov. Predicting functional independence measure scores during rehabilitation with wearable inertial sensors. *IEEE Access*, 3:1350-1366, 2015.
94. A. Weakley, J. Williams, M. Schmitter-Edgecombe, and D. Cook. Neuropsychological test selection for cognitive impairment classification: A machine learning approach. *Journal of Clinical and Experimental Neuropsychology*, 37(9):899-916, 2015.
95. G. Sprint, D. Cook, and D. Weeks. Towards automating clinical assessments: A survey of the Timed Up and Go (TUG). *IEEE Transactions on Reviews in Biomedical Engineering*, 8:64-77, 2015.
96. K. Feuz, D. Cook, C. Rosasco, K. Robertson, and M. Schmitter-Edgecombe. Automated detection of activity transitions for prompting. *IEEE Transactions on Human Machine Systems*, 45(5):575-585, 2015.
97. K. Feuz and D. Cook. Transfer learning across feature-rich heterogeneous feature spaces via feature-space remapping. *ACM Transactions on Intelligent Systems and Technology*, 6(1):3, 2015.
98. B. Das, N. Krishnan, and D. Cook. RACOG and wRACOG: Two probabilistic oversampling methods. *IEEE Transactions on Knowledge and Data Engineering*, 27(1):222-234, 2015.
99. E. Nazerfard and D. Cook. CRAFTT: An activity prediction model based on Bayesian networks. *Journal of Ambient Intelligence and Humanized Computing*, 6:193-205, 2015.

100. D. Cook and N. Krishnan. Mining the home environment. *Journal of Intelligent Information Systems*, 43(3):503-519, 2014.
101. K. Robertson, C. Rosasco, K. Feuz, D. Cook, and M. Schmitter-Edgecombe. Prompting technologies: Is prompting during activity transition more effective than time-based prompting? *Archives of Clinical Neuropsychology*, 29(6):598, 2014.
102. K. Feuz and D. Cook. Heterogeneous transfer learning for activity recognition using heuristic search techniques. *International Journal of Pervasive Computing and Communications*, 10(4):393-418, 2014. *Named Outstanding Paper of 2014*.
103. N. Krishnan and D. Cook. Activity recognition on streaming sensor data. *Pervasive and Mobile Computing*, 10:138-154, 2014.
104. D. Cook, N. Krishnan and Z. Wemlinger. Learning a taxonomy of predefined and discovered activity patterns. *Journal of Ambient Intelligence and Smart Environments*, 5(6):621-637, 2013.
105. 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.
106. 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.
107. 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.
108. 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.
109. 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.
110. 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.
111. 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.
112. D. Cook, K. Feuz, and N. Krishnan. Transfer learning for activity recognition: A survey. *Knowledge and Information Systems*, 36(3):537-556, 2013.
113. D. Cook, A. Crandall, B. Thomas, and N. Krishnan. CASAS: A smart home in a box. *IEEE Computer*, 46(7):62-69, 2013.

114. 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.
115. 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.
116. D. Cook and L. Holder. Automated activity-aware prompting for activity initiation. *Gerontechnology*, 11(4):534-544, 2013.
117. J. Augusto, V. Callaghan, D. Cook, A. Kameas, and I. Satoh. Intelligent environments: A manifesto. *Human-Centric Computing and Information Sciences*, 3(1):1-18, 2013.
118. A. Aztiria, J. Augusto, R. Basagoiti, A. Izaguirre, and D. Cook. Learning frequent behaviors of the users in intelligent environments. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 43(6):1265-1278, 2013.
119. L. Hernandez, C. Baladron, J. Aguiar, B. Carro, A. J. Sanchez-Esguevillas, J. Lloret, D. Chinarro, J. J. Gomez-Sanz, D. Cook. A multi-agent system architecture for smart grid management and forecasting of energy demand in virtual power plants. *IEEE Communications Magazine*, 15(1):106-113, 2013.
120. 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. (PMC "Hottest Articles" list).
121. 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.
122. 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.
123. 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.
124. L. Hernandez, C. Baladron, 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 inside a smart grid/smart world framework. *Sensors*, 12(9):11571-11591, 2012.
125. A. Seelye, M. Schmitter-Edgecombe, B. Das, and D. Cook. Application of cognitive rehabilitation theory to the development of smart prompting technologies. *IEEE Reviews in Biomedical Engineering*, 5:29-44, 2012.
126. A. Aztiria, J. Augusto, and D. Cook. Discovering frequent user-environment interactions in intelligent environments. *Personal and Ubiquitous Computing*, 16(1):91-103, 2012.

127. D. Cook. How smart is your home? *Science*, 335:1579-1581, 2012.
128. D. Cook. Learning setting-generalized activity models for smart spaces. *IEEE Intelligent Systems*, 27(1):32-38, 2012.
129. 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)
130. 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.
131. D. Cook, M. Schmitter-Edgecombe, and L. Holder. Gerontechnology education: Beyond the barriers. *IEEE Pervasive Computing*, 10(4):59-63, 2011.
132. 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.
133. 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.
134. 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.
135. 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.
136. 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.
137. 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.
138. 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.
139. 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.
140. 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.
141. 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.

142. E. Kim, S. Helal, and D. Cook. Human activity recognition and pattern discovery. *IEEE Pervasive Computing*, 9(1):48-53, 2010.
143. 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.
144. 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.
145. 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.
146. 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.
147. 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.
148. 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.
149. D. Cook, H. Hagaras, V. Callaghan, and A. Helal. Making our environments intelligent. *Pervasive and Mobile Computing*, 5:556-557, 2009.
150. 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.
151. 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.
152. 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.
153. D. Cook. Multi-agent smart environments. *Journal of Ambient Intelligence and Smart Environments*, 1:47-51, 2009.
154. 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.
155. D. Brezeale and D. Cook. Learning video preferences using visual features and closed captions. *IEEE Multimedia*, 16(3):39-47, 2009.
156. 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.

157. 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.
158. 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.
159. J. Kukluk, L. Holder, and D. Cook. Inference of edge replacement graph grammars. *International Journal on Artificial Intelligence Tools*, 17(3):539-554, 2008.
160. 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.
161. 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.
162. 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.
163. 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.
164. D. Cook. Making sense of sensor data. *IEEE Pervasive Computing*, 6(2):105-108, 2007.
165. J. Kukluk, L. Holder, and D. Cook. Inference of node replacement graph grammars. *Intelligent Data Analysis*, 11(4):377-400, 2007.
166. 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.
167. 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.
168. K. Gopalratnam and D. Cook. Online sequential prediction via incremental parsing: The Active LeZi algorithm. *IEEE Intelligent Systems*, 22(1):52-58, 2007.
169. D. Cook. Providing for older adults using smart environments. *IEEE-USA Today's Engineer*, 2007.
170. 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.
171. D. Cook. Health monitoring and assistance to support aging in place. *Journal of Universal Computer Science*, 12(1):15-29, 2006.
172. 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.

173. 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):64-71, 2005.
174. G. M. Youngblood, D. Cook, and L. Holder. Managing adaptive versatile environments. Pervasive and Mobile Computing, 1(4):373-403, 2005.
175. 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.
176. 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.
177. D. Cook and S. K. Das. MavHome: Work in progress. IEEE Pervasive Computing, 2004.
178. 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):106-127, 2004.
179. 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.
180. 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.
181. A. Rakhshan, L. Holder and D. Cook. Structural web search engine. International Journal on Artificial Intelligence Tools, 13(1):27-44, 2004.
182. 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.
183. 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.
184. 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.
185. 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.
186. G. Peterson and D. Cook. Incorporating decision-theoretic planning in a robot architecture. Robotics and Autonomous Systems, 42(2):89-106, 2003.
187. 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.

188. 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.
189. J. Ramirez, D. Cook, L. Peterson, and D. Peterson. Temporal pattern discovery in course-of-disease data. *IEEE Engineering in Medicine and Biology*, 2002.
190. I. Jonyer, D. Cook, and L. Holder. Graph-based hierarchical conceptual clustering. *Journal of Machine Learning Research*, 2:19-43, 2001.
191. D. Cook, L. Holder, S. Su, R. Maglothin, 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.
192. L. Holder and D. Cook. A client-server computational tool for integrated artificial intelligence curriculum. *Journal of Computing in Higher Education*, 12(2), 2001.
193. I. Jonyer, L. Holder, and D. Cook. Hierarchical conceptual structural clustering. *International Journal on Artificial Intelligence Tools*, 10(1-2):107-136, 2001.
194. 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.
195. 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.
196. N. Manocha, D. Cook, and L. Holder. Structural web search using a graph-based discovery system. *Intelligence Magazine*, 12(1):20-29, 2001.
197. D. Cook and L. Holder. Graph-based data mining. *IEEE Intelligent Systems*, 15(2):32-41, 2000.
198. W. Harris, D. Cook, and F. Lewis. Automatically generating plans for manufacturing. *Journal of Intelligent Systems*, 10(3):297-319, 2000.
199. 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.
200. D. Cook and R. C. Varnell. Adaptable incremental deepening search. *Journal of Artificial Intelligence Research*, 9:167-194, 1999.
201. S. Su, D. Cook, and L. Holder. Knowledge discovery in molecular biology: Identifying structural regularities in proteins. *Intelligent Data Analysis*, 3:413-436, 1999.
202. D. Cook. Preface to the FLAIRS special issue. *International Journal of Pattern Recognition and Artificial Intelligence*, 13(2):1-2, 1999.
203. K. S. Tae, D. Cook, and L. Holder. Experimentation-driven knowledge acquisition for planning. *Computational Intelligence*, 15(3), 1999.

204. 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.
205. 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.
206. 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.
207. D. Cook, P. Gmytrasiewicz and L. Holder. Decision-theoretic cooperative sensor planning. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 18(10):1013-1023, 1996.
208. D. Cook, L. Holder, and S. Djoko. Scalable discovery of informative structural concepts using domain knowledge. *IEEE Expert*, 10:59-68, 1996.
209. 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.
210. D. Cook, L. Holder, and S. Djoko. Knowledge discovery from structural data. *Journal of Intelligence and Information Sciences*, 5(3):229-245, 1995.
211. K. S. Tae and D. Cook. Learning rules from redundant and incomplete domain theory. *The Journal of Computing in Small Colleges*, 10(5), 1995.
212. D. Cook and L. Holder. Substructure discovery using minimum description length and background knowledge. *Journal of Artificial Intelligence Research*, 1:231-255, 1994.
213. 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.
214. L. Holder and D. Cook. Discovery of inexact concepts from structural data. *IEEE Transactions on Knowledge and Data Engineering*, 5(6):992-994, 1993.
215. D. Cook and G. Lyons. Massively parallel IDA* search. *International Journal on Artificial Intelligence Tools*, 2(2):163-180, 1993.
216. D. Cook. Parallel techniques for planning by analogy. *International Journal of Expert Systems*, 5(2):169-179, 1992.
217. D. Cook. Application of parallelized analogical planning to engineering design. *International Journal of Applied Intelligence*, 1:133-144, 1991.

Books

1. D. Cook and N. Krishnan. *Activity Learning: Discovering, Recognizing, and Predicting Human Behavior from Sensor Data*, Wiley, February 2015.

*Diane J. Cook, Regents Professor
Washington State University*

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

Book Chapters

1. M. Schmitter-Edgecombe, C. Luna, and D. Cook. Technologies for health assessment, promotion, and intervention: Focus on aging and functional health. In J. J. Randolph (ed.), Positive Neuropsychology: An Evidence-Based Perspective on Promoting Cognitive Health. Springer, 2021.
2. A. Akbari, P. Alinia, H. Ghasemzadeh, D. Cook, and R. Jafari. Transfer learning for wearable computers. Wearable Sensors, pages 435-459, 2020.
3. T. Wang and D. Cook. Towards unsupervised multi-resident tracking in ambient assisted living: Methods and performance metrics. In N. Suryadevara and N. Mukhopadhyay (eds.), Assistive Technologies for the Elderly. Elsevier, 2019.
4. M. Schmitter-Edgecombe, D. Cook, A. Weakley, and P. Dawadi. Using smart environment technologies to monitor and assess everyday functioning and deliver real-time intervention. In T. Parsons and R. Kane (eds.), The Role of Technology in Clinical Neuropsychology, Oxford University Press, 2017.
5. A. Crandall and D. Cook. Current state of the art of smart environments and labs from an AAL point of view. In F. Florez-Revuelta and A. Chaaraoui (eds.), Ambient Assisted Living: Technologies and Applications, IET, 2016.
6. A. Salah, B. Krose, D. Cook. Behavior analysis for elderly. Human Behavior Understanding, pages 1-10, Springer, 2015.
7. M. Schmitter-Edgecombe and D. Cook. Smart homes for monitoring and assessing everyday functioning and for real-time intervention. In The Role of Technology in Clinical Neuropsychology, Oxford University Press, 2015.
8. P. Dawadi and D. Cook. Monitoring everyday abilities and cognitive health using pervasive technologies: Current state and prospect. In E. Wouters, J. van Hoof, and G. Demiris (eds.), Handbook of Smart Homes, Health Care and Well Being, pages 365-385, Springer, 2015.
9. G. Acampora, D. Cook, P. Rashidi, and A. Vasilakos. Data analytics for pervasive health. Healthcare Data Analytics, C. Aggarwal and C. Reddy, editors, Chapman and Hall, London, pages 533-576, 2015.

10. 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.
11. A. Crandall and D. Cook. Behaviometrics for multiple residents in a smart environment. *Human Aspects in Ambient Intelligence*, pages 55-71, Springer, 2013.
12. D. Cook. Scaling smart environments. *Handbook of Sensor Networks for Sustainable Development*, CRC Press, 2013.
13. A. Crandall and D. Cook. Tracking systems for multiple smart home residents. *Human Behavior Recognition Technologies*, IGI Global, 2013.
14. 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, pages 143-160, 2013.
15. 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, pages 434-450, 2012.
16. B. Das, N. Krishnan, and D. Cook. Automated activity interventions to assist with activities of daily living. *Agents and Ambient Intelligence*, IOS Press, 2012.
17. C. Chen and D. Cook. Novelty detection in human behavior through analysis of energy utilization. *Human Behavior Recognition Technologies*, IGI Global, 2011.
18. P. Rashidi and D. Cook. An adaptive sensor mining framework for pervasive computing applications. *Lecture Notes in Computer Science*, 5840:154-174, 2010.
19. 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.
20. 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.
21. W. Eberle, L. Holder, and D. Cook, Identifying threats using graph-based anomaly detection. *Machine Learning in Cyber Trust - Security, Reliability, Privacy*, Springer, 2008.
22. 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.
23. V. Jakkula and D. Cook, Mining temporal relations in smart environment data using TempAI. *Knowledge Discovery from Sensor Data*, Taylor and Francis, 2008.
24. V. Jakkula and D. Cook, Enhancing smart home algorithms using temporal relations. *Technology and Aging*, IOS Press, 2008.

25. V. Jakkula, A. Crandall, and D. Cook, Enhancing anomaly detection using temporal pattern discovery. *Advanced Intelligent Environments*, Springer, 2008.
26. 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.
27. 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.
28. D. Brezeale and D. Cook, Learning video preferences from video content. *Proceedings of the International Workshop on Multimedia Data Mining*, 2007.
29. 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), Springer, 2006.
30. D. Cook, G. M. Youngblood, and S. Das, A multi-agent approach to controlling a smart environment. *AI and Smart Homes*, pages 165-182, Springer Verlag, 2006.
31. S. Das and D. Cook, Smart home environments: A paradigm based on learning and prediction. *Wireless Mobile and Sensor Networks: Technology, Applications and Future Directions*, (R. Shorey, A. Ananda, M. C. Chan, and W. T. Ooi, eds.), pages 337-356, Wiley, 2006.
32. D. Cook, L. Holder, J. Coble and J. Potts, Graph-based mining of complex data. S. Bandyopadhyay, U. Maulik, L. Holder and D. J. Cook (eds.), *Advanced Methods for Knowledge Discovery from Complex Data*, Springer, 2005.
33. L. Holder and D. Cook, Graph-based data mining. J. Wang (ed.), *Encyclopedia of Data Warehousing and Mining*, Idea Group Publishing, 2005.
34. S. Das and D. Cook, Health monitoring in an agent-based smart home by activity prediction. *Toward a Human-Friendly Assistive Environment*, D. Zhang and M. Mokhari (eds.), IOS Press, pages 3-14, 2004.
35. D. Cook and G. M. Youngblood, Smart homes. *Encyclopedia of Human-Computer Interaction*, pages 623–627, 2004.
36. D. Cook, Prediction and recognition of activities, D. Cook and S. Das (eds.). *Smart Environments: Technologies, Protocols and Applications*, Wiley, 2004.
37. L. Holder, D. Cook, J. Gonzalez, and I. Jonyer, Structural pattern recognition in graphs. *Pattern Recognition and String Matching* (D. Chen and X. Cheng, eds.), Kluwer Academic Publishers, 2002.
38. J. Ramirez, D. Cook, L. Peterson, and D. Peterson, Temporal pattern discovery in sparse course-of-disease data. *Medical Data Mining and Knowledge Discovery* (K.J. Cios, ed.), Springer-Verlag, 2001.

39. D. Cook, G. Galal, and L. Holder, Improving scalability of scientific discovery systems by exploiting parallelism. *Pattern Discovery in Biological Data: Tools, Techniques and Application*, J. Wang, B. Shapiro, and D. Shasha (eds.), Oxford University Press, 1999.
40. E. Mettala, D. Cook and K. Harbison, Scenario-based design of UGV RSTA algorithms. *Reconnaissance, Surveillance, and Target Acquisition for the Unmanned Ground Vehicle*, O. Firschein and T. Strat (eds.), 1997.
41. D. Cook, P. Gmytrasiewicz and L. Holder, Decision-theoretic multi-agent cooperative sensor planning. *Reconnaissance, Surveillance, and Target Acquisition for the Unmanned Ground Vehicle*, O. Firschein and T. Strat (eds.), 1997.
42. D. Cook, A hybrid approach to improving the performance of parallel search. *Parallel Processing for Artificial Intelligence*, J. Geller (ed.), Elsevier Science Publishers, 1997.
43. L. Stark, K. Bowyer, K. Woods, L. Hall, and D. Cook, Application of learning techniques in a function-based recognition system. *Symbolic Visual Learning*, K. Ikeuchi and M. Veloso (eds.), Oxford University Press, 1995.
44. K. Woods, D. Cook, L. Hall, L. Stark, and K. Bowyer, Learning fuzzy membership functions in a function-based object recognition system. *Fuzzy Logic in Artificial Intelligence*, Anca L. Ralescu, editor, Springer-Verlag, pages 77-96, 1994.
45. D. Cook, The nature of learning mappings between analogous plans. *Computational Learning Theory and Natural Learning Systems, Constraints and Prospects*, S. Hanson, G. Drastal, and R. Rivest (eds.), 1994.
46. D. Cook, Planning by analogy on the Connection Machine. *Advances in Artificial Intelligence Research, Volume III*, 1993.

Conference Proceedings

1. B. Gavett, M. Schmitter-Edgecombe, K. Luna, D. Cook, and S. Tomaszewski Farias. Utilization of ecological momentary assessments to examine the association between subjective and objective measures of cognition, Annual Meeting of the International Neuropsychology Society, 2025.
2. C. Liu, M. Murphy, and D. Cook. Real-time promotive factors attenuate the associations between stress and well-being among racially/ethnically minoritized students. Biennial Meeting of the Society for Research in Child Development, 2025.
3. S. Pimento, H. Agarwal, B. Minor, S. Karia, D. Cook, M. Schmitter-Edgecombe, S. Farias, R. Lorabi, and A. Weakley. Interactive-Wear: An intelligent watch application to aid memory for intentions and everyday functioning in older adults with cognitive impairments. IEEE International Conference on AI for Medicine, Health, and Care, 2024.
4. J. Nie, M. Schmitter-Edgecombe, and D. Cook. Speech analysis in older adults for neuropsychological status prediction. International Neuropsychological Society, 2024.

5. K. Wuestney, R. Jenkins, B. Beech, R. Fritz, M. Schmitter-Edgecombe, and D. Cook. Detecting the impact of older adult healthy brain aging behaviour adoption using smart home technology. International Conference on Biomedical Engineering and Systems, 2024.
6. J. Briscoe, C. DeSmet, K. Wuestney, A. Gebremedhin, R. Fritz, and D. Cook. Reducing sample selection bias in clinical data through generation of multi-objective synthetic data. International Conference on Biomedical Engineering and Systems, 2024.
7. A. Walker, R. Weaver, M. Schmitter-Edgecombe, and D. Cook. Smartwatch behavior monitoring and proximity detection to predict biopsychosocial interaction experiences of dyads. International Conference on Biomedical Engineering and Systems, 2024.
8. M. Schmitter-Edgecombe, C. Luna, S. Farias, and D. Cook. Development of an algorithm for real-time delivery of automated intervention boosters to support long-term use of an electronic memory aid. Alzheimer's Association International Conference, 2023.
9. K. Wuestney, B. Lin, D. Cook, and R. Fritz. Modeling human frailty with a smart home-based approximation of entropy. ACM Conference on Bioinformatics, Computational Biology, and Health Informatics, 2023.
10. D. Cook, L. Wiese, and M. Schmitter-Edgecombe. Testing the feasibility of tracking behavior and physiology patterns using wearable technology to detect potential cognitive risk among rural, multicultural older adults. Alzheimer's Association International Conference, 2023.
11. L. Wiese, I. Williams, J. Holt, C. Magzamen, L. Besser, J. Park, D. Mitsova, and D. Cook. Cane, muck, and community connections: Soil and air matters. Southern Gerontological Society Annual Scientific Conference, 2023.
12. P. Seegmiller, J. Gatto, M. Basak, D. Cook, H. Ghasemzadeh, J. Stankovic, and S. Preum. The scope of in-context learning for the extraction of medical temporal constraints. International Workshop on Health Natural Language Processing, 2023.
13. G. Wilson, J. Doppa, and D. Cook. Domain adaptation under behavioral and temporal shifts for natural time series mobile activity recognition. SIGKDD Workshop on Mining and Learning from Time Series, 2022.
14. J. Briscoe, A. Gebremedhin, L. Holder, and D. Cook. Adversarial creation of a smart home testbed for novelty detection. AAAI Spring Symposium on Designing AI for Open Worlds, 2022.
15. K. Wuestney, J. Ramirez, D. Cook, and R. Fritz. Smart home data visualization for proactive health monitoring of community dwelling older adults. Gerontological Society of America Annual Scientific Meeting, 2022.
16. G. Wilson, J. Doppa, and D. Cook. Multi-source deep domain adaptation with weak supervision for time-series sensor data. SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2020.

17. Y. Ma, A. Campbell, D. Cook, J. Lach, S. Patel, T. Ploetz, M. Sarrafzadeh, D. Spruijt-Metz, H. Ghasemzadeh. Transfer learning for activity recognition in mobile health. KDD Workshop on Applied Data Science for Healthcare, 2020.
18. Y. Wang and D. Cook. BralN: A Bidirectional Generative Adversarial Networks network for image captions. International Conference on Machine Learning and Natural Language Processing, 2020.
19. G. Wilson and D. Cook. Multi-purposing domain adaptation discriminators for pseudo labeling confidence. KDD Workshop on Adversarial Learning Methods for Machine Learning and Data Mining, 2019.
20. Y. Wang and D. Cook. Bidirectional imputation of sensor-based time series. KDD Workshop on Mining and Learning from Time Series, 2019.
21. A. Ghods and D. Cook. Activity2Vec: Learning ADL embeddings from sensor data with a sequence-to-sequence model. KDD Workshop on Applied Data Science in Healthcare, 2019. <https://arxiv.org/abs/1907.05597>
22. J. Conci, G. Sprint, D. Cook, and D. Week. Utilizing consumer-grade wearable sensors for unobtrusive rehabilitation outcome prediction. IEEE International Conference on Biomedical and Health Informatics, 2019.
23. S. Mirzadeh, J. Ardo, R. Fallahzadeh, B. Minor, L. Evangelista, D. Cook, and H. Ghasemzadeh. LabelMerger: Learning activities in uncontrolled environments. International Conference on Transdisciplinary AI, 2019.
24. S. Akter, L. Holder, and D. Cook. Activity recognition using graphical features from smart phone sensor data. International Conference on Internet of Things, June 2018.
25. A. Musser, B. Lin, D. Cook, B. Jobson, M. Kirk, N. Lima, P. O’Keeffe, S. Pressley, V. Walden, Y. Huangfu, and B. Lamb. Indoor air toxic gases levels in a net-zero energy house under multiple ventilation system settings. Conference of the International Society of Indoor Air Quality and Climate, 2018.
26. A. Musser, B. Lin, D. Cook, B. Jobson, M. Kirk, N. Lima, P. O’Keeffe, S. Pressley, V. Walden, Y. Huangfu, and B. Lamb. Simulations of indoor air quality based on future climate conditions. Conference of the International Society of Indoor Air Quality and Climate, 2018.
27. A. Musser, B. Lin, D. Cook, B. Jobson, M. Kirk, N. Lima, P. O’Keeffe, S. Pressley, V. Walden, Y. Huangfu, and B. Lamb. The major role of temperature on indoor concentrations of air toxic VOCs in 9 houses based on in-situ high time resolution measurements. Conference of the International Society of Indoor Air Quality and Climate, 2018.
28. S. Aminikhanghahi and D. Cook. Transition aware smart home prompting and notification time management. Women in Machine Learning, 2017.
29. S. Aminikhanghahi, R. Fallahzadeh, M. Sawyer, D. Cook, and L. Holder. Thyme: Improving smartphone prompt timing through activity awareness. IEEE International Conference on Machine Learning and Applications, 2017.

30. G. Sprint, A. La Fleur, J. Dahmen, V. Stilwill, A. Meisen-Vehrs, D. Weeks, and D. Cook. Continuous assessment of daytime heart rate response during inpatient rehabilitation. American Congress of Rehabilitation Medicine Annual Conference, 2017.
31. R. Fritz and D. Cook. Identifying varying health states in smart home sensor data: An expert-guided approach. World Multiconference on Systems, Cybernetics and Informatics, 2017.
32. R. Fallahzadeh, B. Minor, L. Evangelista, D. Cook, and H. Ghasemzadeh. Mobile sensing to improve medication adherence. ACM/IEEE International Conference on Information Processing in Sensor Networks, pages 279-280, 2017.
33. J. Dahmen, A. LaFleur, G. Sprint, D. Cook, and D. Weeks. Using wrist-worn sensors to measure and compare physical activity changes for patients undergoing rehabilitation. Workshop on Sensing Systems and Applications Using Wrist Worn Smart Devices, 2017.
34. G. Sprint, V. Borisov, D. Cook, and D. Weeks. Measuring changes in gait and vehicle transfer ability during inpatient rehabilitation with wearable inertial sensors. Workshop on Pervasive Health Technologies, 2017.
35. S. Aminikhanghahi and D. Cook. Using change point detection to automate daily activity segmentation. Workshop on Context and Activity Modeling and Recognition, 2017.
36. K. Feuz and D. Cook. Modeling skewed class distributions by reshaping the concept space. AAAI Conference on Artificial Intelligence, pages 1891-1897, 2017.
37. J. Williams and D. Cook. Using time series techniques to forecast and analyze wake and sleep behavior. KDD Workshop on Mining and Learning from Time Series, 2016.
38. G. Sprint, D. Cook, and D. Weeks. Patient similarity and joint features for rehabilitation outcome prediction. IJCAI Workshop on Knowledge Discovery in Healthcare Data, 2016.
39. R. Fallahzadeh, S. Aminikhanghahi, A. Gibson, and D. Cook. Toward personalized and context-aware prompting for smartphone-based intervention. International Conference of the IEEE Engineering in Medicine and Biology Society, 2016.
40. G. Sprint and D. Cook. Designing wearable sensor-based analytics for quantitative mobility assessment. IEEE International Conference on Smart Computing, 2016.
41. G. Sprint, D. Cook, R. Fritz, and M. Schmitter-Edgecombe. Detecting health and behavior change by analyzing smart home sensor data. IEEE International Conference on Smart Computing, 2016.
42. S. Aminikhanghahi and D. Cook. Activity transition detection by relative density ratio estimation. Florida Artificial Intelligence Research Symposium, 2016.
43. K. Bouchard, L. Holder, and D. Cook. Extracting generalizable spatial features from smart phone datasets. AAAI Workshop on Artificial Intelligence Applied to Assistive Technologies and Smart Environments, 2016.

44. G. Sprint and D. Cook. Quantitative assessment of lower limb and cane movement with wearable inertial sensors. The Engineering in Medicine and Biology Conference, 2016.
45. B. Minor, D. Cook, and J. Doppa. Data-driven activity prediction: Algorithms, evaluation methodology, and applications. ACM SIGKDD Conference on Knowledge Discovery and Data Mining, pages 805-814, 2015.
46. G. Sprint and D. Cook. Enhancing the CS1 student experience with gamification. IEEE Integrated STEM Education Conference, 2015. *Winner, best paper award.*
47. J. Dahmen, G. Sprint, and D. Cook. Physical therapist feedback regarding wearable technology. Proceedings of the Annual Biomedical Research Conference, 2015.
48. B. Minor and D. Cook. Regression tree classification for activity prediction in smart homes. ACM International Joint Conference on Pervasive and Ubiquitous Computing, pages 441-450, 2014.
49. P. Dawadi, M. Schmitter-Edgecombe, and D. Cook. Smart home-based longitudinal functional assessment. ACM UbiComp Workshop on Smart Health Systems and Applications, 2014.
50. C. Simon, C. Cain, S. Hajjamini, R. Saeedi, M. Schmitter-Edgecombe, and D. Cook. Digital memory notebook: Experimental evaluation of motivational reward strategies. SmartHealthSys, 2014.
51. S. Bagaveyev and D. Cook. Designing and evaluating active learning methods for activity recognition. ACM International Joint Conference on Pervasive and Ubiquitous Computing, 2014.
52. G. Sprint, V. Borisov, D. Cook, and D. Weeks. Wearable sensors in ecological rehabilitation environments. ACM International Joint Conference on Pervasive and Ubiquitous Computing, 2014.
53. B. Thomas and D. Cook. CARL: Activity-aware automation for energy efficiency. ACM International Joint Conference on Pervasive and Ubiquitous Computing, 2014.
54. B. Das, N. Krishnan, and D. Cook. wRACOG: A Gibbs sampling-based oversampling technique. IEEE International Conference on Data Mining, 2013.
55. B. Das, N. Krishnan, and D. Cook. Handling class overlap and imbalance to detect prompt situations in smart homes. Proceedings of the ICDM Workshop on Data Mining in Biomedical Informatics and Healthcare, pages 266-273, 2013.
56. K. Feuz and D. Cook. Real-time annotation tool (RAT). Proceedings of the AAAI Workshop on Activity Context-Aware System Architectures, 2013.
57. J. Williams, A. Weakley, D. Cook, and M. Schmitter-Edgecombe. Machine learning techniques for diagnostic differentiation of mild cognitive impairment and dementia. Proceedings of the AAAI Workshop on Expanding the Boundaries of Health Informatics Using AI, 2013.

58. N. Roy, A. Misra, and D. Cook. Infrastructure-assisted smartphone-based ADL recognition in multi-inhabitant smart environments. IEEE International Conference on Pervasive Computing and Communication, 2013.
59. D. De, W. Song, and D. Cook. FindingHuMo: Real-time tracking of motion trajectories from anonymous binary sensing in smart environments. Proceedings of the International Conference on Distributed Computing Systems, 2012.
60. L. Zulas, A. Crandall, M. Schmitter-Edgecombe, and D. Cook. Caregiver needs from elder care assistive smart homes: Nursing assessment. Proceedings of the International Conference of the Human Factors and Ergonomics Society, 2012.
61. A. Crandall, L. Zulas, N. Krishnan, K. Feuz, and D. Cook. Visualizing your ward: Bringing smart home data to caregivers. Proceedings of the CHI Workshop on Emerging Technologies for Healthcare and Aging, 2012.
62. B. Das, A. Seelye, B. Thomas, D. Cook, L. Holder, and M. Schmitter-Edgecombe. Using smart phones for context-aware prompting in smart environments. IEEE International Workshop on Consumer eHealth Platforms, Services and Applications, 2012.
63. A. Crandall and D. Cook. Smart home in a box: A large scale smart home deployment. Proceedings of the Workshop on Large Scale Intelligent Environments, 2012.
64. E. Nazerfard and D. Cook. Bayesian network structure learning for activity prediction in smart homes. Proceedings of the International Conference on Intelligent Environments, 2012.
65. S. Dernbach, B. Das, N. Krishnan, B. Thomas, and D. Cook. Simple and complex activity recognition through smart phones. Proceedings of the International Conference on Intelligent Environments, 2012.
66. C. Chen and D. Cook. Behavior-based home energy prediction. Proceedings of the International Conference on Intelligent Environments, 2012.
67. Y. Sahaf, N. Krishnan, and D. Cook. Defining the complexity of an activity. Proceedings of the AAAI Workshop on Activity Context Representation: Techniques and Languages, 2011.
68. P. Dawadi, D. Cook, C. Parsey, M. Schmitter-Edgecombe, and M. Schneider. An approach to cognitive assessment in smart homes. Proceedings of the KDD Workshop on Medicine and Healthcare, 2011.
69. C. Chen and D. Cook. Energy outlier detection in smart environments. Proceedings of the AAAI Workshop on Artificial Intelligence and Smarter Living: The Conquest of Complexity, 2011.
70. V. Jakkula and D. Cook. Detecting anomalous sensor events in smart home data for enhancing the living experience. Proceedings of the AAAI Workshop on Artificial Intelligence and Smarter Living: The Conquest of Complexity, 2011.

71. P. Rashidi and D. Cook. Ask me better questions: Active learning queries based on rule induction. Proceedings of the International Conference on Knowledge Discovery and Data Mining, pages 904-912, 2011.
72. S. Tang, D. De, W. Song, D. Cook, and S. Das. ActSee: Activity-aware radio duty-cycling for sensor networks in smart environments. Proceedings of the International Conference on Networked Sensing Systems, 2011.
73. B. Das and D. Cook. Data mining challenges in automated prompting systems. Workshop on Interacting with Smart Objects, 2011.
74. P. Rashidi and D. Cook. Domain selection and adaptation in smart homes. Proceedings of the International Conference on Smart Homes and Health Telematics, 2011.
75. B. Das and D. Cook. An automated prompting system for smart environments. Proceedings of the International Conference on Smart Homes and Health Telematics, pages 9–16, 2011.
76. E. Nazerfard, P. Rashidi, and D. Cook. Using association rule mining to discover temporal relations of daily activities. Proceedings of the International Conference on Smart Homes and Health Telematics, 2011.
77. S. Helal, J. Lee, S. Hossain, E. Kim, H. Hagraas, and D. Cook. Persim - Simulator for human activities in pervasive spaces. Proceedings of the International Conference on Intelligent Environments, 2011.
78. P. Rashidi and D. Cook. Mining sensor streams for discovering human activity patterns over time. IEEE International Conference on Data Mining, pages 431-440, 2010.
79. C. Parsey, M. Schmitter-Edgecombe, L. Foltz, N. Hansen, D. Cook, and G. Belenky. Sleep/wake patterns in Mild Cognitive Impairment: A preliminary study of sleep disturbance in transitional cognitive decline. 24th Annual Meeting of the Associated Professional Sleep Societies, 2010.
80. C. Parsey, R. Srinivasan, M. Schmitter-Edgecombe, and D. Cook. Monitoring activity with actigraph and motion-sensor data in a smart environment. Annual Work Conference of the International Society for Gerontechnology, 2010.
81. B. Das, C. Chen, N. Dasgupta, D. Cook, and A. Seelye. Automated prompting in a smart home environment. Proceedings of the ICDM Workshop on Data Mining for Service, 2010.
82. E. Nazerfard, P. Rashidi, and D. Cook. Discovering temporal features and relations of activity patterns. Proceedings of the ICDM Workshop on Data Mining for Service, 2010.
83. P. Rashidi and D. Cook. Mining and monitoring patterns of daily routines for assisted living in real world settings. Proceedings of the ACM International Health Informatics Symposium, 2010.

84. E. Nazerfard, L. Holder, and D. Cook. Conditional random fields for activity recognition in smart environments. Proceedings of the ACM International Health Informatics Symposium, 2010.
85. P. Rashidi and D. Cook. Home to home transfer learning. Proceedings of the AAAI Plan, Activity, and Intent Recognition Workshop, 2010.
86. P. Rashidi and D. Cook. Multi home transfer learning for resident activity discovery and recognition. Proceedings of the International Workshop on Knowledge Discovery from Sensor Data, pages 53-63, 2010.
87. R. Srinivasan, C. Chen, and D. Cook. Activity recognition using an actigraph sensor. Proceedings of the International Workshop on Knowledge Discovery from Sensor Data, 2010.
88. C. Chen, B. Das, and D. Cook. Energy prediction based on resident's activity. Proceedings of the International Workshop on Knowledge Discovery from Sensor Data, 2010.
89. J. Kuszniir and D. Cook. Designing lightweight software architectures for smart environments. Proceedings of the International Conference on Intelligent Environments, 2010.
90. C. Chen, B. Das, and D. Cook. A data mining framework for activity recognition in smart environments. Proceedings of the International Conference on Intelligent Environments, 2010.
91. A. Crandall and D. Cook. Using a hidden Markov model for resident identification. Proceedings of the International Conference on Intelligent Environments, 2010.
92. A. Aztiria and D. Cook. Automatic modeling of frequent user behaviours in intelligent environments. Proceedings of the International Conference on Intelligent Environments, 2010.
93. V. Jakkula and D. Cook. Outlier detection in smart environment structured power datasets. Proceedings of the International Conference on Intelligent Environments, 2010.
94. A. Elfaham, H. Hagraas, S. Helal, S. Hossain, J. Lee, and D. Cook. A fuzzy based verification agent for the PerSim human activity simulator in ambient intelligence environments. IEEE International Conference on Fuzzy Systems, 2010.
95. C. You, L. Holder, and D. Cook. Learning patterns in the dynamics of biological networks. Proceedings of the ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2009.
96. C. Corley, A. Mikler, K. Singh, and D. Cook. Monitoring influenza trends through mining social media. Proceedings of the International Conference on Bioinformatics and Computational Biology, 2009.

97. N. Ketkar, L. Holder, and D. Cook. gRegress: Extracting features from graph transactions for regression. Proceedings of the International Joint Conference on Artificial Intelligence, 2009.
98. N. Ketkar, L. Holder, and D. Cook. Faster computation of the direct product kernel for graph classification. Proceedings of the Symposium on Computational Intelligence and Data Mining, 2009.
99. N. Ketkar, L. Holder, and D. Cook. Empirical comparison of graph classification algorithms. Proceedings of the Symposium on Computational Intelligence and Data Mining, 2009.
100. A. Mendez-Vazquez, S. Helal, and D. Cook. Simulating events to generate synthetic data for pervasive spaces. Proceedings of the CHI Workshop on Developing Shared Home Behavior Datasets to Advance HCI and Ubiquitous Computing Research, 2009.
101. D. Cook, M. Schmitter-Edgecombe, A. Crandall, C. Sanders, and B. Thomas. Collecting and disseminating smart home sensor data in the CASAS project. Proceedings of the CHI Workshop on Developing Shared Home Behavior Datasets to Advance HCI and Ubiquitous Computing Research, 2009.
102. J. Augusto, M. Bohlen, D. Cook, F. Flentge, G. Marreiros, C. Ramos, W. Qin, Y. Suo. The Darmstadt Challenge - The Turing test revisited. Proceedings of the International Conference on Agents and Artificial Intelligence, 2009.
103. A. Crandall and D. Cook. Resident and caregiver: Handling multiple individuals in a smart care facility. Proceedings of the AAAI Fall Symposium on AI in ElderCare, pages 39-47, 2008.
104. G. Singla and D. Cook. Interleaved activity recognition for smart environments. Proceedings of the International Conference on Intelligent Environments, 2009.
105. P. Rashidi and D. Cook. Transferring learned activities in smart environments. Proceedings of the International Conference on Intelligent Environments, 2009.
106. C. You, L. Holder, and D. Cook, Graph-based data mining in dynamic networks: Empirical comparison of compress-based and frequency-based subgraph mining. Proceedings of the Workshop on Analysis of Dynamic Networks, 2008.
107. P. Rashidi and D. Cook, An adaptive sensor mining framework for pervasive computing applications. Proceedings of the KDD Workshop on Knowledge Discovery from Sensor Data, 2008.
108. C. You, L. Holder, and D. Cook, Graph-based temporal mining of metabolic pathways with microarray data. Proceedings of the SIGKDD Workshop on Data Mining in Bioinformatics (BIOKDD), 2008.
109. A. Aztiria, J. Augusto, A. Izaguirre, and D. Cook, Learning accurate temporal relations from user actions in intelligent environments. Proceedings of the Symposium of Ubiquitous Computing and Ambient Intelligence, 2008.

110. C. You, L. Holder, and D. Cook, Temporal and structural analysis of biological networks in combination with microarray data. Proceedings of the IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, 2008.
111. W. Davis, A. Kalyanaraman, and D. Cook, An informatic theoretic approach for the discovery of irregular and repetitive patterns in genomic data. IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, 2008.
112. C. You, L. Holder, and D. Cook, Dynamic graph-based relational learning of temporal patterns in biological networks changing over time. Proceedings of the International Conference on Bioinformatics and Computational Biology, 2008.
113. P. Rashidi and D. Cook, Adapting to resident preferences in smart environments. Proceedings of the AAAI Workshop on Advances in Preference Handling, pages 78-84, 2008.
114. G. Singla, D. Cook, and M. Schmitter-Edgecombe, Incorporating temporal reasoning into activity recognition for smart home residents. Proceedings of the AAAI Workshop on Spatial and Temporal Reasoning, pages 53-61, 2008.
115. S. Lockwood and D. Cook, Computer, light on!. Proceedings of the International Conference on Intelligent Environments, 2008.
116. A. Crandall and D. Cook, Attributing events to individuals in multi-inhabitant environments. Proceedings of the International Conference on Intelligent Environments, 2008.
117. P. Rashidi and D. Cook, Keeping the intelligent environment resident in the loop. Proceedings of the International Conference on Intelligent Environments, 2008.
118. J. Tilton, D. Cook, and N. Ketkar, The integration of graph based knowledge discovery with image segmentation hierarchies for data analysis, data mining and knowledge discovery. IEEE International Geoscience & Remote Sensing Symposium, 2008.
119. V. Jakkula, A. Crandall, and D. Cook, Knowledge discovery in entity based smart environment resident data using temporal relations based data mining. Proceedings of the ICDM Workshop on Spatial and Spatio-Temporal Data Mining, 2007.
120. C. Corley, L. Brown, A. Mikler, D. Cook, and K. Singh, Generating social networks of intimate contacts for the study of public health intervention strategies. IEEE Seventh International Symposium on Bioinformatics and BioEngineering, 2007.
121. W. Davis, A. Kalyanaraman, and D. Cook, An information theoretic approach for the discovery of irregular and repetitive patterns in genomic data. Proceedings of the International Conference on Computational Systems Bioinformatics, 2007.
122. V. Jakkula and D. Cook, Mining sensor data in smart environments for temporal activity prediction. Proceedings of the First International Workshop on Knowledge Discovery from Sensor Data, 2007.

123. J. Kukluk, L. Holder, and D. Cook, Inference of node and edge replacement graph grammars. Proceedings of the ICML Workshop on Challenges and Applications of Grammar Induction, 2007.
124. V. Jakkula, A. Crandall, and D. Cook, Temporal pattern discovery for anomaly detection in smart homes. Proceedings of the International Conference on Intelligent Environments, pages 339-345, 2007.
125. V. Jakkula and D. Cook, Using temporal relations in smart home data for activity prediction. Proceedings of the ICML Workshop on the Induction of Process Models, 2007.
126. J. Kukluk, C. You, L. Holder and D. Cook, Learning node replacement graph grammars in metabolic pathways. International Conference on Bioinformatics and Computational Biology, 2007.
127. V. Jakkula and D. Cook, Learning temporal relations in smart home data. Proceedings of the Second International Conference on Technology and Aging, 2007.
128. V. Jakkula and D. Cook, Prediction models for a smart home based health care system. Proceedings of the First International Workshop on Smart Homes for Tele-Health, 2007.
129. P. Rashidi, G. M. Youngblood, D. Cook, and S. Das, Inhabitant guidance of smart environments. Proceedings of the International Conference on Human-Computer Interaction, pages 910-919, 2007.
130. J. Kukluk, L. Holder, and D. Cook, Inference of edge replacement graph grammars. Proceedings of the Florida Artificial Intelligence Research Symposium, 2007.
131. D. Cook, A. Crandall, and M. Schmitter-Edgecombe, Smart environment support to assist elder adults and people with disabilities. Proceedings of the Workshop on Intelligent Systems for Assisted Cognition, 2007.
132. K. Ates, J. Kukluk, L. Holder, D. Cook and K. Zhang, Graph grammar induction on structural data for visual programming. Proceedings of the 18th IEEE International Conference on Tools with Artificial Intelligence, November 2006.
133. J. Kukluk, C. You, L. Holder and D. Cook, Discovering recursive patterns in biological networks. Dallas Area Bioinformatics and Computational Biology Workshop, August 2006.
134. D. Brezeale and D. Cook, Using closed caption and visual features to classify movies by genre. Proceedings of the KDD/MDM Workshop, 2006.
135. N. Ketkar, L. Holder, and D. Cook, Mining in the proximity of subgraphs. Proceedings of LinkKDD, 2006.
136. C.-C. Tseng and D. Cook, Mining from time series human movement data. Proceedings of the Conference on Systems, Man, and Cybernetics, 2006.

137. V. Jakkula, G. M. Youngblood, and D. Cook, Identification of lifestyle behavior patterns with prediction of the happiness of an inhabitant in a smart home. Proceedings of the AAAI Workshop on Computational Aesthetics, 2006.
138. G. Jain, D. Cook, and V. Jakkula, Monitoring health by detecting drifts and outliers for a smart environment inhabitant. Proceedings of the International Conference On Smart Homes and Health Telematics, pages 114-121, 2006.
139. J. Kukluk, L. Holder and D. Cook, Inference of node replacement recursive graph grammars. Proceedings of the SIAM International Conference on Data Mining, April 2006.
140. C. You, L. Holder, and D. Cook. Application of graph-based data mining to metabolic pathways, Proceedings of the International Conference on Data Mining, 2006.
141. S. Das and D. Cook, Designing and modeling smart environments. Proceedings of the Workshop on Autonomic Computing and Communications, 2006.
142. C. D. Corley, D. Cook, L. Holder, and K. P. Singh, Graph-based data mining in epidemic and terrorism data. Proceedings of the Conference on Quantitative Methods and Statistical Applications in Defense and National Security, 2006.
143. G. M. Youngblood, D. Cook, and L. Holder, Seamlessly engineering a smart environment. IEEE Conference on Systems, Man, and Cybernetics, 2005.
144. N. Ketkar, L. Holder and D. Cook, Qualitative comparison of graph-based and logic-based multi-relational data mining: A case study. Proceedings of the ACM KDD Workshop on Multi-Relational Data Mining, August 2005.
145. N. Ketkar, L. Holder, D. Cook, R. Shah and J. Coble, Subdue: Compression-based frequent pattern discovery in graph data. Proceedings of the ACM KDD Workshop on Open-Source Data Mining, August 2005.
146. S. Das and D. Cook, Designing smart environments: A paradigm based on learning and prediction. Proceedings of First International Conference on Pattern Recognition and Machine Intelligence (PReMI'05), pages 80–90, Kolkata, India, Dec 18-22, 2005.
147. G. M. Youngblood, D. Cook, L. Holder and E. Heierman, Automation intelligence for the smart environment. Proceedings of the International Joint Conference on Artificial Intelligence, 2005.
148. J. Potts, L. Holder, D. Cook, and J. Coble, Learning concepts from intelligence data embedded in a supervised graph. Proceedings of the International Conference on Intelligence Analysis, 2005.
149. G. M. Youngblood, L. Holder, and D. Cook, A learning architecture for automating the intelligent environment. Proceedings of the Conference on Innovative Applications of Artificial Intelligence, pages 1576-1581, 2005.
150. J. Coble and D. Cook, Structure discovery in sequentially connected data. Proceedings of the Florida Artificial Intelligence Research Symposium, 2005. *Winner, best paper award.*

151. K. Gee and D. Cook, Text classification using graph-encoded linguistic elements. Proceedings of the Florida Artificial Intelligence Research Symposium, 2005.
152. R. Rathi and D. Cook, A serial partitioning approach to scaling graph-based knowledge discovery. Proceedings of the Florida Artificial Intelligence Research Symposium, 2005.
153. J. Potts, D. Cook, and L. Holder, Learning from examples in a single graph. Proceedings of the Florida Artificial Intelligence Research Symposium, 2005.
154. G. M. Youngblood, D. Cook, and L. Holder, Managing adaptive versatile environments. Proceedings of the IEEE International Conference on Pervasive Computing and Communications, pages 351-360, 2005.
155. S. Das and D. Cook, Health monitoring in an agent-based smart home. Proceedings of the International Conference on Smart Homes and Health Telematics (ICOST), Singapore, September, 2004.
156. E. Heierman, M. Youngblood, and D. Cook, Mining temporal sequences to discover interesting patterns. KDD Workshop on Mining Temporal and Sequential Data, 2004.
157. I. Jonyer, L. Holder, and D. Cook, Attribute-value selection based on the minimum description length. Proceedings of the International Conference on Artificial Intelligence, 2004.
158. J. Coble, D. Cook, L. Holder, and R. Rathi, Structure discovery from sequential data. Proceedings of the Florida Artificial Intelligence Research Symposium, 2004.
159. D. Cook, S. Das, K. Gopalratnam, and A. Roy, Health monitoring in an agent-based smart home. Proceedings of the International Conference on Aging, Disability and Independence Advancing Technology and Services to Promote Quality of Life, 2003.
160. E. Heierman and D. Cook, Improving home automation by discovering regularly occurring device usage patterns. Proceedings of the International Conference on Data Mining, pages 537-540, 2003.
161. Y. Wang, D. Cook, V. Papudesi, and M. Huber, User-guided reinforcement learning of robot assistive tasks for an intelligent environment. Proceedings of the Conference on Intelligent Robots and Systems, 2003.
162. S. Rao and D. Cook, Identifying tasks and predicting actions in smart homes using unlabeled data. Proceedings of the Machine Learning Workshop on The Continuum from Labeled to Unlabeled Data, 2003.
163. C. Noble and D. Cook, Graph-based anomaly detection. Proceedings of the Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, pages 631-636, 2003.
164. F. Khawaja, D. Gjoni, M. Huber, D. Cook and M. Youngblood, Achieving faster convergence to the optimal policy by using knowledge of the reward structure. Artificial Intelligence Applications Conference, 2003.

165. I. Jonyer, L. Holder, and D. Cook, MDL-based context-free graph grammar induction. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 351–355, May 2003. *Runner up, best paper award.*
166. A. Rakhshan, L. Holder, and D. Cook, Structural web search engine. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 319–323, May 2003.
167. K. Gopalratnam and D. Cook, Active LeZi: An incremental parsing algorithm for device usage prediction in the smart home. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 38–42, May 2003.
168. R. Mehta, D. Cook, and L. Holder, Identifying inhabitants of an intelligent environment using a graph-based data mining system. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 314–318, May 2003.
169. S. Rao and D. Cook, Improving the performance of action prediction through identification of abstract tasks. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 43–47, May 2003.
170. V. Papudesi, M. Huber, Y. Wang, and D. Cook, Integrating user commands and autonomous task performance in a reinforcement learning framework. Proceedings of the AAAI Spring Symposium on Human Interaction with Autonomous Systems in Complex Environments, 2003.
171. D. Cook, G. M. Youngblood, E. Heierman, K. Gopalratnam, S. Rao, A. Litvin, and F. Khawaja, MavHome: An agent-based smart home. IEEE International Conference on Pervasive Computing and Communications, pages 521–524, 2003.
172. A. Roy, S. Bhaumik, A. Bhattacharya, K. Basu, D. Cook, and S. Das, Location aware resource management in smart homes. Conference on Pervasive Computing, 2003.
173. K. Gee and D. Cook, Using latent semantic indexing to filter spam. ACM Symposium on Applied Computing, Data Mining Track, 2003.
174. D. Cook, M. Huber, K. Gopalratnam, and M. Youngblood. Learning to control a smart home environment. Innovative Applications of Artificial Intelligence, 2003.
175. C. Pace and D. Cook, A preview of home automation. Conference for the Louis Stokes Alliance for Minority Participation, 2002. *Winner, best presentation award.*
176. I. Jonyer, L. Holder, and D. Cook, Concept formation using graph grammars. KDD Workshop on Multi-Relational Data Mining, 2002.
177. J. Gonzalez, L. Holder, and D. Cook, Experimental comparison of graph-based relational concept learning with inductive logic programming systems. Inductive Logic Programming Conference, 2002.
178. J. Gonzalez, L. Holder, and D. Cook, Graph-based relational concept learning. International Machine Learning Conference, 2002.

179. S. Bandyopadhyay, U. Maulik, D. Cook, L. Holder, and Y. Ajmerwala, Enhancing structure discovery for data mining in graphical databases using evolutionary programming. Florida Artificial Intelligence Research Symposium, pages 232–236, 2002.
180. P. Sandanayake and D. Cook, Imitating agent game strategies using a scalable Markov model. Florida Artificial Intelligence Research Symposium, 2002.
181. J. Gonzalez, L. Holder, and D. Cook, Application of graph-based concept learning to the predictive toxicology domain. Predictive Toxicology Challenge Workshop, 2001.
182. N. Manocha, D. Cook, and L. Holder, Structural web search using a graph-based discovery system. Florida Artificial Intelligence Research Symposium, pages 133–137, 2001.
183. D. Cook and L. Holder, A client-server interactive tool for integrated artificial intelligence curriculum. FLAIRS special track on AI Education, pages 206–210, 2001.
184. J. R. Nayak and D. Cook, Approximate association rule mining. Florida Artificial Intelligence Research Symposium, pages 259–263, 2001.
185. J. Gonzalez, L. Holder, and D. Cook, Graph-based concept learning. Florida Artificial Intelligence Research Symposium, pages 377–381, 2001.
186. C. Hannon and D. Cook, Exploring the use of cognitive models in AI applications using the Stroop effect. Florida Artificial Intelligence Research Symposium, pages 433–438, 2001.
187. J. Gonzalez, L. Holder, and D. Cook, Graph-based concept learning. Proceedings of the National Conference on Artificial Intelligence, 2000.
188. I. Jonyer, L. Holder, and D. Cook, Graph-based hierarchical conceptual clustering in structural data. Proceedings of the National Conference on Artificial Intelligence, 2000.
189. W. Harris, D. Cook, and F. Lewis, Combining representations from manufacturing, machine planning, and manufacturing resource planning. Proceedings of the AAAI Workshop on Representational Issues for Real-World Planning Systems, 2000.
190. J. Gonzalez, I. Jonyer, L. Holder, and D. Cook, Efficient mining of graph-based data. Proceedings of the AAAI Workshop on Learning Statistical Models from Relational Data, pages 21–28, 2000.
191. G. Peterson and D. Cook, Decision-theoretic planning in the Graphplan framework. Proceedings of the Artificial Intelligence Planning Symposium, 2000.
192. A. Baritchi and D. Cook, Discovering structural patterns in telecommunications data. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 82–85, 2000.
193. J. Gonzalez, L. Holder, and D. Cook, Structural knowledge discovery used to analyze earthquake activity. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 86–90, 2000.

194. M. Youngblood, L. Holder, and D. Cook, A framework for autonomous mobile robot exploration and mapping through the use of place-centric occupancy grids. Proceedings of the Machine Learning Workshop on Learning From Spatial Information, 2000.
195. C. Hannon and D. Cook, A parallel approach to unified cognitive modeling of language. Proceedings of the Thirteenth Canadian Conference on Artificial Intelligence, 2000.
196. C. Hannon and D. Cook, A parallel approach to modeling language learning and understanding in young children. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 209–213, 2000.
197. J. Coble and D. Cook, Real-time learning when concepts shift. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 192–196, 2000.
198. I. Jonyer, L. Holder, and D. Cook, Graph-based hierarchical conceptual clustering. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 91–95, 2000.
199. P. Gmytrasiewicz, C.-C. Tseng, and D. Cook, Optimization of parallel search using ML and uncertain reasoning. Proceedings of the IJCAI Workshop on Statistical Machine Learning for Large-Scale Optimization, 1999.
200. G. Peterson and D. Cook, Decision-theoretic layered robotic control architecture. Proceedings of the National Conference on Artificial Intelligence, 1999.
201. D. Cook and C. Hannon, Adaptive parallel search for theorem proving. Proceedings of the Florida Artificial Intelligence Research Symposium, 1999.
202. W. Briggs and D. Cook, Anytime planning for optimal tradeoff between deliberative and reactive planning. Proceedings of the Florida Artificial Intelligence Research Symposium, 1999.
203. R. Chittimoori, L. Holder, and D. Cook, Applying the Subdue substructure discovery system to the chemical toxicity domain. Proceedings of the Florida Artificial Intelligence Research Symposium, 1999.
204. R. Chittimoori, L. Holder, and D. Cook, Applying the Subdue substructure discovery system to the chemical toxicity domain. Proceedings of the AAAI Spring Symposium on Predictive Toxicology of Chemicals: Experiences and Impact of AI Tools, 1999.
205. D. Cook and P. J. Gmytrasiewicz, Controlling the parameters of parallel search using uncertainty reasoning. Proceedings of the AAAI Symposium on Search Strategy under Uncertain and Incomplete Information, 1999.
206. J. Coble and D. Cook, Virtual environments: An agent-based approach. Proceedings of the AAAI Spring Symposium on Agents With Adjustable Autonomy, 1999.
207. J. Coble and D. Cook, Virtual environments: An agent-based approach. Proceedings of the AAAI Spring Symposium on Intelligent Agents in Cyberspace, 1999.

208. 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 Biocomputing, pages 190–201, 1999.
209. 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.
210. 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.
211. J. Coble and D. Cook, Fault tolerant coordination of robot teams. Proceedings of the AAAI Fall Symposium on Cognitive Robotics, 1998.
212. 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.
213. S. Taylor, D. Levine, K. Kavi, and D. Cook, A comparison of multithreading implementations. Yale Multithreaded Programming Workshop, 1998.
214. L. Holder and D. Cook, Coupling two complementary knowledge discovery systems. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 183–187, 1998.
215. W. Harris and D. Cook, Integrating hierarchical and analogical planning. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 126–130, 1998.
216. 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.
217. G. Peterson and D. Cook, DFA learning of opponent strategies. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 367–371, 1998.
218. 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.
219. 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.
220. 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.
221. 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.

222. 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.
223. K. S. Tae and D. Cook, Experimental knowledge acquisition for planning. Proceedings of the Conference on Machine Learning, 1996.
224. 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.
225. 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.
226. K. S. Tae and D. Cook, Experimentation-driven incremental operator learning. Proceedings of the Florida Artificial Intelligence Research Symposium, pages 204–208, 1996.
227. D. Cook, P. Gmytrasiewicz and L. Holder, Multi-agent cooperative sensor planning. Proceedings of the Image Understanding Workshop, pages 1321–1332, 1996.
228. 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.
229. D. Cook, Scaling up planning systems using parallel hardware and machine learning. Proceedings of the NSF Design and Manufacturing Grantees Conference, 1996.
230. 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.
231. W. Briggs and D. Cook, Flexible social laws. Proceedings of the International Joint Conference on Artificial Intelligence, pages 688–693, 1995.
232. 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.
233. J. Baumgartner, D. Cook, and B. Shirazi, Genetic solutions to the load balancing problem. Proceedings of the International Conference on Parallel Processing, 1995.
234. 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.
235. 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.

236. D. Cook, Reconfiguration of multi-agent planning systems. Proceedings of the 1994 Conference on AI Planning Systems, pages 225–230, 1994.
237. 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.
238. 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.
239. J. Baumgartner and D. Cook, A genetic-based solution to load balancing in parallel computers. Proceedings of the 1994 ACM Computer Science Conference, 1994.
240. D. Cook and L. Holder, Sensor planning and coordination in multi-agent systems. Proceedings of the Image Understanding Workshop, 1994.
241. M. Kidwell and D. Cook, A genetic algorithm for dynamic task scheduling. Proceedings of the International Phoenix Conference on Computers and Communication, 1993.
242. 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.
243. L. O. Hall, D. Cook, L. Stark and K. W. Bowyer, Fuzzy set learning in functional object recognition. Proceedings of NAFIPS, 1993.
244. 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.
245. 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.
246. 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.
247. L. Holder, D. Cook, and H. Bunke, Fuzzy substructure discovery. Ninth International Machine Learning Conference, Aberdeen, Scotland, pages 218–223, 1992.
248. 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.
249. 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.
250. 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.

251. 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.
252. D. Cook, The base selection task in analogical planning. Proceedings of the International Joint Conference on Artificial Intelligence, Sydney, Australia, pages 790–795, 1991.
253. 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.
254. D. Cook, Forming analogical plans for robot arm path planning. Proceedings of the 1991 International Conference on Intelligent Teleoperation, Greensboro, NC, 1991.
255. 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.
256. 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.
257. D. Cook, Analogical planning. Proceedings of the DARPA Workshop on Innovative Approaches to Planning, Scheduling and Control, San Diego, CA, pages 22–27, 1990.
258. 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.
259. 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.
260. D. Cook, Learning by analogy on the connection machine. Proceedings of the Florida Artificial Intelligence Research Symposium, Cocoa Beach, FL, pages 28–32, 1990.
261. 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.
262. D. Cook, ORPHEUS: A music notation program, Proceedings of the 1987 International Computer Music Conference, pages 302–310, 1987.

Media

- March 2023 Sensing the Smart Home. Project Sustainability Podcast.
- June 2021 WSU, Gonzaga researchers look at software to detect cognitive decline to assist senior living. Spokesman-Review.
- June 2020 Smart home devices can reveal behaviors associated with dementia. IEEE Spectrum.

*Diane J. Cook, Regents Professor
Washington State University*

December 2019 What's the best way to measure the smarts of AI systems? Researchers are developing an IQ test. GeekWire.

August 2019 Smart home technology increasingly used to help elderly population. Digital Trends.

May 2019 Nurse of the future. Lewiston Tribute.

April 2019 Will we ever have robot carers? BBC.

March 2019 Meet RAS, the home support robot. NEXST.

January 2019 WSU students create robot to help dementia patients. KXLY.com.

January 2019 WSU smart home tests first elder care robot. WSU Insider.

January 2019 Is black mirror becoming reality? Daily Evergreen.

November 2018 Aging in place: Smart-home technology offers a way to extend seniors' independence. The Virginian Pilot.

July 2018 Student developing elder-care robot, achieving dream. WSU Insider.

June 2018 Smart homes could monitor medical issues for elderly. The Institute.

February 2018 WSU's system monitors seniors' activities to help them live independently longer. Digital Trends.

October 2017 WSU researchers team sensors, clinicians, algorithms for senior care. Exome.

September 2017 Tech talk: Virtual rehab, smart sensors, and digital patient engagement. Health Facilities Management.

March 2017 How will artificial intelligence help the aging? Smithsonian.

November 2016 Equip your home with the latest smart tech. NEA Member Benefits.

September 2016 Living smart with sensor technology. Spokane Journal.

July 2015 Fact sheet. The White House Conference on Aging.

February 2015 Home smart home. Scholastic SuperScience.

December 2015 Smart home project records movement, behavior. The Spokesman-Review.

August 2014 Using sensor technology to lower elder care costs. Wall Street Journal.

March 2014 Are smart homes the answer to the long-term care crises? AARP Magazine.

December 2013 How life will change with smart homes. LiveScience.

December 2013 WSU research project focus on memory problems. The Spokesman-Review.

November 2013 Technologies NIBIB-funded researchers are developing with sensors. NIH Science Education.

October 2013 WSU study uses sensors to keep seniors living alone safe. KREM.

August 2013 Smart home in a box could capture community behavior. Fierce Smart Grid.

August 2013 NSF grant helps WSU researchers share 'smart home' technology around the world. Seattle Business.

- March 2013 Aging at Home - Grant helps move research project to marketplace. WSU News.
- July 2012 On Watch - Monitoring an owner's behavior could improve how a house functions. Builder Online.
- May 2012 'Smart' homes prevent illness, run the dryer. ABC News.
- March 2012 A Rose future: Jetsons-like gadgets with ambient intelligence are key to smart homes and cities. Scientific American.
- September 2009 Smart home knows just how you like your breakfast. NewScientist Tech.
- May 2009 Better living through technology: Smart home technology will allow patients to stay in their homes longer. WSU CEA Innovation.
- May 2007 Home sweet home of the future. NBC News.
- May 2007 The MavHome smart home. HGTV.

Support

- 2023-2028 The role of air quality and built environment in social isolation and cognitive function among rural, racially/ethnically diverse residents at risk for Alzheimer's Disease (WSU PI, subcontractor to L. Wiese, FAU), NIH, \$5,580,195
- 2022-2025 Multi-objective generation of synthetic time series data to boost model robustness and data privacy, NSF, \$200,000
- 2022-2025 Automated health assessment through mobile sensing and machine learning of daily activities (Co-PI, with L. Holder, Adaptelligence), NIH, \$2,500,000
- 2022-2024 Spatiotemporal transfer learning for enabling cross-country and cross-hemisphere in-season crop mapping (Co-PI, with L. Ding, GMU), NSF, \$200,000
- 2022-2023 Collaborative Project: SCH: Smart Health and Biomedical Research in the Area of Artificial Intelligence and Advanced Data Science PIs Meeting 2022, NSF, \$25,000
- 2020-2025 Creating adaptive, wearable technologies to assess and intervene for individuals with ADRDs (PI, with M. Schmitter-Edgecombe). NIH, \$4,590,000
- 2020-2025 Compensation training and lifestyle modifications to promote healthy aging in persons at risk for Alzheimer's disease: A digital application supported intervention (Co-PI, with M. Schmitter-Edgecombe). NIH/NIA, \$3,517,278
- 2020-2026 Multi-modal functional health assessment and intervention for individuals experiencing cognitive decline (PI, with M. Schmitter-Edgecombe). NIH, \$3,170,783; supplement for AI/ML readiness, \$305,722
- 2020-2025 Behavior360: Learning a human behaviorome in uncontrolled settings (PI, with H. Ghasemzadeh). NSF, \$1,155,042
- 2020-2026 A digital memory notebook to support everyday functioning, decrease caregiver burden and track health status (Co-PI, with M. Schmitter-Edgecombe). DOD, \$1,299,515
- 2020-2022 NIH supplement to clinician-in-the-loop for early detection of ADRDs (PI, with R. Fritz and M. Schmitter-Edgecombe). NIH, \$366,710

*Diane J. Cook, Regents Professor
Washington State University*

- 2021-2022 NIH supplement to clinician-in-the-loop bioethics (PI, with R. Fritz). NIH, \$144,139
- 2019-2021 Automated health assessment through mobile sensing and machine learning of daily activities (Co-PI, with Adaptelligence and M. Schmitter-Edgecombe). NIH STTR, \$347,739
- 2019-2022 Artificial intelligence quotient (AIQ) based on task novelty and diversity (Co-PI, with L. Holder). DARPA, \$1,000,000
- 2017-2029 A clinician-in-the-loop smart home to support health monitoring and intervention for chronic conditions (PI, with R. Fritz and M. Schmitter-Edgecombe). NIH, \$1,250,000 (2017-2022), \$2,693,606 (2024-2029)
- 2017-2020 NRI: INT: Learning-enabled robot support of daily activities for successful activity completion (Co-PI, with M. Taylor and M. Schmitter-Edgecombe). NSF, \$999,999
- 2017-2020 Development of an online course suite in tools for analysis of sensor-based behavioral health data (AHA!) (PI, with G. Sprint, A. Kalyanaraman, M. Schmitter-Edgecombe, and R. Fritz). NIH, \$911,650
- 2016-2017 Design of smart home technologies for home security. Huawei, \$110,000
- 2016-2019 Activity-aware prompting to improve medication adherence in heart failure patients (Co-PI, with H. Ghasemzadeh and L. Evangelista). NIH, \$375,251
- 2016-2019 Providing support in real time with smart technologies to improve quality in life (Co-PI, with M. Schmitter-Edgecombe). DOD Quality of Life Research Award, \$720,663
- 2015-2019 CPS: TTP Option: Synergy: Collaborative Research: The Science of Activity-Aware Cyber-Physical Systems (PI, with J. Doppa, M. Schmitter-Edgecombe, and A. Srivastava). National Science Foundation, \$1,100,000
- 2015-2018 Support of graduate students to conduct research in smart environments for health assistance (Co-PI, with M. Schmitter-Edgecombe). Department of Education, \$738,709
- 2014-2018 Smart environment technologies for health assessment and assistance (PI, with M. Schmitter-Edgecombe), National Institutes of Health, \$1,487,560
- 2014-2017 Integrated measurements and modeling using US smart homes to assess climate change impacts on indoor air quality (Co-PI, with B. Lamb), Environmental Protection Agency, \$996,588
- 2014-2026 Multi-disciplinary undergraduate training program in health-assistive smart environments (PI, with M. Schmitter-Edgecombe and A. Crandall), National Institutes of Health, \$3,381,623
- 2014-2017 Engineering and sociological foundations for smart distribution systems (Co-PI, with C.-C. Liu, C. Horne, A. Love, and A. Srivastava, CEA Strategic Investments for Research Excellence, \$70,000
- 2013-2016 CI-ADDO-EN: Smart Home in a Box: Creating a large scale, long term repository for smart environment technologies (PI), National Science Foundation, \$900,000
- 2013-2014 ICDM student travel support (PI, with B. Thuraisingham and W. Ding), National Science Foundation, \$20,000

- 2012–2016 Smart environment technology for longitudinal behavior analysis and intervention (PI, with M. Schmitter-Edgecombe), National Institutes of Health, \$1,566,691
- 2012 Design of a smart community (PI), Cisco, \$15,000
- 2012–2013 CASAS-Care: Pilot study of a smart home in a box, (PI), Life Sciences Discovery Fund, \$149,312
- 2011–2015 SHB: Medium: Collaborative Research: Crafting a human-centric environment to support human health needs (PI, with S. Das, University of Texas at Arlington), National Science Foundation, \$1,050,426
- 2011–2014 Smart home-based analysis and automation for energy efficiency (PI), Avista, \$200,000
- 2011–2012 Interactive, self-programming AI system for activity monitoring of the elderly (PI), National Institutes of Health, subcontract to Ingenium, \$56,196
- 2010–2011 NSF Workshop on pervasive computing at scale National Science Foundation, \$98,000
- 2011 PerCom student travel support, National Science Foundation, \$20,000
- 2010–2014 Research Experiences for Undergraduates in smart environments (PI, with B. Shirazi), National Science Foundation, \$326,770
- 2010–2011 Discovering, visualizing, and tracking patterns in sensor streams (PI), Bosch, \$100,000
- 2009–2014 IGERT: Integrative Training in health-assistive smart environments (PI, with L. Holder, B. Shirazi, M. Schmitter-Edgecombe, and S. Jayaraman), National Science Foundation, \$2,999,928
- 2010–2015 Smart environment technologies for health monitoring and intervention (PI, with M. Schmitter-Edgecombe), National Institutes of Health, \$1,276,965
- 2009–2012 Activity-aware sensor network for smart environments (PI, with W. Song), National Science Foundation, \$300,000
- 2009–2012 II-EN: Smart environment infrastructure for resident and environment modeling (PI), National Science Foundation, \$300,000
- 2009–2010 Learning activity profiles for smart environment residents for functional health monitoring and intervention (PI), Bosch, \$75,000
- 2009–2012 Smart home-based health platform for functional monitoring and intervention (PI, with M. Schmitter-Edgecombe), Life Sciences Discovery Fund, \$790,906
- 2008–2009 Predicting intent from real-world datasets (Co-PI, with S. Thompson), Department of Energy, \$40,000
- 2007–2011 Smart home-based health platform for behavioral monitoring and alteration for diabetic and obese individuals (PI), NIH/University of Florida, \$267,000
- 2007–2008 Subdueing RHSEG (Co-PI, with J. Tilton), NASA, \$100,000
- 2007–2010 Research Experiences for Underrepresented Undergraduates in smart environments (Co-PI, with B. Shirazi), National Science Foundation, \$277,768
- 2005–2008 SEI: Graph based mining of public health data (PI, with L. Holder and K. Singh, National Science Foundation, \$481,971

- 2005–2008 Transfer learning in integrated cognitive systems (Co-PI, subcontract to ISLE), DARPA, \$1,864,420
- 2005 Graph-based structural pattern learning (Co-PI, with L. Holder), Naval Research Lab, 1/1/05 - 12/31/05, \$118,000
- 2004–2005 Application of graph-based pattern learning to financial transaction data, Booz-Allen-Hamilton (Co-PI, with L. Holder), \$30,000
- 2004–2005 Graph-based structural pattern learning (Co-PI, with L. Holder), U.S. Air Force EAGLE Program, \$220,000
- 2004–2009 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), National Science Foundation, \$1,000,000
- 2003–2005 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
- 2002–2004 Research Experiences for Undergraduates in distributed rational agents (Co-PI, with M. Huber and B. Shirazi), National Science Foundation, \$191,000
- 2002–2005 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
- 2001–2004 MavHome: An intelligent home environment, (PI, with S. Chakravarthy, S. K. Das, L. Holder, M. Huber, F. Kamangar, and R. Yerraballi), National Science Foundation, \$1,159,959; REU Supplement, \$24,500
- 2001–2004 Graph-based data mining (PI, with L. Holder and S. Chakravarthy), National Science Foundation, \$442,487
- 2001–2004 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
- 2001–2003 Graph-based structural pattern learning (Co-PI, with L. Holder), DARPA, \$375,000
- 2001–2003 NASA graduate student funding (PI, with J. Potts), \$48,000, 9/1/01 - 8/31/03
- 2001–2003 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
- 2000 Remote site monitoring, measurement, and control (PI, with L. Holder, F. Kamangar, S. K. Das, and R. Yerraballi), ARRI, \$20,000
- 1999–2002 Research Experiences for Undergraduates in tools for concurrent programming (Co-PI, with B. Shirazi), National Science Foundation, \$126,000
- 1998–1999 Scalable knowledge discovery (PI, with L. Holder), Texas ATP, \$108,346
- 1997–2000 Equipment for next generation supervisory and real-time controller for reconfigurable manufacturing workcells (Co-PI, with F. Lewis), National Science Foundation, \$110,091

- 1997–2000 Scalable knowledge discovery from large structural databases (Co-PI, with L. Holder), National Science Foundation, \$304,323
- 1996–1999 Design of a distributed computing environment using PowerPC microkernel (PI, with B. Shirazi and K. Kavi), National Science Foundation, \$62,000
- 1995–1998 A microkernel-based operating systems laboratory (PI, with K. Kavi, B. Shirazi, D. Umbaugh, and D. Levine), National Science Foundation, \$81,500
- 1995–1998 Scaling up planning systems using parallel hardware and machine learning (PI), NSF CAREER, \$135,000; REU supplement, \$12,375
- 1994–1999 Equipment development for high-performance robotic intelligent material handling in unstructured environments (Co-PI, with F. Lewis and K. Liu), National Science Foundation, \$210,784
- 1994–1995 Problem solving strategies for knowledge-based engineering applied to generative N/C programming (Co-PI, with L. Holder), Texas Instruments, \$13,250
- 1994–1999 Graduate Research Traineeships in robotics / intelligent control (Co-PI, with F. Lewis), NSF Graduate Research Traineeships, \$558,000
- 1993–1996 Parallel knowledge discovery from large complex databases (PI, with L. Holder), NASA, \$147,000
- 1993–1996 Parallel artificial intelligence techniques applied to robot planning (PI), National Science Foundation Research Initiation Award, \$99,926
- 1993–1996 Planning and control of reconfiguration in multiagent systems (Co-PI, with K. Harbison-Briggs), ARPA, \$750,000
- 1993 Analysis and design methodologies for autonomous vehicles (Co-PI, with K. Harbison-Briggs, S. Hufnagel, and B. Hammons), Hughes Research Laboratory, \$128,000
- 1992–1993 Parallel algorithms for machine learning methods applied to robot path planning (PI), University of Texas at Arlington Research Initiation Grant, \$20,000
- 1991–1992 The creation of parallel algorithms for analogical planning (PI), DSR Faculty Research and Creative Scholarship Program, \$5,000

Students

PhD

- 1995 Surnjani Djoko, Evaluating the role of domain knowledge in substructure discovery (*UTA/CSE Best PhD Thesis Award*)
- 1986 William Briggs, Modularity and communication in multiagent planning
- 1997 Craig Varnell, An architecture for improving the performance of parallel search
- 1997 Kang Soo Tae, Experimentation-driven learning of planning operators
- 2000 Charles Hannon, Modeling language learning in children
- 2002 Billy Harris, Improving the efficiency and applicability of planning
- 2004 Edwin Heierman, Using information-theoretic principles to discover interesting episodes in a time-ordered sequence

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- 2005 Michael Youngblood, Creation of a dynamic agent hierarchy for intelligent environments
- 2005 Jeffrey Coble, Relational discovery in sequentially-connected data streams: Efficient algorithms for lossless pattern discovery and change detection
- 2006 Joseph Potts, A probabilistic approach to graph-based data mining
- 2007 Darin Brezeale, Learning video preferences using closed caption and video features
- 2011 Gilbert Peterson, Decision-theoretic robot plan generation and execution (*UTA CSE Outstanding PhD Research Award*)
- 2011 Parisa Rashidi, Scaling activity discovery recognition to large, complex datasets; (*WSU EECS Outstanding Graduate Student Award*)
- 2011 Aaron Crandall, Behaviometrics for multiple residents in a smart environment
- 2013 Chao Chen, Investigating the human behavior side of building energy efficiency
- 2014 Ehsan Nazerfard, Using probabilistic graphical models for activity prediction
- 2014 Kyle Feuz, Preparing smart environments for life in the wild: Feature-space and multi-view heterogeneous transfer learning
- 2014 Barnan Das, Machine learning challenges for automated prompting in smart homes
- 2015 Prafulla Dawadi, Automated functional assessment of smart home residents (*WSU EECS Best PhD Student Award*)
- 2015 Bryan Minor, Prediction of inhabitant activities in smart environments
- 2016 Gina Sprint, Machine learning techniques for automating FIM scores in rehabilitation settings (*WSU EECS Best PhD Student Award, GPSA Research Exposition Scholarship*)
- 2017 Brian Thomas, The science of home automation
- 2017 Jennifer Williams, Investigating the relationship between wake and sleep behavior using activity-aware smart homes
- 2018 Samaneh Aminikhangahi, Real-time detection of multi-scale changes in smart homes
- 2019 Jessamyn Dahmen, Automated health event detection in smart homes
- 2019 Tinghui Wang, Unsupervised multi-resident tracking in smart environments
- 2020 Beiyu Lin, Population-level behavior analysis based on smart environment sensor data
- 2021 Garrett Wilson, Collegial and adversarial transfer learning
- 2022 Iman Mirzadeh (co-advisor), Alleviating catastrophic forgetting in continual learning
- 2023 Alireza Ghods, Creating interpretable data-driven approaches for remote health monitoring
- 2024 Chance DeSmet, Multi-agent GAN to generate privacy-preserving synthetic data
- 2024 Ramesh Sah (co-advisor with Hassan Ghasemzadeh), Wearable systems and machine learning for affect recognition and intervention
- Current Jarren Briscoe (co-advisor with Assefaw Gebremedhin), Machine learning model bias detection and reduction

MS

- 1993 Joey Baumgartner, Genetic solutions to load balancing in parallel computers (*Nominated, National Outstanding Thesis Award*)
- 1994 Shubha Nerur, A hybrid parallel-window / distributed-tree algorithm for improving the performance of planning and search-related tasks
- 1994 Kishore Durg, A decision-theoretic model for optimizing the dynamic tradeoff between communication and failure recovery in multi-agent planning systems
- 1994 Tom Lai, A branch-and-bound graph isomorphism algorithm with application to CAD circuit discovery
- 1994 Viralkumar Bharatia, Design and analysis of multiagent coordination models (*UTA CSE Best Master's Thesis Award*)
- 1995 Tim Roden, A reactive model for multi-agent coordination
- 1995 Vikram Jariwala, Exploring WWW and graphics tools for organization publicity on the Internet
- 1995 Szu-Ling Chuan, Robot motion planning design and implementation
- 1995 Andy Winger, An empirical evaluation of plan reuse in STRIPS / PLANEX
- 1997 Gehad Galal, Design and comparison of parallel and distributed techniques for graph-based knowledge discovery
- 1999 Sudheer Maremanda, A graph visualization tool for data mining
- 1999 Michael Finch, Multiagent decision-theoretic map generation and maintenance
- 1999 Avinash Kumar, Simulation and analysis of frequency allocation algorithms for wireless communication networks
- 1999 Ravi Althuru, Design of a Java/Corba wireless communication network simulator
- 1999 Pratima Rao, Design of a wireless robot communication network
- 1999 Andi Baritchi, Discovering interesting substructures in telecommunications data
- 2000 Praveenrao Kalmadi, An adaptive approach to schedule requests for an on-line robot lab
- 2000 Devaki Chandramouli, Handshaking algorithms for a wireless robot communication network
- 2000 Sona Srinivasan, A CORBA based environment for distributed database access
- 2000 Veena Raja, Development of interestingness criteria for temporal pattern discovery
- 2000 Trivikram Bhat, Data mining of program source code
- 2000 Sriram Subramanian, Data mining in nonuniform distributed databases
- 2000 Nitesh Manocha, Mining the Web link structure using a graph-based discovery system (*UTA CSE Outstanding Master's Thesis Award, UTA University Scholar Award*)
- 2000 Pushpalatha Sreenath, A JAVA-based animation of a substructure discovery algorithm
- 2000 Jyothsna Nayak, Association rule mining in the presence of incomplete and imprecise data

- 2000 Aravind Ginjupalli, A web search engine assistant tool
- 2000 Manish Mehta, Applying reinforcement learning with function approximation techniques to robot soccer
- 2000 Mohammad Islam, Learning hierarchical robot soccer playing strategies
- 2001 Kevin Gee, Extending LSA and NBC text mining algorithm using bigrams and parts of speech
- 2001 Ashwini Kuntamukkala, Development of the WISE simulator environment
- 2001 Jessica Lin, Utility reasoning for a smart home operating as a rational agent (*NSF Graduate Research Fellowship*)
- 2002 Priyath Sandanayake, Learning HMMs for the Wumpus World environment
- 2003 Sira Rao, Predicting user actions in a smart home
- 2003 Ritesh Mehta, Graph-based identification of inhabitants in a smart environment
- 2003 Sriram Rajappa, Interactive biasing in graph-based data mining
- 2003 Phanindra Powmpati, Integrating ontologies into a graph-based data mining system
- 2004 Runu Rathi, Serial partitioning for a graph-based data mining system
- 2005 Gaurav Jain, Monitoring health by detecting drifts and outliers in patterns of an inhabitant in a smart home
- 2005 Robert Hawes, Probabilistic graph-based relational learning
- 2006 Srilatha Inavolu, Stochastic approaches to scaling discovery in graph data
- 2007 Vikramaditya Jakkula, Using temporal relations to enhance anomaly detection and event prediction
- 2009 Geetika Singla, Recognizing ADL initiation and completion in a smart home
- 2009 Jim Kuszniir, CLM as a smart home middleware
- 2011 Yasmin Sahaf, Comparing sensor modalities for activity recognition
- 2011 Raghavendran Srinivasan, Learning relationships between detected activities, sleep patterns, and physiological data
- 2014 Salikh Bagaveyev, Active learning for crowd sourcing
- 2020 Cristian Culman, Energy efficient methods for human activity recognition
- 2021 Yuhui Wang, Creating interpretable time series classifiers

Postdoc

- 2011–2014 Aaron Crandall
- 2012–2013 Narayanan Krishnan
- 2015 Kevin Bouchard
- 2015–2016 Bryan Minor
- 2017–2020 Brian Thomas

Undergraduate Honors Theses

- 2020 Miranda Strickland, Honor's thesis, Analyzing sensor data in the brain health intervention project

*Diane J. Cook, Regents Professor
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Professional Activities

Editor in Chief

2005–2009 IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics

Co-Editor in Chief

2023–present Proceedings of the IEEE

2022–2024 ACM Transactions on Intelligent Systems and Technology

2017–2022 Knowledge and Information Systems

2025–present Transactions on Pervasive Computing and Interaction

Associate Editor

2015–present IEEE Journal of Biomedical and Health Informatics

2022–2024 Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies

2012–2024 ACM Transactions on Knowledge Discovery from Data

2006–2024 IEEE Transactions on Knowledge and Data Engineering

2020–2021 ACM/IMS Transactions on Data Science

2012–2021 ACM Transactions on Intelligent Systems and Technology

2015–2021 Proceedings of the IEEE

2019–2021 ECML Principles Practice of Knowledge Discovery in Databases

2007–2021 Pervasive and Mobile Computing

2009–2018 Ambient Intelligence and Humanized Computing

2011–2017 Knowledge and Information Systems

1999–2004 IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics

Regional Editor

2010–present International Journal of Social Network Mining

Editorial Board

2016–present International Journal of Wearable Device

2015–present Smart Homecare Technology and TeleHealth

2013–present Springer Advanced Information and Knowledge Processing Series

2012–present ICST Transactions on Future Intelligent Educational Environments

2011–present International Journal of Computer Vision and Signal Processing

2010–present Journal of Intelligent Information Systems

2009–present International Journal of Information Technology, Communications and Convergence

2008–present IOS Press book series on Ambient Intelligence and Smart Environments

2008–2015 ICST Transactions on Ubiquitous Environments

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2006–2008 Journal of Artificial Intelligence Research

Guest Editor

- 2025 Neuropsychology, special issue on Artificial Intelligence and Neuropsychology
- 2020 IEEE Computational Intelligence Magazine, special issue on Computational Intelligence for Fighting COVID-19
- 2018 NAI Technology and Innovation, special issue on Technologies for Disabilities (with S. Panchanathan)
- 2017 IEEE Journal of Biomedical and Health Informatics, special issue on Artificial Intelligence and Machine Learning applied to Health Sciences (with F. Javier de Cos Juez)
- 2016 IEEE Journal of Selected Topics in Signal Processing, special issue on Person-Centered Computing (with S. Panchanathan, N. Krishnan, T. McDaniel, and N. O'Connor)
- 2016 IEEE Transactions on Human Machine Systems, special issue on Situation, Activity and Goal Awareness for Human-Machine Systems (with L. Chen, B. Guo, and W. Leister)
- 2016 Neurocomputing, special issue on Ambient Assisted Living (with D. Monekosso and P. Remagnino)
- 2016 Journal of Human-Computer Interaction, special issue on Ambient Interaction (with R. Jose and J. Bravo)
- 2016 Journal of Pervasive and Mobile Computing, special issue on Pervasive Computing for Gerontechnology (with A. Caballero)
- 2016 Journal of Pervasive and Mobile Computing, special issue on PerCom papers (with C. Becker, A. Bulling, and Z. Yu)
- 2013 Journal of Pervasive and Mobile Computing, special issue on Pervasive Health (with Franca Delmastro, Marge Skubic, and Paul Lukowitz)
- 2013 ACM Transactions on Intelligent Systems and Technology, special issue on Intelligent Systems for Socially Aware Computing (with Zhiwen Yu, Daqing Zhang, and Nathan Eagle)
- 2010 Journal of Pervasive and Mobile Computing, special issue on Knowledge-Driven Activity Recognition in Intelligent Environments (with Liming Chen, Chris Nugent, and Zhiwen Yu)
- 2009 Journal of Pervasive and Mobile Computing, special issue on Intelligent Environments
- 2008 Journal of Ambient Intelligence and Smart Environments special issue on Body Area Networks and Ambient Intelligence (with WenZhan Song)
- 2007 Journal of Pervasive and Mobile Computing, special issue on Design and Use of Smart Environments
- 2005 International Journal of Pattern Recognition and Artificial Intelligence, special issue on selected papers from the FLAIRS conference

- 2004 IEEE Pervasive Computing, special issue on selected papers from the Pervasive Computing Conference
- 2001 IEEE Wireless Communications, special issue on Smart Homes (with Sajal K. Das)
- 1998 International Journal of Pattern Recognition and Artificial Intelligence, special issue on selected papers from the FLAIRS conference

Steering Committee

- 2016–present IEEE International Conference on Data Mining
- 2014–present International Conference on Smart Homes and Health Telematics (ICOST)
- 2019 ACM Computing Surveys

Advisory Board

- 2023–present Connected Health and Telemedicine
- 2019–present IEEE Smart World Congress
- 2019–present ACM Computing Surveys
- 2018–present CCF Transactions on Pervasive Computing and Interaction
- 2015–present International Conference on Computational Intelligence and Communication Networks
- 2014–present International Conference on Data Sciences and Advanced Analytics
- 2014–present Ambient Intelligence and Economics
- 2011–present International Conference on Personal Health (pHealth)
- 2011–present International Conference of Hybrid Intelligent Systems
- 2010–present International Workshop on U-Healthcare Technologies and Services
- 2010–present Machine Intelligence Research Labs
- 2009–present The International Conference of Soft Computing and Pattern Recognition
- 2008–present International Conference on Intelligent Systems Design and Applications
- 2008–present International Journal of Life Sciences and Technology
- 2008–present IEEE SMC Technical Committee on Cognitive Computing
- 2008–present Research Unit of Fondazione Cariplo
- 2008–present Nature and Biologically Inspired Computing
- 2007–present Ambient Intelligence and Smart Environments
- 2007–present International Journal of Intelligent Computing and Cybernetics
- 2007–present VM BioSciences Journal
- 2007–present IEEE Conference on Cybernetics and Intelligent Systems

General Chair

- 2022 NSF Smart and Connected Health
- 2016 IEEE International Conference on Smart Computing
- 2013 IEEE International Conference on Data Mining (with Bhavani Thuraisingham)

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- 2012 AAAI Fall Symposium on AI for Gerontechnology (with Parisa Rashidi, Narayanan Krishnan, Marjorie Skubic, and Alex Mihailidis)
- 2011 IEEE International Conference on Pervasive Computing and Communications
- 2011 NSF Workshop on Pervasive Computing at Scale (with Andrew Campbell and Roy Want)
- 2008 International Conference on Intelligent Environments
- 2005 Florida Artificial Intelligence Research Symposium
- 1994 North Texas Natural Language Processing Workshop (with Dan Moldovan)

Program Chair

- 2015 IEEE International Conference on Pervasive Computing and Communications
- 2015 UbiComp Workshop on Human Behavior Understanding
- 2013 International Conference on Ambient Assisted Living
- 2011 IEEE International Conference on Data Mining (with Jian Pei)
- 2009 Special Session on Intelligent Knowledge-Based and Agent-Based Systems at the International Conference on Intelligent Environments
- 2009–2015 Workshop on Artificial Intelligence Techniques for Ambient Intelligence
- 2003 Special Track on Intelligent Environments at the Pervasive Computing Conference
- 2003 Special Track on AI and Education at FLAIRS
- 2001 National Science Foundation Information and Data Management Workshop (with Sharma Chakravarthy)
- 2000 Machine Learning Workshop on Learning From Spatial Information
- 1998 Florida Artificial Intelligence Research Symposium

Program Vice Chair

- 2014 ACM International Conference on Information and Knowledge Management
- 2009–2022 International Conference on Data Mining
- 2013 IEEE International Conference on Tools with Artificial Intelligence

Area Chair / Senior Program Committee

- 2021–present AAAI Conference on Artificial Intelligence (AAAI)
- 2014–present ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)
- 2018–present IEEE International Conference on Data Mining (ICDM)
- 2010–2017 SIAM International Conference on Data Mining
- 2007–2014 Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)
- 2009 International Conference on Tools with AI

Workshop Chair

- 2021 PerCom Workshop on Pervasive Health Technologies

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- 2014 ACM UbiComp Workshop on Smart Health Systems and Applications
- 2014 Recent Advances in Behavior Prediction and Pro-active Pervasive Computing
- 2010 IEEE PerCom Workshop on Smart Environments
- 2009–2010 International Conference on Intelligent Environments

Poster Chair

- 2010 SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)

Tutorial Chair

- 2020 IEEE International Conference on Data Mining

Track Chair

- 2010 ACM Conference on Information and Knowledge Management (CIKM)

Awards Co-Chair

- 2023 AAAI Conference on Artificial Intelligence (AAAI)
- 2015–2023 IEEE International Conference on Data Mining
- 2016–2020 IEEE International Conference on Pervasive Computing and Communications
- 2017 SIAM Conference on Data Mining
- 2017 SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)

PhD Forum Chair

- 2020 IEEE International Conference on Pervasive Computing and Communication

Publicity Chair

- 2016 Data Science and Advanced Analytics

Publication Chair

- 2009 International Conference on Ubiquitous Computing

Industry and Professional Society Liaison

- 2009–2010, IET/IEEE International Conference on Intelligent Environments
- 2015–2020

Tutorial

- 2016 HICSS Tutorial on Gerontechnology (with M. Schmitter-Edgecombe and A. Crandall)
- 2015 AAAI Tutorial on Ambient Intelligence (with Juan Carlos Augusto)
- 2008 IJCAI Tutorial on Ambient Intelligence (with Juan Carlos Augusto)
- 2008 AAAI Tutorial on Ambient Intelligence (with Juan Carlos Augusto and Hans Guesgen)

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

Panelist

- 2024–2028 NIH Clinical Informatics and Digital Health, Standing Panelist
- 2023 NIH Special Emphasis Study Section on Health Services
- 2023 Consumer Electronics Show, Digital Health
- 2011–present National Institutes of Health, multiple study sections
 - 2021 NIH Community Interventions
 - 2020 NSF Science and Technology Centers
 - 2020 NIH Digital Health Solutions to Address COVID-19 Pandemic
 - 2020 NSF Future of Work
 - 2020 University of Balamand
 - 2019 NIH Bioengineering of Neuroscience, Vision, and Low Vision Technologies
- 2019–2023 Science Foundation Ireland
 - 2019 Florida Department of Health Biomedical Research Program
 - 2019 NIH Healthcare and Delivery and Methodologies
 - 2018 Research Foundation, Brussels
 - 2017 NSF Civil Infrastructure Systems
 - 2017 NIH Biomarkers in Parkinsonism
 - 2017 NIH Bioengineering Sciences and Technologies
 - 2017 NIH Trailblazer Award
 - 2017 Research Foundation - Flanders
- 2014–2018 American Association for the Advancement of Science
 - 2016 NIH Precision Medicine Initiative
 - 2016 Foundation for Polish Science
- 2007, 2010, 2013 NSF Engineering Research Center
 - 2012 NSF SHB
 - 2012 NSF SEES
- 2008, 2012 Academy of Finland
 - 2011 NSF REU
 - 2011 National Institutes of Health / Robotics Technology Development and Deployment
 - 2010 NSF CISE
 - 2010 NSF NetSE
 - 2009 NSF EIC
 - 2008 NSF IISProgram
 - 2008 NSF US-India Program for Exploratory Experiences for Researchers and Students
 - 2008 National Research Council
 - 2008 Research Council of Norway

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2007 NSF CAREER
 1998, 2006 Natural Sciences and Engineering Research Council of Canada (NSERC)
 2005 NSF Biomedical Program
 2005 NSF US-Egypt Joint Research Program
 2004 NSF CREST
 2003 NSF Division of Information and Intelligent Systems
 1994–1999, 2001–2003 NSF Division of Information, Robotics, and Intelligent Systems
 2002 NSF ITR
 1999 NSF Large Scientific and Software Data Set Visualization Program
 1996 NSF Division of Cross-Disciplinary Activities
 1996 NSF Site Visit Panelist
 1994 NSF Division of Microelectronic Information Processing Systems

Program Committee

2004–2021 IEEE International Conference on Pervasive Computing and Communication (Per-Com)
 2021 Innovative Applications of Artificial Intelligence (IAAI)
 2019–2020 International Conference on Smart Living and Public Health
 2020 International Workshop on Networking for Smart Living
 2017 IEEE International Conference on Smart Computing
 2017 Workshop on Annotation of User Data for Ubiquitous Systems
 2017 IEEE International Conference on Connected Health
 2017–2019 Workshop on Pervasive Health Technologies
 2017 Pervasive Technologies Related to Assistive Environments Conference
 2017–2020 Workshop on Context and Activity Modeling and Recognition
 2016 SIGKDD Workshop on Mining and Learning from Time Series
 2014–2015 International Conference on Physiological Computing Systems
 2014–2018 International Conference on Sensor Networks
 2014 UbiComp Workshop on Smart Health Systems and Applications
 2012–2015 International Conference on Smart Systems, Devices and Technologies
 2015 International Workshop on Mobile and Context Aware Services
 2016 IEEE International Conference on Connected Health: Applications, Systems, and Engineering Technologies
 2013–2015 IEEE Workshop on Managing Ubiquitous Communications and Services
 2011–2015 International Conference on Pervasive and Embedded Computing and Communication Systems
 2008–2015 International Conference on Agents and Artificial Intelligence
 1991–2023 Florida Artificial Intelligence Research Symposium

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2007–2021 FLAIRS Special Track on Data Mining
 2014 AAAI Conference on Artificial Intelligence
 2014 Global Health
 2014 IEEE International Workshop on Crowdsensing Methods, Techniques, and Applications
 2014–2017 International Conference on Intelligent Environments
 2014 International Conference on Smart Computing
 2014 International Workshop on Recent Advances in Medical Informatics
 2012–2017 International Conference on Ubiquitous Computing and Ambient Intelligence
 2012–2014 International Symposium on Ambient Intelligence
 2005–2014 ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)
 2008–2014 AAMAS Workshop on Human Aspects in Ambient Intelligence
 2003–2017 International Conference on Data Mining (ICDM)
 2008–2013 IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing
 2013 IEEE World Congress on Computational Intelligence
 2011–2013 International Conference on Advanced Data Mining and Applications
 2010–2013 International Conference on Advances in Social Networks Analysis and Mining
 2013 Storage and Trends for an Aging Population
 2013 International Conference on Health Informatics
 2001–2013 IEEE International Conference on Tools with Artificial Intelligence
 2003–2018 International Conference on Smart Homes and Health Telematics (ICOST)
 2012 EvAAL Activity Recognition Competition
 2011–2012 International Workshop on Situation, Activity and Goal Awareness
 2011 International Conference on Machine Learning and Applications
 2011 International ICST Conference on Mobile and Ubiquitous Systems: Computing, Networking, and Services (MobiQuitous)
 2011 IEEE International Conference on Cyber, Physical and Social Computing
 2011 IEEE PerCom Workshop on Smart Environments (SmartE)
 2011 International Symposium in Ambient Intelligence
 2011 KDD Workshop on Mining and Learning with Graphs
 2010–2011 KDD Workshop on Mining and Learning with Graphs
 2010–2011 IAPR Workshop on Graph-based Representations in Pattern Recognition
 2009–2011 International Workshop on Knowledge Discovery from Sensor Data
 2006–2018 International Joint Conference on Artificial Intelligence (IJCAI)
 2010 IEEE International Conference on Pervasive Intelligence and Computing
 2010 IEEE PerCom Workshop on Pervasive Healthcare

2010 IEEE WoWMom Workshop on Interdisciplinary Research on E-Health Services and Systems
 2008–2010 IEEE International Symposium on Intelligent Agents
 2010 Mexican International Conference on Artificial Intelligence
 2012 Pervasive Workshop on Recent Advances in Behavior Prediction and
 2012–2013 Pro-Active Pervasive Computing
 2011 Portuguese Conference on Artificial Intelligence
 2011–2020 Symposium on Educational Advances in Artificial Intelligence
 2012 Workshop on Behavior Informatics
 2014 Workshop on Behavior Prediction and Pro-Active Pervasive Computing
 2012 Workshop on Future Intelligent Educational Environments
 2009 IEEE Symposium on Intelligent Agents
 2009 International Symposium on Ubiquitous Applications and Security Services
 2007–2009 International Symposium on Ubiquitous Computing Systems
 2008 Cognitive Collaborative Appliances Workshop
 2007–2008 International Conference on Multimedia and Ubiquitous Engineering
 2006–2007 HTL-NAACL Workshop on Graph-Based Algorithms for Natural Language Processing
 2001–2007 FLAIRS Special Track on Machine Learning
 2007 International Conference on Pervasive Technologies for Assistive Living
 2007 International Workshop on Mining and Learning with Graphs
 2003–2020 Innovative Applications of Artificial Intelligence Conference (IAAI)
 2003–2007 International Conference on Systems, Man and Cybernetics
 2006 IJCAI Workshop on Artificial Intelligence Techniques for Ambient Intelligence
 2006 IEEE Emerging Technologies Conference
 2003–2006 International Conference on Machine Learning (ICML)
 2005 ICDM Workshop on Multi-Agent Data Warehousing and Multi-Agent Data Mining
 2005 KDD Workshop on Anomaly Detection
 2002–2005 KDD Workshop on Multi-relational Data Mining
 2005–2006 KDD Workshop on Link Discovery and Group Detection
 2004 Iberoamerican Workshop on Machine Learning for Scientific Data Analysis
 2004 Canadian Conference on Artificial Intelligence
 2004 CODATA International Workshop on Motion and Vital Data Acquisition
 2004 ECML/PKDD Workshop on Graph, Tree, and Sequence Mining and Learning
 2004 FLAIRS Special Track on AI and Education
 2004 FLAIRS Special Track on Machine Learning for Planning
 2003 First International Workshop on Mobile Distributed Computing
 2001–2002 International Conference on Discovery Science
 2002 International Joint Conference on Autonomous Agents & Multi-Agent Systems
 2001 Conference on Systems, Cybernetics and Informatics

- 2001 FLAIRS Special Track on Knowledge Discovery and Data Mining
- 2001 International Conference on Intelligent Systems
- 2001 International Workshop on Bioinformatics in Data Mining (BIOKDD)
- 2001 Workshop on the Predictive Toxicology Challenge
- 2000 International Joint Conference on Neural Networks
- 2000 Southern Conference on Computing
- 1998–2000 International Conference on Intelligent Systems for Molecular Biology
- 1999–2000 Pacific Symposium on Biocomputing
- 1999 FLAIRS Special Track on Parallel and Distributed Reasoning
- 1998 International Conference on Artificial Intelligence in Design
- 1998 International Conference on Industrial and Engineering Applications of AI and Expert Systems
- 1993 ACM Symposium on Applied Computing
- 1992 Artificial Intelligence in Design Conference Series
- 1991 Conference on Applications for Artificial Intelligence

Member

- American Association for the Advancement of Science
- American Association for Artificial Intelligence
- Institute of Electrical and Electronics Engineers (Fellow)
- Association for Computing Machinery
- Future Technology Research Association International (FTRA)
- Phi Beta Delta
- IEEE Systems, Man, and Cybernetics Society Board of Governors
- IEEE Task Force on Intelligent Agents
- IEEE Task Force on Emergent Technologies
- IEEE CIS Intelligent Systems and Applications
- IEEE CIS Emergent Technology Technical Committee
- IEEE CS Fellow Evaluation Committee
- Founding Member, IEEE Working Group on IoT-based Wearable Computing Systems
- Alzheimer's Association Work Group on Technology
- Sigma Xi

Invited Talks

- 2025 Invited talk, Arizona State University
- 2024 Invited talk, National Academies of Sciences, Engineering, and Medicine, <https://nap.nationalacademies.org/catalog/27784/preventing-and-treating-alzheimers-disease-and-related-dementias-promising-research-and-opportunities-to-accelerate-progress>

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2024 Invited talk, University of Washington
 2024 Invited talk, Washington State Alzheimer's and Dementia Research Network
 2023 Invited talk, Imperial College London
 2023 Keynote, AAAI Workshop on AI for At-Home Tasks
 2023 Invited talk, Project Sustainability Podcast
 2023 Invited talk, MassAITC Seminar, University of Massachusetts
 2023 Invited talk, AI and Data Science Seminar, University of Georgia
 2022 Keynote, IEEE/ACM International Conference on Utility and Cloud Computing, Vancouver, WA
 2022 Invited talk, Cornell University, Ithaca, NY
 2022 Keynote, IEEE BHI-BSN Conference
 2022 Keynote, FAU ADRD Symposium
 2022 Invited talk, University of Denver, Knoebel Institute for Healthy Aging
 2022 Invited talk, International Conference on Data Mining panel, Orlando, FL
 2022 Invited talk, AIAI Seminar, University of Edinburgh, Edinburgh
 2022 Invited talk, University of Texas, Austin, TX
 2021 Invited talk, NIH Behavioral and Social Sciences Research Festival, Bethesda, MD
 2021 Invited talk, Mark Rochon Distinguished Lecture Series, Toronto Rehabilitation Institute, Toronto, Canada
 2021 Invited talk, University of Rochester, Rochester, NY
 2021 Invited talk, Missouri University of Science and Technology, Rolla, MO
 2021 Invited talk, Texas A&M University, College Station, TX
 2021 Invited talk, Ulster University, Newtonabbey County, Ireland
 2021 Invited talk, CAS Seminar Series, McMaster University, Ontario, Canada
 2020 Keynote, International Conference on Data Mining, Sorrento, Italy
 2020 Keynote, IEEE BigData Workshop on Data Analytics for Smart Health, Atlanta, GA
 2020 Keynote, International Conference on Internet of Things, Malmo, Sweden
 2020 Keynote, IEEE International Conference on Pervasive Computing and Communications, Austin, TX
 2020 ECE Distinguished Seminar, Rice University, Houston, TX
 2020 AI Seminar Series, University of South Florida, Tampa, FL
 2019 National Academies of Sciences, Engineering, and Medicine and National Institutes on Aging, Bethesda, MD
 2019 National Institutes of Health, Bethesda, MD
 2019 TECHSevern: Using Technology in Housing and Adult Social Care, Shrewsbury, UK
 2018 NINR Precision Health: Smart Technologies, Smart Health Symposium, Bethesda, MD
 2018 Washington State Hospital Association Annual Meeting, Seattle, WA
 2018 University of Texas, Building Energy and Environments, Austin, TX

2018 WSU CIRC, Pullman, WA
 2017 National Academy of State Health Policy, Portland, OR
 2017 ICAMPAM, National Institutes of Health, Bethesda, MD
 2017 University of Texas, Austin, TX
 2016 Housing Options Must Exist, Portland, OR
 2016 Inland Northwest Movement Disorders Society, Spokane, WA
 2016 National Academy of Neuropsychology Conference, Seattle, WA
 2014 Brigham Young University Machine Learning Colloquium Series, Provo, UT
 2013 IFA Berlin 2014, Panel on Smart Home Technologies
 2012 Consumer Communications and Networking Conference, Las Vegas, NV
 2011 UW/WSU Board of Regents, Seattle, WA
 2011 International Conference on Smart Homes and Health Telematics, Montreal, Canada
 2010 Innovation in the Age of Reform, Swedish 100th Anniversary Symposium, Seattle, WA
 2009 Orcatech, Portland, OR
 2009 Kiwanis, Pullman, WA
 2008 University of Idaho, Moscow, ID
 2008 International Conference on Supportive Technology and Design for Healthy Aging, Portland, OR
 2008 WSU Vancouver Chancellor's Seminar Series, Vancouver, WA
 2008 The Innovators, Seattle, WA
 2008 International Conference on Body Area Networks, Phoenix, AZ
 2005 Mid-Cities Technical Club, Dallas, TX
 2004 University of North Texas, Denton, TX
 2004 Arlington Rotary Club, Arlington, TX
 2003 Southern Methodist University, Dallas, TX
 2002 First International Workshop on Distributed Computing with Agent Technologies, Austin, TX
 2002 Dallas Group for Ergonomics and Human Factors, Dallas, TX
 2002, 2006 Texas Society of Professional Engineers, Dallas, TX
 2001 National Institute of Standards and Technologies, Gaithersburg, MD
 2001 International Business Machines Watson Research Center, Yorktown Heights, NY
 2001 University of Texas at Dallas, Dallas, TX
 2000 International Business Machines, New York City, NY
 2000 SABRE Corporation, Dallas, TX
 1997 International Symposium on Computer Science, Torreon, Coahuila, Mexico
 1995 International Parallel Processing Symposium, Santa Barbara, CA
 1994 IEEE Robotics and Automation Conference, Workshop on Ideal Factory of the Future, San Diego, CA

2002 Workshop on Distributed Computing and Agent Technologies, Dallas, TX
1995, 1996, Metrocon, Dallas, TX
2002
1993 MIND Workshop, Dallas, TX
1992 NTAAI Workshop, Arlington, TX

Faculty Advisor

2019–2020 Tau Beta Pi
2017–2019 WSU Robotics Club
1995–2000 Autonomous Vehicles Systems Team
1995–2000 UTA Honor's Program in Parallel Processing
1995–1997 UTA Kung Fu Club
1993–1997 Society of Professional Hispanic Engineers
1993–2001 Society of Women Engineers