

Julie A. Adams

Curriculum Vitae

August 1, 2011

Associate Professor of Computer Science
Associate Professor of Computer Engineering
Department of Electrical Engineering and Computer Science
Vanderbilt University
julie.a.adams@vanderbilt.edu
www.vuse.vanderbilt.edu/adamsja/

VU Station B #351824
Nashville, TN 37235, USA
Tel.: (615) 322-8481
Fax: (615) 343-5459

RESEARCH INTERESTS

My research interests are in the areas of human-robotic interaction and distributed artificial intelligence for multiple robot teams. My human-robotic interaction research focuses on designing and developing interaction and visualization capabilities that permit a single human to supervise a large number of heterogeneous robots. In particular, my research has focused on developing visualization algorithms that integrate feedback from multiple types of robotic platforms, external data sources, and humans into a system of interfaces that support a spectrum of human-robotic interaction roles. My research in the area of artificial intelligence develops distributed multiple heterogeneous robot algorithms that support human supervisors' decision making tasks, particularly in cognitively demanding and high workload situations. This work has centered on the development and deployment of coalition formation algorithms for real robot applications, such as mass casualty event response. I am also developing capabilities that allow robots to gain situation awareness and use that awareness to determine future actions and behaviors in dynamic, uncertain mission environments.

EDUCATION

University of Pennsylvania, Philadelphia, PA

- PH.D. IN COMPUTER AND INFORMATION SCIENCES, 1995
- MASTER OF SCIENCE IN ENGINEERING IN COMPUTER AND INFORMATION SCIENCES, 1993

Siena College, Loudonville, NY

- BACHELORS OF BUSINESS ADMINISTRATION IN ACCOUNTING, MAGNA CUM LAUDE, 1990
- BACHELORS OF SCIENCE IN COMPUTER SCIENCE, BUSINESS MINOR, 1989

PROFESSIONAL EXPERIENCE

Vanderbilt University, Department of Electrical Engineering and Computer Science, Nashville, TN

Associate Professor, September 2010 - present

Assistant Professor, September 2003 - August 2010

Research Assistant Professor, August 2002 - August 2003

Kansas State University, Department of Computing and Information Science, Manhattan, KS

Adjunct Professor, June 2007 - present

Rochester Institute of Technology, Department of Computer Science, Rochester, NY

Assistant Professor, September 2000 - May 2003

Cornell University, Sibley School of Mechanical and Aerospace Engineering, Ithaca, NY
Visiting Assistant Professor, June 2002 - August 2002

Eastman Kodak Company, Rochester, NY
Senior Applications Engineer, Engineering Systems Division, November 1999 - August 2000
Senior Human Factors Engineer, Center for Design and Usability, October 1996 - November 1999

University of Rochester, Department of Computer Science, Rochester, NY
Adjunct Professor, January 1999 - May 2000

Honeywell, Inc., User Centered Design Group, Minneapolis, MN
Research Associate, September 1995 - October 1996

University of Pennsylvania, Philadelphia, PA
Research Assistant, Department of Computer Science, General Robotics, Automation, Sensing and Perception Laboratory, May 1992 - August 1995
Research Scientist/Programmer, Center for Bioinformatics, September 1991 - May 1993

Unisys, Human Genome Project, Paoli, PA
Research Scientist/Programmer, June 1991 - August 1991

Allied-Signal Bendix, FMD, Corporate Accounting Department, Albany, NY
Fixed-Asset and Capital Projects Accountant, April 1988 - June 1990

HONORS AND AWARDS

- National Science Foundation (NSF) Faculty Early Career Development Award (CAREER), 2007-2011.
- Outstanding Service Award (Vice President of Long Range Planning and Finance), IEEE Systems, Man and Cybernetics Society, 2007.
- Distinguished Service Award, 2004 IEEE Conference on Information Reuse and Integration, 2004.
- Outstanding Service Award (Treasurer), IEEE Systems, Man and Cybernetics Society, 2002.
- ASEE/NASA Summer Faculty Fellowship, NASA Johnson Space Center, 2001.
- Senior Member, Institute of Electrical and Electronics Engineers (IEEE), September 2001.
- International Who's Who of Information Technology, 1999.
- GOLD Representative, Rochester IEEE Section, IEEE-USA PACE Conference, 1998.
- National Science Foundation (NSF) Summer Institute in Japan, 1994.

PROFESSIONAL AFFILIATIONS

- Institute of Electrical and Electronics Engineers (IEEE).
- Association of Computing Machinery (ACM).
- Association for the Advancement of Artificial Intelligence (AAAI).
- Human Factors and Ergonomics Society (HFES).

PUBLICATIONS (Student co-authors are underlined)**Refereed Journal Publications**

- J1. T. C. Service and **J. A. Adams**, (Accepted) "Randomized Coalition Structure Generation," *Artificial Intelligence*.
- J2. S. T. Freedman and **J. A. Adams**, (2011) "Filtering Data Based on Human-Inspired Forgetting," *IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics*, DOI: 10.1109/TSMCB.2011.2157142.
- J3. R. Voyles and **J. A. Adams**, (2011) "Editorial: Security, Search and Rescue Robotics," *Journal of Intelligent Robotic Systems*, DOI: 10.1007/s10846-011-9613-1.
- J4. T. Zhang and **J. A. Adams**, (2011) "Evaluation of a Geospatial Annotation Tool for Unmanned Vehicle Specialist Interface," *International Journal of Human-Computer Interaction*, DOI: 10.1080/10447318.2011.590122.
- J5. C. M. Humphrey and **J. A. Adams**, (2011) "Analysis of Complex, Team-based Systems: Augmentations to Goal-Directed Task Analysis and Cognitive Work Analysis," *Theoretical Issues in Ergonomics*, 12(2):149-175, DOI: 10.1080/14639221003602473.
- J6. T. C. Service and **J. A. Adams**, (2011) "Constant Factor Approximation Algorithms for Coalition Structure Generation", *Autonomous Agents and Multi-Agent Systems*, 23(1):1-17, DOI: 10.1007/s10458-010-9124-7.
- J7. T. C. Service and **J. A. Adams**, (2010) "Coalition Formation for Task Allocation: Theory and Algorithms", *Autonomous Agents and Multi-Agent Systems*, 22(2):225-248, DOI: 10.1007/s10458-010-9123-8.
- J8. C. M. Humphrey, and **J. A. Adams**, (2010) "General Visualization Abstraction Algorithm for Directable Interfaces: Component Performance and Learning Effects," *IEEE Transactions on Systems, Man and Cybernetics: Part A - Systems and Humans*, 40(6):1156-1167, DOI: 10.1109/TSMCA.2010.2052604.
- J9. M. A. Goodrich, B. S. Morse, C. Engh, J. L. Cooper, and **J. A. Adams** (2009) "Towards Using UAVs in Wilderness Search and Rescue: Lessons from Field Trials," *Interaction Studies, Special Issue on Robots in the Wild: Exploring Human-Robot Interaction in Naturalistic Environments*, 10(3):453-478, DOI:10.1075/is.10.3.08goo.
- J10. C. M. Humphrey and **J. A. Adams** (2009) "Robotic Tasks for CBRNE Incident Response," *Journal of Advanced Robotics, Special Issue on Disaster Response Robotics*, 23: 1217-1232. DOI:10.1163/156855309X452502.
- J11. **J. A. Adams**, C. M. Humphrey, M. A. Goodrich, J. L. Cooper, B. S. Morse, C. Engh, and N. Rasmussen (2009) "Cognitive Task Analysis for Developing UAV Wilderness Search Support," *Journal of Cognitive Engineering and Decision Making*, 3(1): 1-26. DOI 10.1518/155534309X431926.
- J12. **J. A. Adams** (2009) "Multiple Robot-Single Human Interaction: Affects on Perceived Workload and Performance," *Behaviour & Information Technology*, 28(2): 183-198, DOI: 10.1080/01449290701288791.
- J13. M. A. Goodrich, B. S. Morse, D. Gerhardt, J. L. Cooper, M. Quigley, C. Humphrey, and **J. A. Adams** (2008) "Supporting Wilderness Search and Rescue using a Camera-Equipped Mini UAV," *Journal of Field Robotics, Special Issue on Safety, Security, and Rescue Robotics*, 25(1-2): 89-110. DOI: 10.1002/rob.20226.
- J14. P. Rani, N. Sarkar, and **J. A. Adams** (2007) "Anxiety-based affective communication for implicit human-machine interaction," *Advanced Engineering Informatics*, 21(3):323-334. DOI: 10.1016/j.aei.2006.11.009.
- J15. L. Vig and **J. A. Adams** (2007) "Coalition Formation: From Software Agents to Robots," *Journal of Intelligent Robotic Systems*, 50(1): 85-118. DOI: 10.1007/s10846-007-9150-0.

- J16. L. Vig and **J. A. Adams** (2006) "Multi-Robot Coalition Formation," *IEEE Transactions on Robotics*, 22(4): 637-649. DOI: 10.1109/TRO.2006.878948.
- J17. **J. A. Adams** (2006) "Supporting Supervision of Multiple Robots," *The Journal of the Robotics Society of Japan*. 24(5): 17-19.
- J18. **J. A. Adams** and M. Skubic (2005) "Introduction to the Special Issue on Human-Robotic Interaction," *IEEE Transactions on Systems, Man and Cybernetics - Part A, Special Issue on Human-Robotic Interaction*, 35(4): 433-437. DOI: 10.1109/TSMCA.2005.850577.
- J19. M. Skubic, S. Blisard, C. Bailey, **J. A. Adams**, and P. Matsakis (2004) "Qualitative Analysis of Sketched Route Maps: Translating a Sketch into Linguistic Descriptions," *IEEE Transactions on Systems, Man and Cybernetics - Part B*, 34(2): 1275-1282. DOI: 10.1109/TSMCB.2003.817099.
- J20. **J. A. Adams**, R. Bajcsy, J. Kosecka, V. Kumar, R. Mandelbaum, M. Mintz, R. Paul, C.-C. Wang, Y. Yamamoto, and X. Yun (1996) "Cooperative Material Handling by Human and Robotic Agents: Module Development and System Synthesis," *Expert Systems with Applications*, Pergamon, 11(2): 89-97. DOI: 10.1016/0957-4174(96)00036-X.
- J21. G. C. Overton, J. S. Aaronson, J. Hass, and **J. Adams** (1994) "QGB: A System for Querying Sequence Database Fields and Features," *Computational Biology*, 1(1): 3-13. PMID: 8790449.

Selective Conference Publications

(Acceptance Based on Peer Review of Full Paper/Acceptance Rate \leq 40%)

- CS1. C. E. Harriott, T. Zhang and **J. A. Adams** (2011) "Evaluating the Applicability of Current Models of Workload to Peer-Based Human-Robot Teams," *Proceedings of the 6th ACM/IEEE International Conference on Human-Robot Interaction*, pp. 45-52, DOI: 10.1145/1957656.1957670.
- CS2. T. C. Service and **J. A. Adams** (2010) "Approximate Coalition Structure Generation," *Proceedings of the 24th AAAI Conference on Artificial Intelligence*, pp. 854-859, DOI: .
- CS3. L. Vig and **J. A. Adams** (2009) "The Effect of Coalition Imbalance on Multi-Robot Teams," *Proceedings of the 4th Indian International Conference on Artificial Intelligence*, pp. 603-615, DOI: .
- CS4. C. Humphrey and **J. A. Adams** (2008) "Compass Visualization for Human-Robotic Interaction," *Proceedings of the 3rd ACM/IEEE International Conference on Human-Robot Interaction*, pp. 49-56, DOI: 10.1145/1349822.1349830.
- CS5. C. M. Humphrey, C. Henk, G. Sewell, B. Williams, and **J. A. Adams** (2007) "Assessing the Scalability of a Multiple Robot Interface," *Proceedings of the 2nd ACM/IEEE International Conference on Human-Robot Interaction*, pp. 239-246, DOI: 10.1145/1228716.1228749.
- CS6. S. Singh and **J. A. Adams** (2006) "Transfer of Learning for Complex Task Domains: A Demonstration using Multiple Robots," *Proceedings of the 2006 IEEE International Conference on Robotics and Automation*, pp. 3332-3337, DOI: 10.1109/ROBOT.2006.1642210.
- CS7. L. Vig and **J. A. Adams** (2005) "A Framework for Multi-Robot Coalition Formation," *Proceedings of the 2nd Indian International Conference on Artificial Intelligence*, pp. 347-363.
- CS8. R. Olivares, C. Zhou, R. Bodenheimer, and **J. A. Adams** (2003) "Interface Evaluation for Mobile Robot Teleoperation," *Proceedings of the 41st Annual ACM Southeast Conference*, pp. 112-118, DOI: 10.1.1.9.8009.

Refereed Conference Publications (Acceptance Based on Peer Review of Full Paper)

- C1. E. R. Hooten and **J. A. Adams** (2011 - to appear) "A Comparison of Mouse and Touch Input for Mobile, Map-Based Interfaces," *Proceedings of the 2011 IEEE International Conference on Systems, Man and Cybernetics*.
- C2. E. R. Hooten, S. T. Hayes and **J. A. Adams** (2011 - to appear) "A Comparison of Communicative Modes for Map-Based Tasking," *Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society*.
- C3. S. T. Hayes, E. R. Hooten and **J. A. Adams** (2011 - to appear) "Visually-Cued Touch Gestures for Accurate Mobile Interaction," *Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society*.
- C4. C. E. Harriott, T. Zhang and **J. A. Adams** (2011) "Predicting and Validating Workload in Human-Robot Teams," *Proceedings of the 20th Conference on Behavior Representation in Modeling and Simulation*, pp. 162-169.
- C5. T. C. Service and **J. A. Adams** (2010) "Anytime Dynamic Programming for Coalition Structure Generation," Short paper, Poster Presentation, *Proceedings of the 9th International Conference on Autonomous Agents and Multiagent Systems*, pp.1411-1412.
- C6. S. T. Freedman and **J. A. Adams** (2009) "Human-Inspired Robotic Forgetting: Filtering to Improve Estimation Accuracy," *Proceedings of the 14th IASTED International Conference on Robotics and Applications*, pp. 434-441.
- C7. C. M. Humphrey and **J. A. Adams** (2009) "General Visualization Abstraction Algorithm for Geographic Map-based Human-Robot Interfaces," *Proceedings of the 2009 Human Factors and Ergonomics Society 53rd Annual Meeting*, pp. 970-974, DOI: 10.1145/1514095.1514180.
- C8. C. M. Humphrey, S. R. Motter, **J. A. Adams** and M. Gonyea (2009) "A Human Eye Like Perspective for Remote Vision," *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, pp. 1712-1717, DOI: 10.1109/ICSMC.2009.5346911.
- C9. T. P. English, D. J. Shampine, C. G. Muniak, **J. A. Adams**, and E. W. Kratovil (2008) "The Safety of Unmanned Systems: The Development of Safety Precepts for Unmanned Systems (UMS)," *Proceedings of the 26th International System Safety Conference*. Paper length: 13 pages.
- C10. T. P. English, D. J. Shampine, **J. A. Adams**, C. G. Muniak, and E. W. Kratovil (2008) "The Safety of Unmanned Systems: The Development of Safety Precepts for Unmanned Systems (UMS)," *Proceedings of the 13th International Command and Control Research and Technology Symposium*. Paper length: 29 pages.
- C11. **J. A. Adams** and S. T. Freedman (2007) "Unmanned System Autonomy, Situation Awareness, and System Safety," *Proceedings of the 25th International System Safety Conference*, pp. 800-810, DOI: 10.1109/ICSMC.2007.4414129.
- C12. M. A. Goodrich, J. L. Cooper, **J. A. Adams**, C. Humphrey, R. Zeeman, and B. G. Buss (2007) "Using a Mini-UAV to Support Wilderness Search and Rescue: Practices for Human-Robot Teaming," *Proceedings of the IEEE International Workshop on Safety, Security and Rescue Robotics*, pp. 1-6, DOI: 10.1109/SSRR.2007.4381284.
- C13. S. T. Freedman and **J. A. Adams** (2007) "The Inherent Components of Unmanned Vehicle Situation Awareness," *Proceedings of the 2007 IEEE International Conference on Systems, Man and Cybernetics*, pp. 973-977, DOI: 0.1109/ICSMC.2007.4414129.
- C14. **J. A. Adams** (2007) "Unmanned Vehicle Situation Awareness: A Path Forward," *Proceedings of the 2007 Human Systems Integration Symposium*. Paper length: 11 pages.
- C15. L. Vig and **J. A. Adams** (2006) "Market-based Multi-Robot Coalition Formation," *Proceedings of the 8th International Symposium on Distributed Autonomous Robotic Systems*, M. Gini & R. Voyles (Eds.), Springer, pp. 227-236, DOI: 10.1007/4-431-35881-12.3.

- C16. I. C. Envarli and **J. A. Adams** (2005) "Task Lists for Human-Multiple Robot Interaction," *Proceedings of the 14th IEEE International Symposium on Robot and Human Interactive Communication*, pp. 119-124, DOI: 10.1109/ROMAN.2005.1513767.
- C17. **J. A. Adams**, and H. Kaymaz-Keskinpala (2004) "Analysis of Perceived Workload when using a PDA for Mobile Robot Teleoperation," *Proceedings of the 2004 IEEE International Conference on Robotics and Automation*, pp. 4128-4133, DOI: 10.1109/ROBOT.2004.1308919.
- C18. L. Chamberlain, J. Tang, M. Watugala, **J. A. Adams** and M. Babish (2003) "A Behavioral Architecture for Strategy Execution in the RoboFlag Game," *Proceedings of the American Controls Conference*, pp. 672-677, DOI: 10.1109/ACC.2003.1239097.
- C19. **J. A. Adams** and A. T. Hayes (2003) "The RoboFlag SURF Competition: Results, Analysis, and Future Work," *Proceedings of the American Controls Conference*, pp. 678-682, DOI: 10.1109/ACC.2003.1239098.
- C20. R. P. Paul, C. P. Sayers, and **J. A. Adams** (1995) "Operobotics," *Proceedings of the International Symposium on Microsystems, Intelligent Materials and Robotics*.
- C21. **J. A. Adams**, R. Bajcsy, J. Kosecka, V. Kumar, R. Mandelbaum, M. Mintz, R. Paul, C.-C. Wang, Y. Yamamoto, and X. Yun (1995) "Cooperative Material Handling by Human and Robotic Agents: Module Development and System Synthesis," *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 200-205, DOI: 10.1109/IROS.1995.525797.
- C22. **J. A. Adams** and R. P. Paul (1994) "Human-Managed, Hierarchical Control of Multiple Mobile Agents," *Proceedings of the 33rd IEEE Conference on Decision and Control*, pp. 3524-3529, DOI: 10.1109/CDC.1994.411693.

Conference Publications (Acceptance Based on Review of Extended Abstract)

- CE1. C. E. Harriott and **J. A. Adams** (2010) "Human Performance Moderator Functions for Human-Robot Peer-Based Teams," Short paper, Poster Presentation, *Proceedings of the 5th ACM/IEEE International Conference on Human-Robot Interaction*, pp. 151-152, DOI: 978-0-9826571-1-9.
- CE2. S. T. Hayes, E. R. Hooten and **J. A. Adams** (2010) "Multi-Touch Interaction for Tasking Robots," Short paper, Poster Presentation, *Proceedings of the 5th ACM/IEEE International Conference on Human-Robot Interaction*, pp. 97-98, DOI: 10.1145/1734454.1734490.
- CE3. D. T. Levin, M. Saylor and **J. A. Adams** (2009) "The Role of Concepts About Agency in Perceiving and Conceptualizing Actions," Abstract only, *Proceedings of the 50th Annual Meeting of the Psychonomic Society*.
- CE4. C. M. Humphrey and **J. A. Adams** (2009) "General Visualization Abstraction Algorithm for Geographic Map-based Human-Robot Interaction," Late Breaking, short papers, *Proceedings of the 4th ACM/IEEE International Conference on Human-Robot Interaction*, pp. 289-290, DOI: 10.1145/1514095.1514180.
- CE5. C. M. Humphrey, S. M. Gordon, and **J. A. Adams** (2006) "Robotic Team Visualization," *Proceedings of the 2006 Human Factors and Ergonomics Society 50th Annual Meeting*, pp. 651-655, DOI: .
- CE6. **J. A. Adams** (2005) "Human-Robot Interaction Design: Understanding User Needs and Requirements," *Proceedings of the 2005 Human Factors and Ergonomics Society 49th Annual Meeting*, pp. 447-451.
- CE7. H. Kaymaz-Keskinpala and **J. A. Adams** (2004) "Objective Data Analysis for PDA-Based Human-Robot Interaction," *Proceedings of the 2004 IEEE International Conference on Systems, Man and Cybernetics*, pp. 2809-2814, DOI: 10.1109/ICSMC.2004.1400758.
- CE8. S. Shankar, L. Su, Y. Jin, **J. A. Adams**, and B. Bodenheimer (2004) "Comparing the Usability of Enhanced RoboFlag Interfaces," *Proceedings of the 2004 IEEE International Conference on Systems, Man and Cybernetics*, pp. 2815-2820, DOI: 10.1109/ICSMC.2004.1400759.
- CE9. J. Phillips, S. Kogekar, and **J. A. Adams** (2004) "Emergency Automated Response System (EARS)," *Proceedings of the 2004 Human Factors and Ergonomics Society 48th Annual Meeting*, pp. 851-856.

- CE10. S. Shankar, Y. Jin, **J. A. Adams**, and B. Bodenheimer (2004) "Enhancing RoboFlag Users' Situational Awareness," *Proceedings of the 2004 Human Factors and Ergonomics Society 48th Annual Meeting*, pp. 356-360.
- CE11. P. Rani, N. Sarkar, C. A. Smith, and **J. A. Adams** (2003) "Affective Communication for Implicit Human-Machine Interaction," *Proceedings of the 2003 IEEE International Conference on Systems, Man and Cybernetics*, pp. 4896-4903, DOI: 10.1109/ICSMC.2003.1245758.
- CE12. C. A. Johnson, **J. A. Adams**, and K. Kawamura (2003) "Evaluation of an Enhanced Human-Robot Interface," *Proceedings of the 2003 IEEE International Conference on Systems, Man and Cybernetics*, pp. 900-905, DOI: 10.1109/ICSMC.2003.1243929.
- CE13. H. Kaymaz-Keskinpala, **J. A. Adams**, and K. Kawamura (2003) "PDA-Based Human-Robotic Interface," *Proceedings of the 2003 IEEE International Conference on Systems, Man and Cybernetics*, pp. 3931-3936, DOI: 10.1109/ICSMC.2003.1244502.
- CE14. K. Kawamura, P. Nilas, K. Muguruma, **J. A. Adams**, and C. Zhou (2003) "An Agent-Based Architecture for an Adaptive Human-Robot Interface," *Proceedings of the 36th Hawaii International Conference on System Science*, pp. 126-133, DOI: 10.1109/HICSS.2003.1174288.
- CE15. **J. A. Adams** (2001) "The Feasibility of Distributed Web Based Expert Systems," panel session position paper, *Proceedings of the 2001 IEEE International Conference on Systems, Man and Cybernetics*.
- CE16. **J. A. Adams** and C. Reynolds (2000) "Complex Systems for Abnormal Situation Management of Complex Chemical Processes," *Proceedings of the 2000 IEEE International Conference on Systems, Man, and Cybernetics*, pp. 1959 - 1964, DOI: 10.1109/ICSMC.2000.886401.
- CE17. **J. A. Adams**, A. Bopp, D. Kinney, J. Larmann, and C. Reynolds (2000) "Combining Engineering Knowledge Across Continents," Eastman Kodak Engineering Conference, Rochester, N.Y.
- CE18. **J. A. Adams** (1999) "Applying User Feedback during the Product Design," *Proceedings of the 43rd Human Factors and Ergonomics Society Annual Meeting*, pp. 1080-1084.
- CE19. **J. A. Adams** (1997) "Employing MASC to Control Multiple Mobile Robots," *Proceedings of the American Nuclear Society Seventh Topical Meeting on Robotics and Remote Systems*, pp. 990-997.
- CE20. **J. A. Adams** and R. P. Paul (1996) "Experimental Analysis of the Mediation Hierarchy Theory," *Proceedings of the 1996 IEEE International Conference on Systems, Man and Cybernetics*, pp. 544-549, DOI: 10.1109/ICSMC.1996.569850.
- CE21. R. P. Paul, C. P. Sayers, and **J. A. Adams** (1995) "Operator Control of Robotic Systems," *Proceedings of the International Symposium on Robotics Research*.
- CE22. **J. A. Adams** and R. P. Paul (1995) "Human Supervisory Control of Multiple Mobile Robots," *Proceedings of the 1995 IEEE International Conference on Systems, Man and Cybernetics*, pp. 3298-3303, DOI: 10.1109/ICSMC.1995.538294.
- CE23. **J. A. Adams** and R. P. Paul (1994) "Human Management of a Hierarchical Control System for Multiple Mobile Agents," *Proceedings of the 1994 IEEE International Conference on Systems, Man and Cybernetics*, pp. 2780-2785, DOI: 10.1109/ICSMC.1994.400294.

Book Chapters

- B1. L. Vig and **J. A. Adams** (2005) "Issues in Multi-Robot Coalition Formation," *Multi-Robot Systems: From Swarms to Intelligent Automata Vol. III*, L. E. Parker, F. E. Schneider & A. C. Schultz (Eds.), Springer: Germany, pp. 15-26, DOI: 10.1007/1-4020-3389-3_2.

Workshop Publications

- WE1. S. T. Freedman and **J. A. Adams** (2008) "Synthetic Cognitive Agent Situational Awareness Components," *AAAI Fall Symposium on Biologically Inspired Cognitive Architectures*, AAAI Technical Report FS-08-04, p. 62, DOI: 10.1.1.180.4754.
- WE2. **J. A. Adams** (2006) "Unmanned Vehicle Situation Awareness," 2006 Robotics: Science and Systems Conference, Intuitive Human-Robot Interaction for Getting the Job Done Workshop.
- WE3. **J. A. Adams**, P. Rani, and N. Sarkar (2004) "Mixed Initiative Interaction and Robotic Systems," *AAAI-04 Workshop on Supervisory Control of Learning and Adaptive Systems*, AAAI Technical Report, WS-04-10, pp. 6-14.
- WE4. **J. A. Adams** (2002) "Critical Considerations for Human-Robot Interface Development," *Proceedings of the 2002 AAAI Fall Symposium on Human-Robot Interaction*, AAAI Technical Report, FS-02-03, pp. 1-8, DOI: 10.1.1.100.7272.
- WE5. **J. A. Adams**, R. Bajcsy, J. Kosecka, V. Kumar, R. Mandelbaum, M. Mintz, R. Paul, C.-C. Wang, Y. Yamamoto, and X. Yun (1995) "Cooperative Material Handling by Human and Robotic Agents: Task Description and Experiments (revised version)," *Proceedings of the ARO International Workshop on Critical Issues in Robotics*, DOI: 10.1109/IROS.1995.525797.
- WE6. **J. A. Adams**, R. Bajcsy, J. Kosecka, V. Kumar, R. Mandelbaum, M. Mintz, R. Paul, C.-C. Wang, Y. Yamamoto, and X. Yun (1995) "Cooperative Material Handling by Human and Robotic Agents: Task Description and Experiments," *Proceedings of IROS Workshop on Computer Vision*.

Videos

- V1. Jesse Gray, Matt Berlin, Cynthia Breazeal, Paula Aguilera, Kenton Williams, **Julie A. Adams**, Philipp Robbel, Sanford T. Freedman, Jonathan P. How, Aditya Undurti, Stefanie Tellex, Nicholas Roy, Thomas Kollar, Sigurdur Orn Adalgeirsson, Jason B. Alonso, Fardad Faridi, Jun Ki Lee, Mikey Siegel, Sophie Wang, Jonathan Williams (2009) "Robots to the Rescue: Mixed-initiative human-robot teaming for disaster response," The 2009 International Joint Conference on Artificial Intelligence, AI Video Competition. Nominated for Best Video and Best Sound Track.

Book Reviews

- BR1. **J. A. Adams** (2001) "Multiagent Systems: A Modern Approach to Distributed Artificial Intelligence, A Review," *AI Magazine*, Vol. 22, No. 2.

Technical Reports

- TR1. C. E. Harriott, T. Zhang and **J. A. Adams** (2010) "Applying Workload Human Performance Moderator Functions to Peer-Based Human-Robot Interaction," Human-Machine Teaming Laboratory Technical Report HMT-10-04, Vanderbilt University.
- TR2. J. Barrett, C. E. Harriott and **J. A. Adams** (2010) "Multiple Object Tracking and Memory Recall for Multiple Mobile Robot Supervision," Human-Machine Teaming Laboratory Technical Report HMT-10-02, Vanderbilt University.
- TR3. S. T. Freedman and **J. A. Adams** (2009) "Improving Robot Situational Awareness Through Commonsense: Side-Stepping Incompleteness and Unsoundness," Human-Machine Teaming Laboratory Technical Report HMT-09-03, Vanderbilt University.
- TR4. S. T. Freedman and **J. A. Adams** (2008) "Synthetic Cognitive Agent Situational Awareness Components", Human-Machine Teaming Laboratory Technical Report HMT-08-04, Vanderbilt University.
- TR5. B. Okorn and **J. A. Adams** (2008) "KSU Urban Operation Lab and Vanderbilt Human Machine Teaming Lab: Single Human - Multiple Robot Interface," Human-Machine Teaming Laboratory Technical Report HMT-08-01, Vanderbilt University.

- TR6. **J. A. Adams**, J. L. Cooper, M. A. Goodrich, C. Humphrey, M. Quigley, B. G. Buss, and B. S. Morse (2007) "Camera-Equipped Mini-UAVs for Wilderness Search Support: Task Analysis and Lessons from Field Trials," BYU-HCMI Technical Report 2007-1, Brigham Young University.
- TR7. **A. Pitman**, C. M. Humphrey and **J. A. Adams** (2007) "A Picture-in-Picture Interface for a Multiple Robot System," Human-Machine Teaming Laboratory Technical Report HMT-07-02, Vanderbilt University.
- TR8. **R. Wu**, C. M. Humphrey, S. T. Freedman and **J. A. Adams** (2007) "Multi-Robot Disaster Recon: Building Software Foundations with Real and Simulated Robots to Work with a Common Interface," Human-Machine Teaming Laboratory Technical Report HMT-07-01, Vanderbilt University.
- TR9. C. M. Humphrey, C. Henk, G. Sewell, B. Williams, and **J. A. Adams** (2006) "Evaluating a Scaleable Multiple Robot Interface based on the UTFARSim Platform," Human-Machine Teaming Laboratory Technical Report HMT-06-01, Vanderbilt University.
- TR10. **J. A. Adams** and D. Lawler (2001) "Remote Intelligent Robonaut Health Monitoring Demonstration," Final report NASA/ASEE Summer Faculty Fellowship Program, NASA Johnson Space Center.
- TR11. **J. A. Adams** and J. C. Watts-Perotti (1997) "Human-Centric Model of Consumer Digital Imaging: Digital User Experience Strategy (DUES)," Technical Report, Eastman Kodak Company.
- TR12. **J. A. Adams** (1996) "Human Factors Experimental Analysis of the MASC System," Technical Report MS-CIS-96-11, University of Pennsylvania.
- TR13. **J. A. Adams** (1995) "Human Management of a Hierarchical System for the Control of Multiple Mobile Robots," Ph.D. Dissertation, University of Pennsylvania.
- TR14. **J. A. Adams** (1995) "Human Management of a Hierarchical Control System for Multiple Mobile Robots," Ph.D. Dissertation Proposal, Technical Report MS-CIS-95-17, University of Pennsylvania.
- TR15. **J. A. Adams**, R. Bajcsy, J. Kosecka, V. Kumar, R. Mandelbaum, M. Mintz, R. Paul, C.-C. Wang, Y. Yamamoto, and X. Yun (1995) "Cooperative Material Handling by Human and Robotic Agents: Module Development and System Synthesis" (Long Version), Technical Report MS-CIS-95-01, GRASP LAB 385, University of Pennsylvania.
- TR16. **J. A. Adams** (1993) "Robust Hypothesis Testing and Statistical Color Classification," Masters Thesis, Technical Report MS-CIS-93-90/GRASP LAB 365, University of Pennsylvania.

Posters

- P1. **J. A. Adams** (2006) "Unmanned Vehicle System Situation Awareness," BOT Language Workshop, West Point, N.Y.

Tutorials

- TT1. R. Murphy and **J. A. Adams** (2010) "Cognitive Analysis Methods Applied to Human-Robot Interaction," The 2010 ACM/IEEE International Conference on Human-Robot Interaction.
- TT2. G. Trafton and **J. A. Adams** (2008) "Human-Robot Interaction: Conducting User Evaluations," The 2008 IEEE International Conference on Robotics and Automation.

Invited Talks

- T1. *Human-Robot Interaction for the Untrained User*, Keynote address, New York Celebration of Women in Computing Conference, April 2011.
- T2. *Human-Robot Interaction for the Untrained User*, Invited Talk, Department of Computer Science, Siena College, April 2011.
- T3. *Remote and Local Human-Robot Interaction*, ENV Spring 2011 Seminar, Air Force Institute of Technology, April 2011.

- T4. *Human-Robotic Teaming*, Keynote address, Kentucky Celebration of Women in Computing Conference, February 2010.
- T5. *Human Robotic Teaming/Interaction and Experimentation*, ONR Science of Autonomy Program Meeting, July 2009.
- T6. *Conducting Cognitive Task Analysis for Real-World Systems*, Keynote Address, AAAI Spring Symposium on Experimental Design for Real-World Systems, March 2009.
- T7. *Cognitive Limitations when Humans Interact with Large Teams of Robots*, The 34th Annual Interdisciplinary Conference, February 2009.
- T8. *A System of Human-Robot Interfaces for Large Robot Teams*, Georgia Institute of Technology, Robotics and Intelligent Machines Seminar Series, January 2009.
- T9. *A System of Human-Robot Interfaces for Large Robot Teams*, Carnegie Mellon University, The Robotics Institute, Robotics/Human-Computer Interaction Institute Seminar Series, December 2008.
- T10. *A System of Human-Robot Interfaces for Large Robot Teams*, University of Minnesota, CSE Distinguished Lecture Series, May 2008.
- T11. *A System of Human-Robot Interfaces for Large Robot Teams*, University of Pennsylvania, The General Robotics, Automation, Sensing, and Perception Laboratory, March 2008.
- T12. *Statistical Validity Pitfalls*, Keynote Address: Metrics for Human-Robot Interaction Workshop, The 3rd ACM/IEEE International Conference on Human-Robot Interaction, March 2008.
- T13. *Applying Cognitive Engineering to Human-Robotic Interaction*, Brigham Young University, Computer Science Department, December 2007.
- T14. *Human Supervision of Unmanned Vehicles*, Georgia Institute of Technology, Daniel Guggenheim School of Aerospace Engineering, September 2007.
- T15. *Multi-Robot Coalition Formation*, Unmanned Systems Capabilities Conference III, Academic panel, Department of Defense, Joint Ground Robotics Enterprise, January 2007.
- T16. *Unmanned Vehicle Situation Awareness Briefing - Update*, Unmanned Systems Safety Workshop, Department of Defense, Office of the Under Secretary of Defense, June 2006.
- T17. *Unmanned Vehicle Situation Awareness Briefing*, Unmanned Systems Safety Workshop, Department of Defense, Office of the Under Secretary of Defense, May 2006.
- T18. *The Human Response to Chemical, Biological, Radiological, Nuclear, and Explosive Device Events*, North Carolina State University Edward P. Fitts Department of Industrial and Systems Engineering, April 2006.
- T19. *Task Analysis for System Design*, Vanderbilt Informatics Seminar Series, March 2006.
- T20. *The Human Response to Chemical, Biological, Radiological, Nuclear, and Explosive Device Events*, Patient Safety Seminar Series, Vanderbilt University Center for Improving Patient Safety, November 2005.
- T21. *The Human Response to Chemical, Biological, Radiological, Nuclear, and Explosive Device Events*. The Western NY Human Factors and Ergonomics Chapter, Rochester, NY. May 2005.
- T22. *The Human Response to Chemical, Biological, Radiological, Nuclear, and Explosive Device Events*. The Mechanical Engineering Department, State University of New York at Buffalo. May 2005.
- T23. *Vanderbilt University Robotics Research*. AUVSI, Pathfinder Chapter - Unmanned Systems Symposium, TEAMS week 2005, Huntsville, AL. March 2005.
- T24. *Human-Robotic Teaming*. Department of Computer Science, Rochester Institute of Technology. September 2003.

- T25. *Human-Machine Teaming*. ACM Student Chapter, Middle Tennessee State University. March 2004.
- T26. *Critical Considerations for Human-Robotic Interface Development*. Department of Computer Science; University of South Florida. February 2003.

Other Talks (Talks given prior to 2003 are not listed.)

- O1. *Complex Mission Coalition Formation for Human-UxV Deployments*, ONR Science of Autonomy Program Meeting, April 2011.
- O2. *Human-Robot Teams Informed by Human Performance Moderator Functions*, AFOSR Workshop on Cognitive Modeling and Software Engineering. May 2010.
- O3. *Complex Mission Coalition Formation for Human-UxV Deployments*, ONR Science of Autonomy Program Meeting, June 2010.
- O4. *General Visualization Abstraction Algorithm for Geographic Map-based Human-Robot Interaction*, The 53rd Human Factors and Ergonomics Society Annual Meeting, October 2009.
- O5. *A Human Eye Like Perspective for Remote Vision*, The 2009 IEEE International Conference on Systems, Man and Cybernetics, October 2009.
- O6. *Adapting Robotic and Human Teams in Real-Time Based Upon Human Performance Metrics: An Update*, with S. A. DeLoach (Kansas State Univ.), AFOSR Workshop on Cognitive Modeling and Software Engineering. May 2009.
- O7. *Robotics*, Vanderbilt University School of Engineering Boy Scouts of America Explorers Program, April 2009.
- O8. *How to Enhance Situational Awareness, Agility and Mobility for Your Warfighter in Urban Operations*, with B. Levin (Kansas State Univ.), 2009 Soldier Technology US, Situation Awareness focus day, February 2009.
- O9. *Adapting Robotic and Human Teams in Real-Time Based upon Human Performance Metrics*, with S. A. DeLoach (Kansas State Univ.), AFOSR Workshop on Cognitive Modeling and Software Engineering. July 2008.
- O10. *Robotics*, Vanderbilt University School of Engineering Boy Scouts of America Explorers Program, January 2008.
- O11. *Unmanned System Autonomy, Situation Awareness, and System Safety*, The 25th International System Safety Conference, August 2007.
- O12. *Cognitively Compatible and Collaboratively Balanced Human-Robot Teaming in Urban Military Domains: Thrusts II-C and III*, ONR MURI Topic 8 Program Kick Off Meeting, November 2007.
- O13. *The Inherent Components of Unmanned Vehicle Situation Awareness*, The 2007 IEEE International Conference on Systems, Man and Cybernetics, October 2007.
- O14. *Unmanned Vehicle Situation Awareness: A Path Forward*, The 2007 Human Systems Integration Symposium, March 2007.
- O15. *Unmanned Vehicle Situation Awareness*, 2006 Robotics: Science and Systems Conference, Intuitive Human-Robot Interaction for Getting the Job Done Workshop, August 2006.
- O16. *Objective Data Analysis for PDA-Based Human-Robot Interaction*, The 2004 IEEE International Conference on Systems, Man and Cybernetics, October 2004.
- O17. *Comparing the Usability of Enhanced RoboFlag Interfaces*, The 2004 IEEE International Conference on Systems, Man and Cybernetics, October 2004.
- O18. *Enhancing RoboFlag Users' Situational Awareness*, The 2004 Human Factors and Ergonomics Society 48th Annual Meeting, September 2004.

- O19. *Mixed Initiative Interaction and Robotic Systems*, AAAI-04 Workshop on Supervisory Control of Learning and Adaptive Systems, July 2004.
- O20. *Analysis of Perceived Workload when using a PDA for Mobile Robot Teleoperation*, The 2004 IEEE International Conference on Robotics and Automation, April 2004.
- O21. *Evaluation of an Enhanced Human-Robot Interface*, 2003 IEEE International Conference on Systems, Man, and Cybernetics, October 2003.

Invited Panels

- IP1. *Human-Robot Interaction*, Moderator, The 2011 AUVSI Unmanned Systems North America, August 2011.
- IP2. *Thinking About Graduate School?*, Panelist, The 2011 New York Celebration of Women in Computing, April 2011.
- IP3. *Comparing, Merging, and Adapting Methods of Cognitive Task Analysis*, Discussant, The 53rd Human Factors and Ergonomics Society Annual Meeting, October 2009.
- IP4. *Simplifying Systems Interfaces to Ease Decision Making in Operations*, Panelist, Soldier Technology US 2009, Situation Awareness Focus Session, Arlington, VA, February 2009.
- IP5. *From Sorceress to Scientist: Women in Computing*, Panelist, Object Oriented Programming, Systems, Languages and Applications Conference, Nashville, TN, October 2008.
- IP6. *Academic Panel*, Panelist, The Third Annual Unmanned Systems Capabilities Conference, Nashville, TN, January 2007.
- IP7. *The Future of Human-Robotic Interaction*, Moderator, 2003 IEEE International Conference on Systems, Man and Cybernetics, Arlington, VA, October 2003.

SPONSORED RESEARCH ACTIVITIES

Dr. Adams has received >\$7M in support from the Defense Advanced Research Projects Agency, Air Force Office of Scientific Research, Marine Corps Systems Command, National Science Foundation, and Office of Naval Research.

PROFESSIONAL ACTIVITIES AND SERVICE

Editorial Boards

- Associate Editor, IEEE Transactions on Systems, Man and Cybernetics - Part A, November 2004 - present.
- Editorial Board, Journal of Cognitive Engineering and Decision Making, July 2011 - present.
- Editorial Board, Human Factors and Ergonomics in Manufacturing, October 2008 - present.
- Guest co-editor (with Richard Voyles), special issue of the *Journal of Intelligent and Robotic Systems* on Safety, Security, and Rescue Robotics, to appear 2011.
- Guest co-editor (with Carline Cao and Guadalupe Muoz), special issue *Advances in Human-Computer Interaction* on Human-Computer Interaction in Critical Systems, 2008, canceled due to low submission rate, handled paper reviewing for regular review process.
- Guest co-editor (with Marjorie Skubic), special issue of the *IEEE Transactions on Systems, Man and Cybernetics - Part A* on Human-Robotic Interaction, July 2005.

Committees

- Human-Robot Interaction Steering Committee, 2005-present
- IEEE Systems, Man and Cybernetics Society, Board of Governors, 2006-2009

- IEEE Systems, Man and Cybernetics Society, Executive Committee, 2000-2005, 2010-2011
- IEEE Systems, Man and Cybernetics Society, Administrative Committee (AdCom), 1998-2000
- IEEE Systems, Man and Cybernetics Society, Conference and Meetings Committee, 2006-2010
- IEEE Technical Activities Board, Society Review Committee, 2002-2004
- IEEE Technical Activities Board, Finance Committee, 2001-2002
- IEEE Graduates of the Last Decade (GOLD) Committee, 2000-2001
- IEEE Systems, Man and Cybernetics Society, Student Activities Committee, 1996-2005

Steering Committee Co-Chair

- Human-Robot Interaction Steering Committee, September 2009-present

Vice President

- IEEE Systems, Man and Cybernetics Society, Human-Machine Systems, 2010-2011
- IEEE Systems, Man and Cybernetics Society, Long Range Planning and Finance, 2004-2005
- IEEE Systems, Man and Cybernetics Society, Conferences and Meetings, 2002-2003

Treasurer

- IEEE Systems, Man and Cybernetics Society, 2000-2003

Program Co-Chair (with J. Gregory Trafton)

- The 6th ACM/IEEE International Conference on Human-Robot Interaction, Switzerland, March 2011

Program Chair

- Computer Systems Technical Group (CSTG), Human Factors and Ergonomics Society 43rd Annual Meeting, Houston, TX, September 1999
- Computer Systems Technical Group (CSTG), Human Factors and Ergonomics Society 42nd Annual Meeting, Chicago, IL, October 1998

Assistant Program Chair (to Stephanie Guerlain)

- Computer Systems Technical Group (CSTG), Human Factors and Ergonomics Society 41st Annual Meeting, 1997
- Computer Systems Technical Group (CSTG), Human Factors and Ergonomics Society 40th Annual Meeting, 1996

Regional Program Chair

- The 20th IEEE International Symposium on Robot and Human Interactive Communication, 2011
- The 8th IEEE International Workshop on Safety, Security, and Rescue Robotics, 2010

Local Arrangements Chair

- 2005 IEEE International Symposium on Robot and Human Interactive Communication, Nashville, TN

Publicity Chair

- 2004 IEEE International Conference on Information Reuse and Integration, Las Vegas, NV, November 2004

Finance Chair

- The 2nd ACM/IEEE International Conference on Human-Robot Interaction, Arlington, VA, March 2007
- The 1st ACM/IEEE International Conference on Human-Robot Interaction, Salt Lake City, UT, March 2006

Finance Co-Chair (with Curtis Neilsen)

- The 3rd ACM/IEEE International Conference on Human-Robot Interaction, Amsterdam, March 2008

Demo Chair

- 2009 IEEE International Workshop on Safety, Security, and Rescue Robotics, Denver CO, November 2009

Technical Committee Chair

- IEEE Robotics and Automation Society, Technical Committee on Safety, Security, and Rescue Robotics, 2011 - present

Invited Session Track Organizer (with Jean Scholtz)

- Human-Robotic Interaction Track, 2003 IEEE International Conference on Systems, Man and Cybernetics, Washington, DC, October 2003

Program Committee Member

1. IEEE International Workshop on Safety, Security, and Rescue Robotics, 2008, 2009, 2011
2. 3rd International Conference on Applied Human Factors and Ergonomics, 2010
3. ACM/IEEE International Conference on Human-Robot Interaction, 2008-2010
4. New Frontiers in Human-Robot Interaction Symposium, 2009, 2010
5. Grace Hopper Conference, 2008
6. ACM International Conference on Human-Robot Interaction, 2006
7. IEEE International Symposium on Robot and Human Interactive Communication, 2005
8. American Association for Artificial Intelligence National Conference (AAAI), 2004-2005
9. IEEE International Conference on Systems, Man and Cybernetics, 1998-2005
10. Human Factors and Ergonomics Society Annual Meeting, 1996-2003

Student Activities Committee

- Co-Chair (with Abdel El Kamel), IEEE Systems, Man and Cybernetics Society, 1999
- Chair, IEEE Systems, Man and Cybernetics Society, 1997-1998

Peer-Reviewing (since August 2003)

1. Autonomous Robots
2. Human Factors
3. IEEE Intelligent Systems
4. IEEE Transactions on Knowledge and Data Engineering
5. IEEE Transactions on Robotics
6. IEEE Transactions on Systems, Man, and Cybernetics, Part A

7. IEEE Transactions on Systems, Man, and Cybernetics, Part B
8. IEEE Transactions on Systems, Man, and Cybernetics, Part C
9. International Journal of Robotics and Automation
10. Journal of Cognitive Engineering and Decision Making
11. Journal of Intelligent and Robotic Systems

Review Panels

1. National Science Foundation, 2004, 2005, 2007, 2008, 2009, 2010

Other Professional Service

1. National Research Council, Aeronautics and Space Engineering Board, NASA Technology Roadmap review panel, 2011.
2. National Academy of Science, Soldier Systems Panel, 2007-2010
3. Joint Government/Industry Unmanned Systems Safety Initiatives - Situation Awareness Working Group, Office of the Under Secretary of Defense, 2006
4. IEEE Young Members Focus Group, 1999

University Service

- **Vanderbilt**
 - Provost's Graduate Fellowship Committee, 2007-2010
 - Graduate Faculty Delegate Assembly, 2004-2005

School Service

- **Vanderbilt - School of Engineering**
 - Library Committee, 2009-2011
 - Website Committee, 2008-2009
- **Rochester Institute of Technology - College of Computing and Information Sciences**
 - Student Scholars Committee, 2001-2002

Departmental Service

- **Vanderbilt**
 - Chair, Computer Science Faculty Search Committee, 2010-2011
 - Academic Adviser, Computer Science, Classes of 2009, 2014
 - Computer Science Faculty Search Committee, 2008-2009
 - Coordinator, Artificial Intelligence Research Group, 2006-2007
 - Computer Engineering Ad-Hoc Committee, 2005-2006
 - Systems Engineering Concentration Committee, 2003-2004
- **Rochester Institute of Technology**
 - Chair, Department of Computer Science Web Committee, 2001-2002
 - First Year Java Committee, 2000-2001

- Introductory Computer Science Committee, 2001-2002
- ABET Committee, 2000

RESEARCH TRAINING AND SUPERVISION

Publications with students, if any, are shown in parenthesis

Post-doctoral Research Associate

1. Tao Zhang, September 2009 - present. (J4, CS1, C4, TR1)

Doctoral Students Graduated

1. Carlotta Johnson, Ph.D. in Electrical Engineering, Co-Advised with Kazuhiko Kawamura, *Enhancing a Human-Robot Interface using a Sensory Egosphere*, May 2003. (CE12)
Current employment: Assistant Professor, Department of Electrical and Computer Engineering, Rose-Hulman Institute of Technology.
2. Lovekesh Vig, Ph.D. in Computer Science, *Multi-Robot Coalition Formation*, December 2006. (J15, J16, CS3, CS7, C15, B1)
Current Employment: Assistant Professor of Information Technology, Jawaharlal Nehru University. As of November 2009, Assistant Professor, Indraprastha Institute of Information Technology Delhi (IIIT-Delhi).
3. Curtis Humphrey, Ph.D. in Computer Science, *Information Abstraction Visualization for Human-Robot Interaction*, August 2009. (J5, J8, J10, J11, J13, CS4, CS5, C7, C8, C12, CE4, CE5, TR6, TR7, TR8, TR9)
Current Employment: Computer Analyst I, Dynetics, Inc.
4. Sanford Freedman, Ph.D. in Computer Science, *Human-Inspired Forgetting for Robotic Systems*, December 2010. (J2, C6, C11, C13, WE1, TR3, TR4, TR8, V1)
Current Employment: Robotics Systems Software Engineer, Digilab, Inc.

Doctoral Students

1. Travis Service, Ph.D. student in Computer Science. Area of research: Multiple Robot Coalition Formation. Expected completion date: May 2012. (J1, J7, J6, CS2, C5)
2. Sean Hayes, Ph.D. student in Computer Science. Area of research: Multimodal Human-Robotic Interaction. (C2, C3, CE2)
3. Eli Hooten, Ph.D. student in Electrical Engineering, National Defense Science and Engineering Fellowship Recipient. (C1, C2, C3, CE2)
4. Caroline Harriott, Ph.D. student in Computer Science. (CS1, C4, CE1, TR1, TR2)
5. Sayan Dev Sen, Ph.D. student in Computer Science.
6. Electa Baker, Ph.D. student in Computer Science.
7. Michael Anderson, Ph.D. student in Computer Science, co-advised with Ted Bapty.
8. Paul McNeil, Ph.D. student in Computer Science, co-advised with Ted Bapty.

M.S. Students Graduated

1. Brian Okorn, M.S. in Computer Science, *Smuggling Tunnel Mapping Using Slide Image Registration*, May 2011. (TR5)
Current employment: Scientist, Unmanned Systems Branch, Space and Naval Warfare Command Pacific.
2. Andrew Bouchard, M.S. in Mechanical Engineering, *Design and Control of a Manipulator for Autonomous Joining of Featureless Panels*, May 2009.
Current employment: Civilian Engineer, Naval Surface Warfare Center.

3. Peter Grant, M.S. in Computer Science, *Grid Results Checking*, May 2006.
4. Christopher Henk, M.S. in Computer Science, December 2006. (CS5, TR9)
Current employment: Engineer, Allison Transmission.
5. Hande Kaymaz-Keskinpala, M.S. in Electrical Engineering, *PDA-Based Teleoperation Interface for a Mobile Robot*, December 2004. (C17, CE7, CE13)
Current employment: Vanderbilt University, Ph.D. program in Electrical Engineering.
6. Souyma Sengupta, M.S. in Computer Science, Rochester Institute of Technology, Co-advised with James E. Heliotis, *Utilizing Mobile Agents for Accessing Remote Services*, 2003.
7. John Mikucki, M.S. in Computer Science, Rochester Institute of Technology, *Net.Sense*, 2002.
8. Tung-Cheih Lee, M.S. in Computer Science, Rochester Institute of Technology, *Network Studio*, 2001.
9. Christopher Hahn, M.S. in Printing Management and Sciences, Rochester Institute of Technology/Eastman Kodak Company, *An Investigation of Non-Verbal Auditory Cues within Graphical User Interfaces*, 1999.

M.S. Academic Advisor

1. Sayan Dev Sen, M.S. in Computer Science, Sept. 2009 - May 2011.
2. William Holcomb, M.S. in Computer Science, December 2010.
3. Andrew Pitman, M.S. in Computer Science, May 2009.
4. Ari M. Wilson, M.S. in Computer Science, May 2008.
5. Arun Ghosh, M.S. in Computer Science, May 2007.
6. Sameer Singh, M.S. in Computer Science, May 2007. (CS6)
7. Ryan Castle, M.S. in Computer Science, May 2005.
8. Thanjavur Prabhu, M.S. in Computer Science, May 2004.
9. Sangeeta Shankar, M.S. in Computer Science, May 2003. (CE8, CE10)

Thesis Committee Member

1. Haojie Wu, Ph.D. in Computer Science, December 2011 (Expected).
2. Scott Harman, Ph.D. in Computer and Information Science, Kansas State University, December 2011 (expected).
3. Christina Campbell, Ph.D. in Electrical Engineering, *Robotic Grasp Learning*, December 2012 (expected).
4. Candice Griffith, Ph.D. in Civil Engineering (Interdisciplinary Studies), *Human Reliability in Engineering Systems*, December 2012 (expected).
5. Isaac Amundson, Ph.D. in Computer Science, *Spatio-Temporal Awareness in Mobile Wireless Sensor Networks*, August 2010.
6. John Kinnebrew, Ph.D. in Computer Science, *Global SensorWeb Coordination and Control Using Multi-Agent Systems*, May 2009.
7. Juan Rojas, Ph.D. in Electrical Engineering, *Autonomous Cooperative Assembly by Force Feedback using a Control Basis Approach*, May 2009.
8. Larry Thomas, Ph.D. in Computer Science, *Quality Issues in Open Source Software Engineering*, August 2008.

9. Liguu Yu, Ph.D. in Computer Science, *Categorization of Common Coupling and its Application to Open-Source Operating Systems*, August 2004.
10. Roxanne Canosa, Ph.D. in Imaging Science, Rochester Institute of Technology, *Seeing, Sensing, and Selection: Modeling Visual Perception in Complex Environments*, 2003.
11. Elizabeth Seward, M.S. in Computer Science, *Time-to-Contact Estimation for Street Crossing*, 2006.
12. Craig Bailey, M.S. in Computer Science, University of Missouri-Columbia, *A Sketch Interface for Understanding Hand-Drawn Route Maps*, 2004. (J19)
13. Daniel Kunkle, M.S. in Computer Science, Rochester Institute of Technology, *Automatic Classification of One-Dimensional Cellular Automata*, 2003.
14. Keith Jones, M.S. in Computer Science, Rochester Institute of Technology, *Obsage - An Agent Based Model of Observational Learning*, 2003.
15. Unmesh Churi, M.S. in Computer Science, Rochester Institute of Technology, *XML Database Data Manipulation Systems (XDBDMS)*, 2001.
16. Richard Buck, M.S. in Computer Science, Rochester Institute of Technology, *Intelligent Home Automation Control System*, 2001.

Other Graduate Student Supervision

1. Glenna Buford, Summer research, 2011.
2. Debargha Dey, Independent Study (CS 390), Coalition Formation, Spring 2011.
3. Caroline Harriott, Independent Study (CS 390), Complex Human-Machine Systems, Fall 2010, Discussion led by T. Zhang.
4. Sean Hayes, Independent Study, (CS 390), Complex Human-Machine Systems, Fall 2010, Discussion led by T. Zhang.
5. Sayan Dev Sen, Summer research, 2010.
6. Travis Service, Independent Study (CS 390), Introduction to Robotics, Fall 2008.
7. William Holcomb, Independent Study (CS 390), Development of an Introduction to Robotics Course, Spring 2008.
8. Robin Rostorfer, Independent Study (CS 390), RACHNA Implementation Architecture, Fall 2007.
9. Karla Conn, Independent Study (EECE 398), Robotics Reading Group, Fall 2005.
10. Matthew Daigle, Independent Study (CS 390), Robotics Reading Group, Fall 2005.
11. Stephen Gordon, Independent Study (EECE 398), Robotics Reading Group, Fall 2005.
12. Ridelto Gutierrez, Independent Study (EECE 398), Robotics Reading Group, Fall 2005.
13. Derek Riley, Independent Study (CS 390), Robotics Reading Group, Fall 2005.
14. Di Wu, Independent Study (CS 390), Robotics Reading Group, Fall 2005.
15. Pramila Rani, Independent Study (EECE 398), Mixed-Initiative Interaction for Affect-Based Human-Robot Interaction, Summer 2003. (J14, CE11, WE3)
16. Sangeeta Shankar, Independent Study (CS 390)/Research, Situation Awareness for Human-Robotic Interaction, 2003. (CE8, CE10)

17. Chen Zhou, Research, Co-Advised with Bobby Bodenheimer, 2003. (CS8, CE14)
18. Chip Clifton, Research, Sensory Egosphere Display, Summer 2003.

Undergraduate Student Research Supervision

1. Corey Wollaeger, Summer research, Human-Robot Interaction, Summer 2011.
2. Raffi Bedikian
 - Vanderbilt University Undergraduate Summer Research Program, Human-Robotic Interaction Environmental Mapping Visualization, Summer 2009.
 - Undergraduate Research Assistant, Human-Robotic Interaction System Development, Spring, Fall 2009.
3. Ken Hartsook, Independent Study (CS 240), Multiagent Planning in Real-Time, Spring 2009.
4. Stephen Motter (C8)
 - Undergraduate Research Assistant, Human-Robotic Interaction User Evaluations, Spring, Fall 2009.
 - Undergraduate Research Assistant, Interactive, Web-based Cognitive Task Analysis Results, Fall 2009, Spring 2010, Fall 2010.
5. Brian Okorn
 - Undergraduate Research Assistant, Robotic Architecture Integration and Controller Development, Fall 2008 - Spring 2009, Fall 2009.
 - Summer Research Program for Engineering Undergraduate Students, Single Human - Multiple Robot Interface for Military Applications, Summer 2008. (TR5)
6. Andrew Pitman, Summer Research Program for Engineering Undergraduate Students, A picture-in-picture interface for a multiple robot system, Summer 2007. (TR7)
7. Roger Wu, Vanderbilt University Undergraduate Summer Research Program, Building software foundations for Human-Robotic Interaction, Summer 2007. (TR8)
8. Trieu Dang, Independent Study (CS 240), Introduction to Artificial Intelligence Robotics, Fall 2006.
9. Ari Wilson
 - Undergraduate Research Assistant, Robotic Cognitive Task Analysis, Fall 2005.
 - Summer Research Program for Engineering Undergraduate Students, Robotic Cognitive Task Analysis, Summer 2005.
10. Izzet (John) Can Envarli (C16)
 - Independent Study (CS 240), Human-Multiple Robot Interface User Evaluation, Fall 2004.
 - Vanderbilt University Undergraduate Summer Research Program, Human-Multiple Robot Interface Development, Summer 2004.
11. Dalton Franklin, Independent Study (CS 240), Human-Computer Interaction Development based upon Database Design, Spring 2004.
12. Timothy Rapp, Independent Study (CS 240), Comparison of A* and IDA* algorithms, Spring 2004.
13. Lyle Chamberlain, California Institute of Technology/Cornell University Summer Undergraduate Research Fellowship, RoboFlag Competition. (C18)
14. Japeck Tang, California Institute of Technology/Cornell University Summer Undergraduate Research Fellowship, RoboFlag Competition. (C18)

15. Megha Watugala, California Institute of Technology/Cornell University Summer Undergraduate Research Fellowship, RoboFlag Competition. (C18)

Other Research Supervision

1. Hunter Allen, Independent robotics research, Brentwood, TN High School, Summer 2011.
2. Mark Gonyea, Vanderbilt University Bioengineering Research Experiences for Teachers Program
 - Line Interpolation Algorithm Development, Summer 2010
 - Effectively Co-located GIS Map Items, Summer 2009.
 - Virtual Camera, Summer 2008. (C8)
3. Kimberly Gold, Vanderbilt University Bioengineering Research Experiences for Teachers, Image Mosaicking, Summer 2007.

TEACHING ACTIVITIES

Courses Taught

Vanderbilt University Course numbering reflects curricular changes approved by the School of Engineering Faculty. Courses may have appeared as, for example CS 396 instead of CS 366. Enrollment is shown in parenthesis beside the year the course was taught.

Course	Title	Fall	Spring
CS251	Intermediate Software Design	2010 (19) 2011 (36)	
CS252	Theory of Automata, Formal Languages, and Computation	2010 (22)	2008 (7)
CS260	Introduction to Artificial Intelligence	2003 (26) 2004 (22) 2005 (22) 2006 (14) 2008 (16)	
CS269	Projects in Artificial Intelligence Co-taught with CS366		2004 (11) 2005 (7) 2007 (3) 2009 (1) 2011 (6)
CS292	Introduction to Mobile Robotics		2010 (12)
CS352	Human-Computer Interaction	2005 (17) 2007 (14) 2009 (12)	
CS366 (396)	Distributed Artificial Intelligence		2004 (15) 2005 (7) 2007 (5) 2009 (11) 2011 (10)
EECE/CS396	Complex Man-Machine Systems		2003 (10) 2006 (5)
EECE/CS395	Behavior-Based Robotics	2002 (5)	

Rochester Institute of Technology Graduate level course numbers 4005-70X. Enrollment shown in parenthesis beside the year the course was taught. Enrollments shown as (x, y) indicate individual enrollment for two sections of a course.

Course	Title	Fall	Winter	Spring
4003-231	Computer Science I	2000 (43)		
4003-232	Computer Science II		2000-2001 (38)	
4003-233	Computer Science III			2002 (28)
4003-234	Computer Science IV	2001 (45)		2001 (42, 37)
4003-263	Computer Science for Transfers	2000 (31)		
4003-380	Introduction to Computer Science Theory	2001 (37)		
4003-456	Expert Systems		2000-2001 (9)	
4003-590	Distributed Artificial Intelligence		2001-2002 (15)	
4005-705	Foundations of Computing Theory			2001 (20)
				2002 (22)
4005-709	Distributed Artificial Intelligence		2001-2002 (7)	
4005-751	Knowledge Based Systems		2000-2001 (1)	
NA	Computer Science Honors Seminar		2001-2002 (~20)	

University of Rochester I have not retained enrollment numbers for these courses.

Course	Title	Fall	Spring	Summer
CS 108	Introduction to Computers		1999	
CS 170	Introductory Computer Programming (Engineering Majors, Non-Computer Science)		2000	
CS 171	Computer Programming	2000 (\approx 100)		1999

Volunteer Service

Demonstration Mentor, Tennessee Women in Science, Technology, Engineering and Research program, Adventure Science Center, Nashville, 2010

Volunteer/Running Buddy, Girls on the Run Nashville, 2008-present

Volunteer, Boy Scouts of America, Career Awareness Exploring Program, 2001-2002

Post co-advisor, Boy Scouts of America, Computer Science Explorers Post, 1997

Team member, For Inspiration and Recognition of Science and Technology (FIRST) Robotics Competition, 1996-1998, 2000-2001

Judge, Western New York middle school science fair, 1998-2000

Volunteer, The Jason Project, middle and elementary school program, 1997

Student Mentor, University of Minnesota, Institute of Technology, 1996

Volunteer, Industry Volunteers Encouraging Science and Technology, 1996