

Curriculum Vitae

**CHARLES MICHAEL LEWIS**

**Address:**

School of Computing and Information  
Department of Informatics and Networked Systems  
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**RESEARCH INTERESTS**

Human-Robot Interaction, Human Factors, Human Computer Interaction, Visualization, CSCW, Virtual Environments, Software Agents, Human Error

**TEACHING INTERESTS**

Human Factors, Human Computer Interface, Human Computer Interaction, Decision Making/Decision Support, Interactive Systems

**EDUCATION**

Ph.D. in Psychology (engineering psychology), Georgia Institute of Technology, 1986,  
Thesis: Identification of Rule-Based Models. Advisor: W.B. Rouse

M.S. in Psychology (engineering psychology), Georgia Institute of Technology, 1982,  
Thesis: Modeling from Video Display in Repair Performance. Advisor: E.J. Rinalducci

B.A. in Experimental Psychology, University of California, Santa Barbara, 1973

**PROFESSIONAL EMPLOYMENT and EXPERIENCE**

**Professor** 2006-present School of Computing and Information, Department of Informatics and Networked Systems, University of Pittsburgh

**Associate Professor** 1993-2006 Department of Information Science and Telecommunications, School of Information Sciences with joint appointment in Intelligent Systems Program, University of Pittsburgh

**Assistant Professor** 1987-1993 Department of Information Science and Telecommunications, School of Information Sciences, University of Pittsburgh

**Senior Human Factors Engineer** 1986 Iowa Electric Light & Power Co., Cedar Rapids, IA, Lead HFE on Control Room Design Review of Duane Arnold nuclear power plant

**Graduate Research Assistant and Instructor** 1984-1986, Center for Human-Machine Systems Research, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA 30332

**Associate Scientist** 1984-1986, General Physics Corp., 1770 The Exchange NW, Atlanta, GA

**Human Factors Specialist** 1980-1984, Human Performance Group, Institute of Nuclear Power Operations, 1100 Circle 75 Parkway, Atlanta, GA

### **Contract and Grant Support to Michael Lewis**

- Katia Sycara and **Michael Lewis**, Strengthening Robust Teamwork in Human Agent Teams Cycle 3 (seedling), (March 2021- February 2022), *Army Research Laboratory*
- Katia Sycara and **Michael Lewis**, Strengthening Robust Teamwork in Human Agent Teams Cycle 2 (seedling), (March 2020- February 2021), *Army Research Laboratory*
- Katia Sycara, **Michael Lewis** and Julie Shah, *Individualized Adaptation in Human Agent Teams* (May 2020-April 2023), *Army Research Laboratory*
- Katia Sycara, **Michael Lewis** and Ryan McFarland, *A Robust and Adaptive Agent that Supports High Performance Teams* (December 2019-December 2023), *Defense Advanced Research Projects Agency*
- **Michael Lewis**, *ISHIS—Interface System for Human Interaction with Swarms* (November 2019-October 2022), *Office of Naval Research*
- Katia Sycara and **Michael Lewis**, *Individualized Adaptation in Human Agent Teams* (seedling), (March 2019- February 2020), *Army Research Laboratory*
- Katia Sycara, Nilanjan Chakraborty, and **Michael Lewis**, *Trustworthy Human Interaction with Robotic Swarms*, (June 2015-June 2020), *Air Force Office of Scientific Research*
- Katia Sycara, Christian Lebiere, Meeko Oishi, and **Michael Lewis**, *Formal Models of Human Control and Interaction with CPS*, *National Science Foundation*, (September 2013-September 2016), *Air Force Office of Scientific Research*.
- Katia Sycara and **Michael Lewis**, *The influence of Cultural Factors on Trust in Automation*, (June 2013-May 2016), *Air Force Office of Scientific Research*.

- Katia Sycara, Paul Scerri, **Michael Lewis**, Michael Goodrich, *Cognitively Compliant Command for Multirobot Teams*, Science of Autonomy, (May 2009-May 2014), *Office of Naval Research*
- Katia Sycara, Baruch Fischhoff, Geoffrey Gordon, **Michael Lewis**, Katherine Tinsley, Robin Dillon, Scott Atran, Robert Axelrod, Charles Grindle, David Traum (May 2008-April 2013), *Cultural Models of Collaboration and Negotiation*, Multidisciplinary University Research Initiative, *Army Research Organization*.
- Katia Sycara, Paul Scerri, Christian Lebiere, **Michael Lewis**, Jonathon How, Mary Cummings, Mark Campbell, and Raja Parasuraman (May 2008-April 2013), *Modeling Synergies in Large Human-Machine Networked Systems*, Multidisciplinary University Research Initiative, *Air Force Office of Scientific Research*.
- Katia Sycara and **Michael Lewis** (December 2006-November 2009) *Large Scale Computation for Human Agent Team Coordination in Dynamic Environments*, *Air Force Office of Scientific Research*.
- Eduardo Salas, Nancy Cooke, **Michael Lewis** and Alex Kirlik (May 2006-April 2011) *Reconfigurable Human-Agent Collaboration: Human Performance in Network-Centric Operations*, Multidisciplinary University Research Initiative, *Office of Naval Research*.
- **Michael Lewis** (April 2005-April 2006) *Extending USARsim to Support MOAST Framework*, *National Institute of Standards and Testing*.
- Katia Sycara, Illah Nourbakhsh and **Michael Lewis** (July 2002-July 2006) *Coordination of Heterogeneous Teams (Humans, Agents, Robots) for Emergency Response*, Information Technology Research Initiative, *National Science Foundation*.
- Katia Sycara and **Michael Lewis** (May 2003-November 2005) *Cooperative Attack Testbed for Aircraft, Munitions, and Ground Vehicles*, *Air Force Research Laboratories AFRL/MN*.
- Katia Sycara and **Michael Lewis** (September 2001-August 2006) *Information Fusion for Command and Control: from Data to Actionable Knowledge and Decision*, *Air Force Office of Scientific Research*
- **Michael Lewis** (January 1999-December 1999) *Smooth Navigation through a Cluttered Virtual Environment*, Fellowship in Advanced Simulation and Training, Supervision for Jeffrey Jacobson, *Link Foundation*
- Katia Sycara and **Michael Lewis** (September 1997-February 2002) *Integrating Intelligent Assistants into Human Teams*, Multidisciplinary University Research Initiative, *Office of Naval Research*.

- Robert Korfhage and **Michael Lewis** (March 1996-February 1999) *Visual Information Retrieval Interfaces*, Interactive Systems Program, *National Science Foundation*.
- **Michael Lewis** (January 1991-December 1993) *Ecological Cognition in Visualization*, Interactive Systems Program, *National Science Foundation*.

## Editorial Boards

*IEEE Transactions on Systems, Man, and Cybernetics: Part A*, now reorganized as *IEEE Transactions on Human Machine Systems* (past associate editor)

*Human Factors* (Journal of the Human Factors and Ergonomics Society) (past associate editor)

*Group Decision and Negotiation*: Kluwer Academic Publishers (affiliated with Institute for Operations Research and Management Sciences) (past associate editor)

IEEE International Conference on Robotics and Automation (ICRA)

*Autonomous Agents and Multi-Agent Systems*: Kluwer Academic Publishers (past associate editor)

*Cognition, Technology, and Work: International Journal for the Analysis, Design, and Use of Joint Cognitive Systems*: Springer-Verlag (past associate editor)

## Reviewer

Grant proposals National Science Foundation, Interactive Systems Program, various programs (1991-present)

*IEEE Transactions on Systems, Man, and Cybernetics*

*IEEE Transactions on Robotics*

*IEEE Transactions on Reliability*

*Journal of Visual Languages and Computing*

*International Journal of Human Computer Studies*

IEEE International Conference on Systems, Man, and Cybernetics

International Joint Conference on Autonomous Agents and Multiagent Systems

Human Factors and Ergonomics Society Annual Meeting, Computer Systems Technical Group, Cognitive Engineering and Decision Making, and general sessions

ACM/IEEE Conference on Human-Robot Interaction

IEEE International Conference on Robotics and Automation

IEEE/RSJ International Conference on Intelligent Robots and Systems

### **RoboCup Rescue**

RoboCup 2008 team placed 3<sup>rd</sup> in Virtual Robots Urban Search & Rescue Competition

RoboCup 2007 Winner Virtual Robots Urban Search & Rescue Competition

RoboCup 2006 User Interface Award, Virtual Robots Urban Search & Rescue Competition

American Open 2006 team placed 1<sup>st</sup> in autonomy

Member of RoboCup Organizing Committee 2004 & 2005

American Open 2005, team placed 1<sup>st</sup> in mobility, 1<sup>st</sup> in autonomy and 3<sup>rd</sup> in rescue competitions

American Open 2004, team placed 3<sup>rd</sup> in rescue competition

### **Member**

Association for Computing Machinery  
Special Interest Group on Computer Human Interaction

Institute of Electrical and Electronics Engineers, Lifetime Member  
Computer Society  
Systems, Man, and Cybernetics Society

Human Factors and Ergonomics Society  
Computer Systems Technical Group  
Cognitive Engineering and Decision Making Technical Group

Sigma Xi

### **Dissertation Chair**

Saman Amirpour Amraii, April 2018, Human-Data Interaction in Large and High-Dimensional Data, School of Computing and Information, University of Pittsburgh, Co-founder, xSeer, Palo Alto, CA, nebeleh@gmail.com

Phillip Walker, April 2017, *Improving Operator Recognition and Prediction of Emergent Swarm Behaviors*, School of Information Sciences, University of Pittsburgh, Research Scientist, Soft Information Flow Technologies (SIFT), Minneapolis, MN, [pwalker@sift.net](mailto:pwalker@sift.net)

Shih-Yi Chien, April 2017, *The Influence of Cultural Factors on Trust in Automation*, School of Information Sciences, University of Pittsburgh, Assistant Professor, National Chengu University, TW, [gsechien@gmail.com](mailto:gsechien@gmail.com)

Shafiq Abedin April 2016, *3D Generalization of Brain Model to Visualize and Analyze Neuroanatomical Data*, School of Information Sciences, University of Pittsburgh, Research Scientist, IBM Research-Almaden, [sabedin@us.ibm.com](mailto:sabedin@us.ibm.com)

Huadong, Wang, August 2013, *Asynchronous Visualization of Spatiotemporal Information for Multiple Moving Targets*, School of Information Sciences, University of Pittsburgh, UX Research Manager, Uber, San Francisco, CA, [jwhd82@gmail.com](mailto:jwhd82@gmail.com)

Jijun Wang, April 2008, *Human Control of Cooperating Robots*, School of Information Sciences, University of Pittsburgh, Software Engineer, Intel Corp, Philadelphia, PA., [jijunwang.cn@gmail.com](mailto:jijunwang.cn@gmail.com)

Jumpol Polvichai, April 2008, *Modeling Team Performance for Coordination Configurations of Large Multi-Agent Teams*, School of Information Sciences, University of Pittsburgh, Assistant Professor, King Mungkut's Institute of Technology (Thailand), [jumpol@cpe.kmutt.ac.th](mailto:jumpol@cpe.kmutt.ac.th)

Yang Xu, April 2008, *Token-Based Approach for Scalable Team Coordination*, School of Information Sciences, University of Pittsburgh, Professor, University of Electronic Science and Technology, Chengdu, China, [xuyang.uestc@me.com](mailto:xuyang.uestc@me.com)

Jeffrey Jacobson, April 2008, *Ancient Architecture in Virtual Reality; Does Immersion Really Aid Learning?* School of Information Sciences, University of Pittsburgh, XR Project Manager at Boston Children's Hospital, [jeff@enterprisevr.com](mailto:jeff@enterprisevr.com)

Stephen Hughes August 2005. *Assisted Viewpoint Interactions for 3D Visualizations*, Department of Information Science and Telecommunications, School of Information Sciences, University of Pittsburgh, Assistant Professor, Coe College, Cedar Rapids, IA, [shughes@coe.edu](mailto:shughes@coe.edu)

Cholyeun Hongpaisanwiwat December 2002. *The Influence of Animated Characters on Comprehension and Attention Performance in a Multimedia Presentation*, Department of Information Science and Telecommunications, School of Information Sciences, University of Pittsburgh, Assistant Professor Thammasat University (Thailand), [chhong@cs.tu.ac.th](mailto:chhong@cs.tu.ac.th)

Terri Lenox May 2000. *Supporting Teamwork Using Software Agents in Human-Agent Teams*, Department of Information Science and Telecommunications, School of Information Sciences, University of Pittsburgh, Professor and Chair of Mathematics and Computer Science and Chair of the faculty, Westminster College, now retired, [lenoxtl@westminster.edu](mailto:lenoxtl@westminster.edu)

Jeffrey Campbell May 2000. *Concurrency Control for Collaborative Diagramming*, Department of Information Science and Telecommunications, School of Information Sciences, University of Pittsburgh, Ecological Data Scientist, USDA Agricultural Research Service, jeffrey.campbell@ars.usda.gov

Emile Morse June 1999. *Evaluating Visual Information Browsing Displays*, Department of Information Science and Telecommunications, School of Information Sciences, University of Pittsburgh, Research Scientist, Information Technology Laboratory, National Institute of Standards and Technology, now deceased

Jozsef Toth 1997. *The Effect of Representation in Computer-Mediated Small Group Decision Making*, Department of Information Science and Telecommunications, School of Information Sciences, University of Pittsburgh, previously Research Staff, Institute for Defense Analysis, now deceased

### **Postdoctoral Researchers**

Alin Coman (2010-2012) Assistant Professor of Psychology, Princeton University, acoman@princeton.edu

Andreas Kolling (2009-2012) Senior Principal Robotics Scientist, iRobot Corp., Pasadena, CA, andreas.kolling@gmail.com

## **Publications**

### **Refereed Journals & Magazines**

1. Li, H., Ni, T., Agrawal, S., Jia, F., Raja, S., Gui, Y., Hughes, D., **Lewis, M.**, Sycara, K. (2021). Individualized Mutual Adaptation in Human-Agent Teams, *IEEE Transactions on Human-Machine Systems* (available on-line)
2. Chandarana, M., Hughes, D., **Lewis, M.**, Sycara, K. and Scherer, S. (2021). Planning and Monitoring Multi-Job Type Swarm Search and Service Missions, *Journal of Intelligent & Robotic Systems*, Vol. 101, No. 3, March, 2021
3. Joseph B. Lyons, J., Sycara, K., **Lewis, M.** & Capiola, A. (2021). Human-Autonomy Teaming: Definitions, Debates, and Directions, *Frontiers in Psychology*:
4. Chien, S., **Lewis, M.**, Sycara, K., Liu, J. & Kumru, A. (2020). Influence of Culture, Transparency, Trust, and Degree of Automation on Automation Use, *IEEE Transactions on Human-Machine Systems*, 50(3), 205-214.
5. Nam, C., Walker, P., Li, H., **Lewis, M.**, Sycara, K. (2020). Models of Trust in Human Control of Swarms with Varied Levels of Autonomy, *IEEE Transactions on Human-Machine Systems*, 50(3), 194-204.

6. Chien, S., **Lewis, M.**, Sycara, K., Liu, J. & Kumru, A. (2018). The Effect of Culture on Trust in Automation: Reliability and Workload, *ACM Transactions on Interactive Intelligent Systems*. 8(4), article 29. ACM.
7. Chien, S., Lin, Y., Lee, P., Han, S., **Lewis, M.** & Sycara, K. (2018) Attention Allocation for Human Multi-Robot Control: Cognitive Analysis based on Behavior Data and Hidden States, *International Journal of Human-Computer Studies*. 117, 30-44.
8. Kolling, A., Walker, P., Chakraborty, N., Sycara, K., **Lewis, M.** (2015). Human Interaction with Robot Swarms: A Survey. In *Human-Machine Systems (HMS), 2015 IEEE Transactions on*. (pp. 9-26). IEEE.
9. Kolling, A., Sycara, K., Nunnally, S., & **Lewis, M.** (2013). Human swarm interaction: An experimental study of two types of interaction with foraging swarms, *Journal of Human-Robot Interaction*, 2(2), 103-128.
10. Kleiner, A., Kolling, A., **Lewis, M.**, & Sycara, K. (2013) Hierarchical Visibility for Guaranteed Search in Large-Scale Outdoor Terrain, *Journal of Autonomous Agents and Multi-Agent Systems*, 26(1), 1-36.
11. **Lewis, M.**, Wang, H., Chien, S., Ma, Z., Velagapudi, P., Scerri, P., & Sycara, K. (2011) Process and performance in human-robot teams, *Journal of Cognitive Engineering and Decision Making*, 5(2), 186-208.
12. Scerri, P., Ma, Z., Chien, S., Wang, H., Lee, P., **Lewis, M.** & Sycara, K. (2011) An initial evaluation of approaches to building entry for large robot teams, *Journal of Intelligent and Robotic Systems* ,64, 145-159.
13. **Lewis, M.**, Wang, H., Chien, S., Velagapudi, P., Scerri, P. & Sycara, K. (2010). Choosing autonomy modes for multirobot search, *Human Factors*, 52(2), 225-233.
14. **Lewis, M.**, Sycara, K., & Scerri, P. (2009). Scaling up wide-area-search-munition teams, *IEEE Intelligent Systems*, 24(3), 10-13.
15. Sycara, K., Glington, R., Yu, B., Giampapa, J., Owens, S., **Lewis, M.**, & Grindle, C. (2009). An integrated approach to high-level information fusion, *Information Fusion*, 10(1), 25-50.
16. Balakirsky, S., Carpin, S., Kleiner, A., **Lewis, M.**, Visser, A., Wang, J., and Zipara, V. (2007). Toward heterogeneous robot teams for disaster mitigation: Results and performance metrics from RoboCup Rescue, *Journal of Field Robotics*, 24(11-12), 943-967.
17. **Lewis, M.**, Wang, J., and Hughes, S. (2007). USARsim : Simulation for the Study of Human-Robot Interaction, *Journal of Cognitive Engineering and Decision Making*, 1(1), 98-120.



18. **Lewis, M.** and Wang, J. (2007). Gravity referenced attitude display for mobile robots: Making sense of what we see, *Transactions on Systems, Man and Cybernetics Part A*, 37(1), 94-105.
19. Hughes, S. and **Lewis, M.** (2005). Partially guided viewpoint control in virtual environments, *Human Factors*, 47(3), 630-643.
20. Hughes, S. and **M. Lewis.** (2005). Task-Driven Camera Operations for Robotic Exploration. *Transactions on Systems, Man and Cybernetics Part A*, IEEE, 35(4), 513-522.
21. Jacobson, J. and **Lewis, M.** (2005). Game engine virtual reality with CaveUT. *IEEE Computer*, 38(4), 79-82.
22. Nourbakhsh, I., Sycara, K., Koes, M., Young, M., **Lewis, M.**, and Burion, S. (2005). Human-Robot Teaming for Search and Rescue, *Pervasive Computing*, IEEE, 72-78.
23. Prasithsangaree, P., Manojlovich, J., Hughes, S., and **Lewis, M.** (2004). UTSAF: A Multi-Agent-Based Software Bridge for Interoperability between Distributed Military and Commercial Gaming Simulation, *Simulation*, 80(12), 647-657.
24. Giampapa, J., Sycara, K., Owens, S., Glington, R., Seo, Y., Yu, B., Grindle, C., and **Lewis, M.** (2004). Extending the ONESAF Testbed into a C4ISR Testbed, *Simulation*, 80(12), 681-691.
25. **Lewis, M.** & Jacobson, J. (2002) Game Engines in Research. *Communications of the Association for Computing Machinery (CACM)*, NY: ACM 45(1), 27-48.
26. Morse, E., **Lewis, M.**, and Olsen, K. (2002) Testing visual information retrieval methodologies case study: comparative analysis of textual, icon graphical and 'spring' displays. *Journal of the American Society for Information Science and Technology (JASIST)*, Silver Spring, MD: ASIST 53(1) 28-40
27. Morse, E., **Lewis, M.** and Olsen, K. (2000) Evaluating visualizations: Using a taxonomic guide. *International Journal of Human Computer Studies*, 53(5), 637-662.
28. **Lewis, M.** (1998). Designing for human-agent interaction. *AI Magazine*.67-78.
29. **Lewis, M.** (1993). Assessing decision heuristics using machine learning. *Decision Support Systems*, 10, 199-212.
30. **Lewis, M.** & Sycara, K. (1993). Reaching informed agreement in multi-specialist cooperation, *Group Decision and Negotiation*, vol 2, 3, 279-300.
31. **Lewis, Michael** (1992). Situated visualization: Building interfaces from the mind up. *Multimedia Review*, 4(1), Spring, 23-40.

32. **Lewis, M.** & Heidorn, B. (1991). Identifying tacit strategies in aircraft maneuvers. *IEEE Transactions on Systems, Man, and Cybernetics*, 21(6), 1560-1571.
33. Sycara, K. & **Lewis M.** (1991). Modeling Group Decision making and negotiation in concurrent product design. *Systems Automation: Research and Applications*, 1(3), 217-238
34. Weiss, M. & **Lewis, M.** (1991). Telecommunications pricing and consumer expectation: The case of alternate operator services. *Telecommunications Policy*, Dec 91, 497-508.
35. **Lewis, C. Michael** and Stine, Wm Wren (1989) Hidden dependence in human errors, *IEEE Transactions on Reliability*, 38:3, NY: IEEE, 296-300.
36. Rouse, William B., Hammer, John M., and **Lewis, C. Michael** (1989) Algorithmic approaches to knowledge engineering, *IEEE Transactions on Systems, Man, and Cybernetics*, 19, 558-573.
37. Jamison, Wesley and **Lewis, C. Michael** (1990) UnixTutor: A Menu-Based Transitional Interface, *SIGCHI Bulletin*, NY: ACM.
38. **Lewis, C. Michael** and Hammer, John M. (1986) Significance testing of rules in rule-based models of human problem solving. *IEEE Transactions on Systems, Man, and Cybernetics*, vol SMC-16, no. 1, 154-157
39. Gerth, J.M., **Lewis, C.M.**, Stine, Wm, Maple, T.I. (1982) Evaluation of two computerized data collection devices for research in zoos. *Zoo Biology*, New York: Alan R. Liss, Inc.

## Book Chapters

1. **Lewis, Michael**, Li, Huao, Sycara, Katia (2020). “Deep Learning, transparency and trust in Human Robot Teamwork”, In *Trust in Human-Robot Interaction*, Nam, Chang and Lyons, Joseph (eds), Elsevier.
2. Walker, P., Miller, C., Mueller, J., Sycara, K. and **Lewis, M.** (2019). A Playbook-based interface for human control of swarms, In M. Mouloua and P. Hancock (Ed.), *Human Performance in Automated and Autonomous Systems*, CRC Press, 61-88.
3. **Lewis, M.**, Sycara, K. and Walker, P. (2017). The role of trust in human-robot interaction, In Abbass, H., Scholz, J., & Reid, D. (Eds.), *Foundations of Trusted Autonomy*, Springer-Verlag, Berlin-Heidelberg. 135-159.
4. Nunnally, S., Walker, P., **Lewis, M.**, Chakraborty, N. and Sycara, K. (2015). Using haptic feedback in human swarm interaction, In Ying Tan (Ed.), *Handbook of Research on Design, Control, and Modeling of Swarm Robotics*, Hershey, PA: IGI Global.

5. **Lewis, M.** (2013). Human Interaction with Multiple Remote Robots, In D. Kaber (Ed), Human Factors Reviews Volume 9, on *Human Performance in Teleoperation and Beyond*, HFES, 131-174.
6. Sukthankar, Gita and Shumaker, Randall and **Lewis, Michael** (2011) Intelligent Agents as Teammates. In: Theories of Team Cognition: Cross-Disciplinary Perspectives. Routledge Academic, pp. 313-343.
7. **Lewis, M.** & Wang, J. (2010). Coordination and automation for controlling robot teams, in M. Barnes & F. Jentsch (Eds), *Human-Robot Interactions in Future Military Operations*, Burlington, VT: Ashgate, 397-418.
8. **Lewis, M.** and Wang, J. (2009). Assessing coordination demand in cooperating robots, In Madhavan, Tunstel and Messina (Ed.) *Performance Evaluation and Benchmarking of Intelligent Systems*, Springer, New York, 169-186.
9. Y. Xu, P. Scerri, **M. Lewis**, and K. Sycara (2008). Token-based approach for scalable team coordination," in *Cooperative Networks: Control and Optimization*, Edward Elgar Publishing.
10. Wang, J. and **Lewis, M.** (2007). Mixed-initiative multirobot control in USAR, In N. Sarkar Ed., *Human-Robot Interaction*, Itech Education and Publishing: Vienna, Austria, 405-422.
11. **Lewis, M.**, Polvichai, J., Sycara, K., and Scerri, P. (2006) Scaling-up Human Control for Large UAV Teams, In N. Cooke (Ed.), *The Human Factors of Remotely Piloted Vehicles*, New York: Elsevier, pp. 237-250.
12. Wang, J. **Lewis, M.**, and Hughes, S. (2006) USARsim: Simulation for the Study of Urban Search and Rescue Robotics, In S. Carpin, A. Birk, A. Jacoff, A. Nardi, and S. Tadokoro (Eds), *Rescue Robotics, Lecture Notes in Computer Science*, Springer-Verlag, Berlin Heidelberg, 98-120.
13. Xu, Y., Liao, E., Scerri, P., Yu, B., K. Sycara, and **Lewis, M.** (2006) Towards Flexible Coordination of Large Scale Multi-Agent Teams, in *Coordination of Large Scale Multiagent systems*, Springer, 287-209.
14. Scerri, P., Xu, Y., Polvichai, J., Yu, B., Okamoto, S., **Lewis, M.** and Sycara, K. (2005). Challenges in Building Very Large Teams, in *Massively Multiagent Systems I*, 86-103.
15. Scerri, P., Xu, Y., Liao, E., Lai, G., **Lewis, M.** and Sycara, K. (2004) Coordinating large groups of wide area search munitions. In D. Grundel, R. Murphey, and P. Pandalos (Ed.), *Recent Developments in Cooperative Control and Optimization*, Singapore: World Scientific, 451-480.

16. Sycara, K. and **Lewis, M.** (2004). Integrating intelligent agents into human teams. In E. Salas and S. Fiore (Eds.) *Team Cognition: Understanding the Factors that Drive Process and Performance*, Washington, DC: American Psychological Association, 203-232.
17. Toth, J. & **Lewis, M.** (2002) The Role of working memory and external representation in individual decision making In M. Anderson, B. Meyer, and P. Olivier (Eds.) *Diagrammatic Representation and Reasoning*, Springer- Verlag, Berlin-Heidelberg, 207-221.
18. **Lewis, M.** (1999). Anticipation, delegation, and demonstration: Why talking to agents is hard. In Klusch, Shehory, & Weiss (Eds): *Cooperative Information Agents III, Lecture Notes in Artificial Intelligence* vol. 1652, Springer-Verlag, Berlin Heidelberg, 365-389.
19. **Lewis, M.** and J. Toth (1994). Situated cognition in diagrammatic reasoning, AAI Technical Report on Reasoning with Diagrammatic Representations, SS-92-02 Menlo Park, CA: AAI. 47-52.
20. **Lewis, M.** & Sycara, K. (1993). Modeling multispecialist decision making, In M. Smith & G. Salvendy (Eds.) *Human-Computer Interaction: Applications and Case Studies.*, New York: Elsevier, 481-486.
21. **Lewis, M.** (1991). Visualization and situations. In J. Barwise, M. Gawron, G. Plotkin, & S. Tutiya (Eds.), *Situation Theory and Its Applications, II*, Stanford, CA: CSLI Publications, 553-580.

## Refereed Conferences and Workshops

1. Li, H. Le, L., Chis, M., Zheng, K., Hughes D., Lewis, M., Sycara, K., (2021). Sequential Theory of Mind Modeling in Team Search and Rescue Tasks. In AAI Fall Symposium of Computational Theory of Mind for Human-Machine Teams
2. Deka, A., Luo, W., Li, H., **Lewis, M.**, & Sycara, K. (2021). Hiding Leader's Identity in Leader-Follower Navigation through Multi-Agent Reinforcement Learning, *Proceedings of the 2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
3. Yue Guo, Y., Jena, J., Hughes, D., **Lewis, M.** & Sycara, K. (2021). Transfer Learning for Human Navigation and Triage Strategies Prediction in a Simulated Urban Search and Rescue, *30th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2021)*
4. Deka, A., Li, H., Walker, P., **Lewis, M.** & Sycara, K. (2021). Human vs. Deep Neural Network Performance at a Leader Identification Task, *Proceedings of the 65th Annual Meeting of the Human Factors and Ergonomics Society.*
5. Li, H., Zheng, K., Hughes, D., Sycara, K. & **Lewis, M.** (2021). Human Theory of Mind Inference in Search and Rescue tasks, *Proceedings of the 65th Annual Meeting of the Human Factors and Ergonomics Society.*

6. Hamdan, I., Capiola, A., Alarcon, G., Lyons, J., Nishimura, K., Sycara, K. & **Lewis, M.** (2021). Exploring the Effects of Swarm Degradations on Trustworthiness Perceptions, Reliance Intentions, and Reliance Behaviors, *Proceedings of the 65th Annual Meeting of the Human Factors and Ergonomics Society*.
7. Ni, T., Li, H., Agrawal, S., Raja, S., Jia, F., Gui, Y., Hughes, D., **Lewis, M.**, Sycara, K. (2021). Adaptive Agent Architecture for Real-time Human-Agent Teaming, AAAI Workshop on Plan, Activity, and Intent Recognition (PAIR-2021), non-archival, <https://arxiv.org/abs>
8. Guo, Y., Wang, B., Hughes, D, **Lewis, M.**, Sycara, K. (2020). Designing Context-Sensitive Inverse Reinforcement Learning Framework for Norm-Compliant Autonomous Agents, *RO-MAN*, August 31-Sep 4, 2020.
9. Sycara, K., Hughes, D., Li, H., **Lewis, M.**, and Lauharatanahirun, N. (2020). Adaptation in Human-Autonomy Teamwork, *1<sup>st</sup> IEEE International Conference on Human-Machine Systems*
10. Li, H., **Lewis, M.**, Hughes, D. and Sycara, K. (2020). Individual Adaptation in Teamwork, *42<sup>nd</sup> Annual Meeting of the Cognitive Science Society (COGSCI'20)*.
11. Li, H., **Lewis, M.**, and Sycara, K. (2020). A Kalman Estimation Model of Human Trust in Supervisory Control of Robotic Swarms, *64<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
12. Li, H., Ni, T., Argawal, S., Hughes, D., **Lewis, M.**, and Sycara, K. (2020). Team Synchronization and Individual Contributions in Coop-Space Fortress, *64<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*.
13. Chandarana, M., **Lewis, M.**, Sycara, K. and Scherer, S. (2020). Human-in-the-loop Planning and Monitoring of Swarm Search and Service Missions, *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'20)*.
14. Agarwal, A., Kumar, S., Sycara, K., and **Lewis, M.** (2020), Learning Transferable Cooperative Behavior in Multi-Agent Team, *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'20)*.
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