

Marie desJardins
University of Maryland, Baltimore County
Associate Dean for Academic Affairs, College of Engineering and Information Technology
Professor, Department of Computer Science and Electrical Engineering

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PROFILE

- Visionary leadership with proven strengths in building partnerships, identifying strategic directions, and creating and implementing novel solutions to challenging problems.
- Highly successful research program with over \$11M of externally funded research as PI or co-PI, leading to over 130 peer-reviewed publications, 11 completed Ph.D. dissertations, 25 completed M.S. theses and projects, and supervision of nearly 100 undergraduate researchers.
- Deep, sustained commitment to mentoring and success of students and junior colleagues.
- Award-winning teaching with strengths in curricular and pedagogical innovations.
- Demonstrated skill in building relationships, forming coalitions, and connecting people to create synergy.
- Lifelong emphasis on nurturing and celebrating diversity and interdisciplinarity.
- Exceptional time management, process development, and organizational skills.
- Strong reputation for honesty, integrity, open-mindedness, and fairness.

RESEARCH INTERESTS

Artificial intelligence and computer science education. Primary interests and areas of expertise include machine learning, multi-agent systems, interactive techniques for AI systems, distributed and mixed-initiative planning, preference modeling and learning, K-12 CS education, pedagogical innovation, first-year programs, and ethics education.

EDUCATION

May 1992 **Ph.D. in Computer Science**, University of California, Berkeley.
Dissertation Title: *PAGODA: A Model for Autonomous Learning In Probabilistic Domains*.
Committee: Dr. Stuart J. Russell (advisor), Dr. Lotfi Zadeh, Dr. Alice Agogino.

June 1985 **A.B. magna cum laude in Engineering/Computer Science**, Harvard University.

ADMINISTRATIVE POSITIONS

Associate Dean for Academic Affairs 2015–Present
University of Maryland, Baltimore County
College of Engineering and Information Technology

The College of Engineering and Information Technology comprises four departments, 4100 undergraduate majors, 1500 graduate students, and 100 full-time faculty. The Associate Dean collaborates closely with the Dean to provide leadership, program development, and administrative management of College activities related to student affairs, faculty affairs, curriculum, and assessment. Chief accomplishments include:

- Oversaw multiple assessment activities, including leading a successful Fall 2017 ABET re-accreditation of four undergraduate engineering and computing undergraduate programs.
- Created and launched an interdisciplinary Grand Challenge Scholars Program (GCSP) (including securing National Academy of Engineering approval), with 23 Scholars from 11 majors across the university in the first two cohorts, including four Scholars who completed the program and graduated in May 2017.

- Initiated a professional development program for junior faculty, including monthly group workshops, one-on-one mentoring sessions with all new COEIT faculty, and facilitation of UMBC’s Eminent Scholar Mentor Program within the College.
- Created the “Teaching Circles” teaching improvement program, in which faculty at all ranks share teaching experiences, reflect on their own teaching, and visit each other’s classrooms, with 15 COEIT faculty currently participating in the first three Circles.
- Led and participated in multiple efforts to use analytics to review and develop campus and College policies for advising, enrollment, registration, space management, and classroom renewal and renovation.
- Participated in university and College development activities, including alumni relations, fundraising/friendraising activities, and organizing a COEIT Open House at UMBC’s 50th anniversary celebration.
- Resolved conflicts and solved problems, including formal and informal student and faculty grievances, intra-departmental conflicts, and staff conflicts around processes and workload; led several conflict resolution workshops for faculty groups.
- Redesigned and distributed a College-wide student climate survey, analyzed and presented the results in multiple campus venues, coauthored a journal submission describing key findings, and worked with department chairs to identify areas of greatest need.
- Chaired the search committee for a new Assistant Dean of Shared Services, resulting in a successful hire.
- Supervised COEIT staff members on a variety of projects, including onboarding and mentoring a new administrative assistant, redesigning the COEIT website, and updating information collection and dissemination practices.
- Provided administrative support for numerous College activities, including promotion & tenure and post-tenure review, faculty and staff search, internal and external data reporting, and departmental policy revision and creation. Worked with departments to increase faculty participation rate in the first-year student intervention program from 59% in Spring 2014 to 98% in Fall 2016 and Spring 2017 through improved communication, monitoring, support, and intervention.

American Council on Education Fellow
Worcester Polytechnic Institute

2014–2015

Nominated by UMBC to participate in the selective national ACE Fellows program, which is designed to prepare senior academic leaders for executive positions. Spent Spring 2015 in residence at WPI, working closely with mentors President Laurie Leshin and Senior Vice President Kristin Tichenor to develop leadership skills and knowledge about the academic organization. Chief accomplishments include:

- Surveyed institutional research (IR) best practices, carried out on-site case studies of several model IR offices, and created a vision for a proposed WPI Office of Strategic Decision Support.
- Studied enterprise risk management (ERM) as it applies to academic institutions and designed an ERM implementation plan.
- Shadowed campus leaders and attended and participated in a wide range of campus meetings and activities, including strategic planning retreats and workshops, development office activities, planning sessions for the Foisie Innovation Studio, board meetings, and emergency response committee activities.
- Built relationships and connections across campus with stakeholders including campus administrators, deans, department heads, faculty, and staff.
- Participated in ACE leadership training activities, including four cohort retreats, a 360 review, and 12 site visits to academic institutions in the U.S., France, and Cuba.

ACADEMIC POSITIONS

Professor	2011–Present
Associate Professor	2007–2011
Assistant Professor	2001–2007

University of Maryland, Baltimore County
Department of Computer Science and Electrical Engineering

- Received tenure as a faculty member teaching undergraduate and graduate courses, securing and administering

external funding, leading research projects in artificial intelligence and CS education, advising students, and participating in service activities within and outside of UMBC.

- Led the “CS Matters in Maryland” project, which developed a new AP CS Principles course that received College Board endorsement in Spring 2017; trained 75 teachers to teach the CS Matters course; built a statewide partnership with a steering committee of more than 30 thought leaders from academia, K-12 school systems, the Maryland State Department of Education, industry, and nonprofits; established a national reputation as a model statewide advocacy coalition; and founded the Maryland Center for Computing Education.
- Served as Computer Science Undergraduate Program Director for three years, leading efforts to redesign the introductory program course, revise policies about student retakes, and streamline the process for students to request exceptions to policies.
- Championed the interdisciplinary Honors College by chairing the Honors College Advisory Board, serving as an Honors College Faculty Fellow, chairing search committees for the Honors College Director and Associate Director, designing and teaching an interdisciplinary course on complex systems, and helping to redesign the freshman Honors Forum to center on the NAE Grand Challenges (an idea developed by the UMBC team that I led at the 2015 WPI Institute on Project-Based Learning).
- Chaired the Faculty Senate’s Faculty Affairs Committee, successfully building consensus to update promotion & tenure processes and to move from an unvalidated paper-based course evaluation instrument to a scientifically validated online instrument.

Visiting Professor (Professeur Invité)

September 2014

Université Paris Descartes

Developed new collaborative initiatives in the areas of multi-agent systems and multiattribute decision making.

INDUSTRY POSITION

Computer Scientist / Senior Computer Scientist

1991–2001

Artificial Intelligence Center, SRI International, Menlo Park, CA

Led and worked on a wide variety of research projects in artificial intelligence. Responsibilities included managing research activities, supervising research staff, establishing and tracking budgets of up to \$1.5 million, writing proposals, giving presentations and demonstrations, and interacting with clients.

HONORS AND AWARDS

- A. Richard Newton Educator ABIE Award, Anita Borg Institute, 2017.
- CRA-E (Computing Research Association Education Committee) Undergraduate Research Faculty Mentoring Award, 2016.
- Fourteen Women in AI You Should Follow on Twitter (craigconnects.), 2016.
- Top Ten AI Researchers to Follow on Twitter (TechRepublic), 2016.
- NCWIT (National Center for Women in Information Technology) Undergraduate Research Mentoring Award, 2014.
- UMBC Presidential Teaching Professor, 2014–2017.
- UMBC Academic Innovation Fellow, 2013.
- UMBC Honors Faculty Fellow, 2010–2012.
- Distinguished Member of the Association for Computing Machinery, 2011.
- Senior Member of the Association for the Advancement of Artificial Intelligence, 2011.
- National Academy of Engineering Frontiers of Engineering Education Symposium – Invited Participant, 2011.
- UMBC Professor Not to Miss, 2011.
- CRA-W/CDC Distinguished Lecturer, 2010.
- NASA Tech Brief Awards, February 2008 and May 2010.
- Senior Member of the Association for Computing Machinery, 2006.
- NSF CAREER Award, 2006.
- ACM Recognition of Service Award, November 2003.
- NASA Graduate Researchers Program Fellowship, 1987–1990.

- Outstanding Service Award, Student Musical Activities–Vocal, UC Berkeley, 1990.
- NSF Graduate Fellowship Honorary Mention, 1985.
- Harvard College Fellowship, 1981–1985.
- Danforth Teaching Award, Harvard University, 1984.

LEADERSHIP DEVELOPMENT

- American Council on Education Fellow, 2014–2015.
- Society for College and University Planning (SCUP) Planning Institute, 2014–2015.
- Higher Education Resource Services (HERS) Bryn Mawr Summer Institute, July 2014.
- Grace Hopper Celebration of Women in Computing Senior Women’s Summit – Invited Participant, 2011.
- UMBC ADVANCE Third Leadership Cohort, 2008–2009.

PROFESSIONAL MEMBERSHIP AND OFFICES HELD

- American Association for the Advancement of Science (Member-at-Large, Section T, 2017–2022).
- International Joint Conference on Artificial Intelligence (Trustee, 2017–2021).
- Computer Science Teachers Association (Maryland Chapter: University Liaison, 2011–present; Founding Member, 2011).
- Computing Research Association Board Member (AAAI Liaison, 2006–2009).
- Association for the Advancement of Artificial Intelligence (Senior Member; AAAI Conference Committee member, 2013–present; Councillor, 2001–2004 (Grants Committee Member); AAAI Symposium Associate Chair, 2002–2006).
- Association for Computing Machinery (Distinguished Member; SIGART Vice-Chair, 2001–2005).
- American Association of University Women.
- American Civil Liberties Union.

PUBLICATIONS

Names in italics are students whose work I supervised or co-supervised. Student names with asterisks were undergraduates at the time the research was completed.

Peer-Reviewed Journal Articles

Eric Eaton, Marie desJardins, and Sara Jacob, “Multi-view constrained clustering with an incomplete mapping between views,” *Knowledge and Information Systems*, published online November 2012, doi 10.1007/s10115-012-0577-7.

Fusun Yaman, Thomas J. Walsh, Michael L. Littman, and Marie desJardins, “Democratic approximation of lexicographic preference models,” *Artificial Intelligence* (special issue on *Representing, Processing, and Learning Preferences: Theoretical and Practical Challenges*), 175(7-8): 1290-1307, May 2011.

Kiri L. Wagstaff, Marie desJardins, and *Eric Eaton*, “Modeling and learning user preferences over sets,” *Journal of Experimental and Theoretical Artificial Intelligence (JETAI)*, 22(3): 237-268, 2010.

Michael Smith and Marie desJardins, “Learning to trust in the competence and discounting of agents,” *Journal of Autonomous Agents and Multi-Agent Systems* 18(1): 36-82, February 2009.

Matthew E. Gaston and Marie desJardins, “The effect of network structure on dynamic team formation in multi-agent systems,” *Computational Intelligence* 24(2): 122-157, May 2008.

Marie desJardins, *Priyang Rathod*, and Lise Getoor, “Learning structured Bayesian networks: Combining abstraction hierarchies and tree-structured conditional probability tables,” *Computational Intelligence* 24(1): 1-22, 2008.

Jason Pearlman, Penny Rheingans, and Marie desJardins, “Visualizing diversity and depth over a set of objects,” *IEEE Computer Graphics and Applications*, 27(5): 35-45, September 2007.

Blazej Bulka, Matthew Gaston, and Marie desJardins, "Local strategy learning in networked multiagent team formation." *Journal of Autonomous Agents and Multi-Agent Systems* 15(1): 29-45, August 2007.

Yi Lu, Blazej Bulka, Marie desJardins and Stephen Freeland, "Amino acid quantitative structure property relationship database: A web-based platform for quantitative investigations of amino acids," *Protein Engineering, Design, and Selection* 20: 347-351, July 2007.

Marie desJardins, Blazej Bulka, *Ryan Carr, Andrew Hunt, Eric Jordan, and Penny Rheingans, "Heuristic search and information visualization methods for school redistricting." In *AI Magazine, Special Issue on Innovative Applications (Best Papers of IAAI-2006)*, pp. 59-72, AAAI Press, Fall 2007.

Blazej Bulka, Marie desJardins and Stephen J. Freeland, "An interactive visualization tool to explore the biophysical properties of amino acids and their contribution to substitution matrices," *BMC Bioinformatics* 7:329, July 3, 2006.

Susan Hoban, Marie desJardins, Nora Farrell, Priyang Rathod, Joel Sachs, Suryakant Sansare, Yelena Yesha, John Keating, Bart Busschots, Johanna Means, Gilbert Clark, Lou Mayo, and Willard Smith. "Virtual Telescopes in Education." *Journal of Digital Information Special Issue on Interactivity in Digital Libraries* 2(4), 2002.

Marie desJardins, Edmund H. Durfee, Charles L. Ortiz, Jr., and Michael J. Wolverton. "A survey of research in distributed, continual planning." *AI Magazine*, 20(4): 13-22, Winter 1999.

Marie desJardins and Michael Wolverton. "Coordinating a distributed planning system." In *AI Magazine*, 20(4): 45-53, Winter 1999. (An earlier version appeared in *Working Notes of the AAAI Fall Symposium on Distributed Continual Planning*, AAAI Press Technical Report, 1998.)

Diana F. Gordon and Marie desJardins. "Evaluation and selection of biases in machine learning." *Machine Learning* 20(1-2), July/August 1995, pp. 5-22.

Mark H. Burstein, Richard Schantz, Marie A. Bienkowski, Marie E. desJardins, and Stephen F. Smith. "The Common Prototyping Environment." *IEEE Expert*, February 1995, pp. 17-26.

Book Chapters

Penny Rheingans, Marie desJardins, *Wallace Brown, *Alex Morrow, *Doug Stull, and Kevin Winner, "Visualizing uncertainty in predictive models," in *Scientific Visualization: Uncertainty, Multifield, Biomedical, and Scalable Visualization*, Charles D. Hansen, Min Chen, Christopher R. Johnson, Arie Kaufman, and Hans Hagen, eds., Springer-Verlag Inc, Mathematics and Visualization Series, 2014.

Yasaman Haghpanah, Wolf Ketter, Jan van Dalen, and Marie desJardins. "A decision framework for broker selection in smart grids," Esther David et al., eds., *Agent-Mediated Electronic Commerce: Designing Trading Strategies and Mechanisms for Electronic Markets (AMEC/TADA 2012)*, Lecture Notes on Business Information Processing 136, pp. 61-74, Springer, 2013. (Revised selected papers from the 2012 AMEC/TADA workshops.)

Penny Rheingans, Blazej Bulka, and Marie desJardins, "Visualizing spatial partitions." In Hans Hagen, ed., *Scientific Visualization: Advanced Concepts, Vol.1, Dagstuhl Follow-Ups*, Schloss Dagstuhl ISBN 978-3-939897-19-4, August 2010.

Fusun Yaman, Thomas J. Walsh, Michael L. Littman, and Marie desJardins, "Learning lexicographic preference models." In *Preference Learning*, Johannes Fürnkranz and Eyke Hüllermeier, eds., Springer *Lecture Notes in Computer Science (LNCS)*, November 2010.

Marie desJardins, James MacGlashan, and *Julia Ferraioli, "Interactive visual clustering for relational data." In *Constrained Clustering: Advances in Algorithms, Theory, and Applications*, Sugato Basu, Ian Davidson, and Kiri Wagstaff, eds. (Chap. 14, pp. 329-356), Chapman & Hall, 2008.

Marie desJardins. "Goal-directed learning: A decision-theoretic model for deciding what to learn next." In *Goal-Driven Learning*, Ashwin Ram and David B. Leake, eds. (pp. 241-250), MIT Press, 1995.

Marie desJardins. "Evaluation of learning biases using probabilistic domain knowledge." In Stephen Jose Hanson,

Thomas Petsche, Michael Kearns, and Ronald L. Rivest, eds., *Computational Learning Theory and Natural Learning Systems*, Vol. 2 (ch. 7, pp. 95-112), MIT Press, 1994.

Highly Selective Conferences

Nakul Gopalan, Marie desJardins, Michael L. Littman, James MacGlashan, Shawn Squire, Stefanie Tellex, John Winder and Lawson L.S. Wong, "Planning with Abstract Markov Decision Processes," *Proceedings of the 27th International Conference on Automated Planning and Scheduling*, Pittsburgh, PA, July 2017.

James MacGlashan, Monica Babeş-Vroman, Marie desJardins, Michael Littman, Smaranda Muresan, Shawn Squire, Stefanie Tellex, Dilip Arumugam, and Lei Yang, "Grounding English commands to reward functions," *Proceedings of Robotics: Science and Systems Conference*, Rome, Italy, July 2015. (Acceptance rate: 27%. Selected for presentation in an invited technical session on AI & Robotics at AAAI-16.)

*Nicholay Topin, *Nicholas Haltmeyer, Shawn Squire, John Winder, Marie desJardins, James MacGlashan, "Portable option discovery for automated learning transfer in object-oriented Markov Decision Processes," *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI-15)*, Buenos Aires, Argentina, July 2015. (Acceptance rate: 29%.)

Marie desJardins and Susan Martin, "CE21–Maryland: The state of computer science education in Maryland high schools," *Proceedings of the 44th ACM Technical Symposium on Computer Science Education (SIGCSE-13)*, March 2013. (Acceptance rate: 38%.)

Marie desJardins, "Computation, complexity, and emergence: An interdisciplinary honors seminar," *Proceedings of the 44th ACM Technical Symposium on Computer Science Education (SIGCSE-13)*, March 2013. (Acceptance rate: 38%.)

David Trimm, Penny Rheingans, and Marie desJardins, "Analyzing student course histories using visual composition," *Proceedings of InfoVis 2012*, October 2012. To be published as a special issue of *IEEE Transactions on Visualization and Computer Graphics*. (Acceptance rate: 25%.)

Yasaman Haghpanah and Marie desJardins, "CoRe: A cognitive reputation model," *Proceedings of the Eleventh International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2012)*, June 2012. (Acceptance rate: 20%.)

Eric Eaton and Marie desJardins, "Selective transfer between learning tasks using set-based boosting," in *Proceedings of AAAI-2011*, August 2011. (Acceptance rate: 25%.)

Eric Eaton, Marie desJardins, and Sara Jacob, "Multi-view clustering with constraint propagation for learning with an incomplete mapping between views," in *Proceedings of the 19th ACM Conference on Information and Knowledge Management (CIKM-10)*, October 2010, Toronto, Canada. (Acceptance rate for full papers: 13.4%.)

Marie desJardins, Kiri Wagstaff, and James MacGlashan, "Confidence-based feature acquisition to minimize training and test costs," *Proceedings of the 2010 SIAM International Conference on Data Mining (SDM10)*, pp. 514-524, April 2010, Columbus, Ohio. (Acceptance rate: 23%.)

Marie desJardins and Michael Littman, "Broadening student enthusiasm for computer science with a great insights course," *Proceedings of the 41st ACM Technical Symposium on Computer Science Education (SIGCSE-10)*, pp. 157-161, March 2010.

Patricia Ordóñez, Marie desJardins, Carolyn Feltes, Christoph Lehmann, and James Fackler, "Visualizing multivariate time series data to detect specific medical conditions," *Proceedings of the AMIA 2008 Annual Symposium* (selected as one of eight finalists for the Best Student Paper award), pp. 530-534, 2008.

Mark Roberts, Adele Howe, Brandon Wilson, and Marie desJardins, "What makes planners predictable?" *Proceedings of the International Conference on Automated Planning and Scheduling*, pp. 288-295, Sydney, Australia, 2008. (Acceptance rate: 34%.)

Eric Eaton, Marie desJardins, and Terran Lane, "Modeling transfer relationships between learning tasks for improved inductive transfer," *Proceedings of the European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML PKDD)*, pp. 317-332, 2008. (Acceptance rate: 20%.)

Fusun Yaman, Thomas Walsh, Michael Littman, and Marie desJardins, "Democratic approximation of lexicographic preference models," *Proceedings of the 25th International Conference on Machine Learning*, pp. 1200-1207, 2008. (Acceptance rate: 27%.) (A later version of this paper was also accepted to the *AAAI-08 4th Multidisciplinary Workshop on Advances in Preference Handling*.)

Fusun Yaman and Marie desJardins, "More-or-less CP-networks," *Proceedings of the Twenty-Third Conference on Uncertainty in Artificial Intelligence (UAI-07)*, pp. 434-441, 2007. (Acceptance rate: 32%.)

Marie desJardins, *James MacGlashan, and *Julia Ferraioli, "Interactive visual clustering," *Proceedings of the 2007 International Conference on Intelligent User Interfaces*, pp. 361-364, Honolulu, HI, January 2007. (Acceptance rate for short papers: 35%.)

Marie desJardins, Eric Eaton, and Kiri L. Wagstaff, "Learning user preferences for sets of objects." In *Proceedings of the 23rd International Conference on Machine Learning (ICML-06)*, pp. 273-280, 2006. (Acceptance rate: 20%.)

Marie desJardins, Blazej Bulka, *Ryan Carr, Andrew Hunt, Priyang Rathod, and Penny Rheingans, "Heuristic search and information visualization methods for school redistricting." In *Proceedings of the Eighteenth Annual Conference on Innovative Applications of Artificial Intelligence (IAAI-06)*, pp. 1774-1781, AAAI Press, 2006.

Marie desJardins, Lise Getoor, and Priyang Rathod, "Bayesian network learning with abstraction hierarchies and context-specific independence." In *Proceedings of the 16th European Conference on Machine Learning (ECML-2005)*, pp. 485-496, 2005. (Acceptance rate for full papers: 12%.)

Qianjun Xu, Marie desJardins, and Kiri Wagstaff, "Active constrained clustering by examining spectral eigenvectors." In *Proceedings of Discovery Science 2005*, pp. 294-307, 2005. (Acceptance rate for long papers: 21%.) Winner of the first annual Carl Smith Award (best student paper at the conference).

Poonam Shanbhag, Penny Rheingans, and Marie desJardins. "Temporal visualization of planning polygons for efficient partitioning of geo-spatial data." In *Proceedings of InfoVis 2005*, p. 28, October 23-25, Minneapolis, Minnesota, 2005. (Acceptance rate: 27%.)

Matthew E. Gaston and Marie desJardins. "Agent-organized networks for multi-agent production and exchange." In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI-05)*, pp. 77-82. AAAI Press: Pittsburgh, PA, July 2005. (Full paper acceptance rate: 18%.)

Marie desJardins and Kiri Wagstaff. "DD-PREF: A language for expressing preferences over sets." In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI-05)* (poster presentation), pp. 620-626. AAAI Press: Pittsburgh, PA, July 2005. (Combined paper and poster acceptance rate: 28%.)

Srinivas Bhagavatula, Penny Rheingans, and Marie desJardins. "Discovering high-level parameters for visualization design." *Proceedings of EuroVis 2005: Eurographics/IEEE-VGTC Symposium on Visualization*, pp. 255-262. Leeds, United Kingdom, June 2005. (Acceptance rate: 36%.)

Matthew E. Gaston and Marie desJardins. "Agent-organized networks for dynamic team formation." In *Proceedings of the 2005 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)*, pp. 230-237. Utrecht, Netherlands, July 2005. (Full paper acceptance rate: 24%.)

Michael J. Smith and Marie desJardins. "A framework for decomposing reputation in MAS into competence and integrity." In *Proceedings of the 2005 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)* (poster presentation), pp. 1253-1254. Utrecht, Netherlands, July 2005. (Combined full paper and poster acceptance rate: 47%.)

Penny Rheingans and Marie desJardins. "Visualizing high-dimensional predictive model quality." In *Proceedings of IEEE Visualization 2000*, pp. 493-496. Salt Lake City, October 8-13, 2000.

Michael Wolverton and Marie desJardins. "Controlling communication in distributed planning using irrelevance rea-

soning.” In *Proceedings of the Fifteenth National Conference on Artificial Intelligence*, pp. 868-874, Madison, WI, AAAI Press, 1998.

Marie desJardins, Peter D. Karp, Markus Krummenacker, Thomas J. Lee, and Christos A. Ouzounis. “Prediction of enzyme classification from protein sequence without the use of sequence similarity.” In *Proceedings of the Fifth International Conference on Intelligent Systems for Molecular Biology*, pp. 92-99, Halkidiki, Greece, 1997.

Marie A. Bienkowski and Marie E. desJardins. “Planning-based integrated decision support systems.” In *Proceedings of the Second International Conference on AI Planning Systems*, pp. 196-201, Morgan Kaufmann, 1994.

Marie desJardins. “Representing and reasoning with probabilistic knowledge: A Bayesian approach.” In *Proceedings of the Ninth Conference on Uncertainty in AI* (poster presentation), pp. 227-234, Washington, D.C., July 1993, Morgan Kaufmann.

Less Selective Conferences, Workshops, and Symposia

“Towards Planning With Hierarchies of Learned Markov Decision Processes,” *John Winder, Shawn Squire, *Matthew Landen, *Stephanie Milani* and Marie desJardins, ICAPS Integrated Execution of Planning and Acting (IntEx) Workshop, Pittsburgh PA, June 20, 2017.

“R-AMDP: Model-Based Learning for Abstract Markov Decision Process Hierarchies,” *Shawn Squire, John Winder, *Matthew Landen, Stephanie Milani,* and Marie desJardins, Third Multidisciplinary Conference on Reinforcement Learning and Decision Making, Ann Arbor, Michigan, June 11-14, 2017.

“Planning with Abstract Markov Decision Processes,” Nakul Gopalan, Marie desJardins, Michael L. Littman, James MacGlashan, *Shawn Squire, Stefanie Tellex, John Winder,* and Lawson L.S. Wong, Third Multidisciplinary Conference on Reinforcement Learning and Decision Making, Ann Arbor, Michigan, June 11-14, 2017.

Yasaman Haghpanah and Marie desJardins, “Estimating accurate ratings by modeling the behavior of raters, AAAI-2016 Workshop on Incentive and Trust in E-Communities (WIT-EC’16), 2016.

Shawn Squire and Marie desJardins, “Abstracting complex domains using modular object-oriented Markov decision processes,” AAAI-16 Student Abstract and Poster Program, 2016.

Marie desJardins, **Tenji Tembo, *Nicholay Topin, *Michael Bishoff, Shawn Squire,* James MacGlashan, **Rose Carignan,* and **Nicholas Haltmeyer,* “Discovering subgoals in complex domains.” In *Working Notes of the AAAI 2014 Fall Symposium on Knowledge, Skill, and Behavior Transfer in Autonomous Robots*, November 13-15, 2014.

Shawn Squire and Marie desJardins, “Autonomous hierarchical POMDP planning from low-level sensors.” In *Working Notes of the AAAI-13 Workshop on Learning Rich Representations from Low-Level Sensors*, July 15, 2013.

Gymama Slaughter, *Zach Kurtz,* Marie desJardins, Peter F. Hu, Colin Mackenzie, Lynn Stansbury, and Deborah M. Stein, “Prediction of mortality” (short poster presentation). In *Proceedings of the 2012 IEEE Biomedical Circuits & Systems Conference (BIOCAS-12)*, Hsinchu, Taiwan, November 2012.

**Shawn Biesan,* Adam Anthony, and Marie desJardins, “Block modeling in large social networks with many clusters.” In *Working Notes of the AAAI Fall Symposium on Social Networks and Social Contagion*, November 2012.

Yasaman Haghpanah, Wolf Ketter, Jan van Dalen, and Marie desJardins. “SmartRate: A rating interpretation mechanism for agents in Smart Grid markets” (short paper). In *Proceedings of the International Conference on Electronic Commerce 2012 (ICEC-12)*, Singapore, August 2012.

Monica Babes-Vroman, Ruoyuan Gao, **Richard Adjogah, James MacGlashan, Kevin Winner,* Marie desJardins, Michael Littman, and Smaranda Muresan, “Learning to interpret natural language instructions,” *Working Notes of the AAAI 2012 Workshop on Grounding Language for Physical Systems*, July 2012.

Monica Babes-Vroman, Ruoyuan Gao, **Richard Adjogah, James MacGlashan, Kevin Winner,* Marie desJardins, Michael Littman, and Smaranda Muresan, “Learning to interpret natural language instructions,” *Working Notes of the NAACL-HLT 2012 Workshop on Semantic Interpretation in an Actionable Context (SIAC-12)*, June 2012.

Yasaman Haghpanah, Wolf Ketter, Jan van Dalen, and Marie desJardins. "SmartRate: A rating interpretation mechanism for agents in smart grid markets," *Working Notes of the TADA/AMEC 2012 Workshop* (Joint AAMAS-2012 Workshop on Trading Agent Design and Analysis (TADA) and Agent-Mediated Electronic Commerce (AMEC)), June 2012.

*JJ Seymour, *Joseph Tuzo, and Marie desJardins, "Ant colony optimization in a changing environment," *Working Notes of the AAAI Fall Symposium on Complex Adaptive Systems*, November 2011.

*Joseph Tuzo, *JJ Seymour, and Marie desJardins, "Using a cellular automaton simulation to determine an optimal lane changing strategy on a multi-lane highway," *Working Notes of the AAAI Fall Symposium on Complex Adaptive Systems*, November 2011.

Yasaman Haghpanah and Marie desJardins, "A trust and reputation model for decision making in supply chain management," *Proceedings of the Thirteenth International Workshop on Agent-Mediated Electronic Commerce*, May 2011.

Marie desJardins and Tim Oates, "Mastermind course project," *Proceedings of the Second AAAI Symposium on Educational Advances in Artificial Intelligence* (Model AI Assignment), August 2011.

Marie desJardins, *Amy Ciavolino, *Robert Deloatch, and *Eliana Feasley, "Playing to Program: An intelligent programming tutor for RUR-PLE," *Proceedings of the Second AAAI Symposium on Educational Advances in Artificial Intelligence* (short paper), August 2011.

Patricia Ordóñez, Marie desJardins, Michael Lombardi, Christoph U. Lehmann and Jim Fackler, "An animated multivariate visualization for physiological and clinical data in the ICU." In *Proceedings of the 1st ACM International Health Informatics Symposium* (poster presentation), November 2010.

Yasaman Haghpanah and Marie desJardins, "Using a trust model in decision making for supply chain management," in *Working Notes of the AAAI-10 Workshop on Interactive Decision Theory and Game Theory*, pp. 25-29, AAAI Press, July 2010.

Yasaman Haghpanah and Marie desJardins, "A trust model for supply chain management," in *Proceedings of the Twenty-Fifth AAAI Conference on Artificial Intelligence (AAAI-10)* (student abstract), pp. 1933-1934, July 2010.

Don Miner, James MacGlashan, and Marie desJardins, "A game playing system for use in computer science education," in *Proceedings of The 23rd International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, pp. 305-310, Daytona Beach, Florida, May 2010.

Eric Eaton and Marie desJardins, "Set-based boosting for instance-level transfer," in *Working Notes of the ICDM-2009 Workshop on Transfer Mining*, pp. 422-428, December 2009.

Don Miner and Marie desJardins, "Predicting and controlling system-level parameters of multi-agent systems," in *Working Notes of the AAAI Fall Symposium on CAS and the Threshold Effect (Technical Report FS-09-03)*, pp. 92-95, AAAI Press, November 2009.

*Kevin Winner, Don Miner, and Marie desJardins, "Controlling particle swarm optimization with learned parameters," in *Proceedings of the Third IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2009)* (poster presentation), pp. 288-290, September 2009.

Don Miner and Marie desJardins, "Learning non-explicit control parameters of self-organizing systems," in *Proceedings of the Third IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2009)* (poster presentation), pp. 286-287, September 2009.

James MacGlashan and Marie desJardins, "Hierarchical skill learning for high-level planning," *Working Notes of the ICML-09 Workshop on Abstraction in Reinforcement Learning* (poster paper), pp. 30-35, June 2009.

Adam Anthony, Marie desJardins and *Michael Lombardi, "Measuring general relational structure using the block modularity clustering objective," *Proceedings of the 22nd International Florida AI Research Society (FLAIRS) Conference* (poster paper), pp. 135-136, May 2009.

Don Miner, Marc Pickett, and Marie desJardins, "Understanding the brain's emergent properties," in *Proceedings of*

the Second Conference on Artificial General Intelligence (AGI-09), pp. 212-213, Atlantis Press, March 2009.

Melinda Gervasio, Karen Myers, Marie desJardins, and Fusun Yaman, "Question asking to inform preference learning: A case study," *Working Notes of the AAAI Spring Symposium on Agents that Learn from Human Teachers*, pp. 56-62, AAAI Press, March 2009.

Blazej Bulka, Marie desJardins, and Fusun Yaman, "The effect of planning state space topology on search performance," in *Working Notes of the AAAI-08 Workshop on Search in Artificial Intelligence and Robotics (AAAI Technical Report WS-08-10)*, pp. 169-170, 2008.

Don Miner, Marie desJardins, and *Peter Hamilton, "The Swarm Application Framework," *Proceedings of the AAAI-08 National Conference on Artificial Intelligence (Student Abstract)*, pp. 1822-1823, 2008.

Adam Anthony, Marie desJardins, and *Steve Martin, "A multi-agent team formation framework for classroom instruction," in *Working Notes of the AAAI Colloquium on AI Education*, pp. 1-6, 2008.

Adam Anthony and Marie desJardins, "Generative models for clustering: The next generation," *Working Notes of the Spring Symposium on Social Information Processing*, pp. 7-10, AAAI Press, March 2008.

Adam Anthony and Marie desJardins, "Data clustering with a relational push-pull model," *Proceedings of the ICDM-07 Workshop on Optimization-Based Data Mining Techniques with Applications*, pp. 189-194, Omaha, Nebraska, IEEE Press, October 28-31, 2007.

Markus E. Dale and Marie desJardins, "The FAME problem domain for distributed planning," *Working Notes of the AAAI Fall Symposium on "Regarding the 'Intelligence' in Distributed Intelligent Systems"*, pp. 49-52, November 2007.

Brandon Wilson and Marie desJardins, "Forming stable, overlapping coalitions in an open multi-agent system," *Working Notes of the AAAI Fall Symposium on "Regarding the 'Intelligence' in Distributed Intelligent Systems"*, pp. 120-123, November 2007.

Adam Anthony and Marie desJardins, "Data clustering with a relational push-pull model," *Proceedings of the National Conference on Artificial Intelligence (AAAI-2007) (student abstract)*, pp. 1840-1841, AAAI Press, 2007.

Eric Eaton, Marie desJardins, and *John Stevenson, "Using multiresolution learning for transfer in image classification," *Proceedings of the National Conference on Artificial Intelligence (AAAI-2007) (student abstract)*, pp. 1852-1853, AAAI Press, 2007.

Marie desJardins and Matthew Gaston, "Speaking of relations: Connecting statistical relational learning and multi-agent systems," in *Proceedings of the ICML 2006 Workshop on Statistical Relational Learning*, Pittsburgh PA, 2006.

Adam Anthony and Marie desJardins, "Open problems in relational data clustering," in *Proceedings of the ICML 2006 Workshop on Statistical Relational Learning*, Pittsburgh PA, 2006.

Eric Eaton and Marie desJardins, "Knowledge transfer with a multiresolution ensemble of classifiers," in *Proceedings of the ICML 2006 Workshop on Transfer Learning*, Pittsburgh PA, 2006.

Jim Blythe, Mithila Patwardhan, Tim Oates, Marie desJardins, and Penny Rheingans, "Visualization support for fusing relational, spatio-temporal data: Building career histories." In *Proceedings of FUSION 2006*, pp. 1-7, IEEE Press, 2006.

Blazej Bulka and Marie desJardins, "Integrating top-down planning with a bottom-up approach that learns to locally combine actions." In *Working Notes of the AAAI Spring Symposium on Distributed Plan and Schedule Management*, pp. 153-154, AAAI Press, 2006.

Marie desJardins, "Case study: Teaching research skills to computer science graduate students." In *Proceedings of the 3rd International Conference on Education and Information Systems, Technologies and Applications (EISTA 2005)*, Orlando, FL, July 14-17, IIIC Press, 2005.

Matthew E. Gaston and Marie desJardins. "A simple learning approach for endogenous network formation." In *Working Notes of the AAAI-05 Workshop on Multiagent Learning*, pp. 34-40, Pittsburgh, PA: AAAI Press, 2005.

Blazej Bulka, Matthew Gaston, and Marie desJardins. "Local learning to improve organizational performance in networked multiagent team formation." In *Working Notes of the AAAI-05 Workshop on Multiagent Learning*, pp. 15-20, Pittsburgh, PA: AAAI Press, 2005.

Michael J. Smith and Marie desJardins. "A model for competence and integrity in variable payoff games." In *Working Notes of the AAMAS-05 Workshop on Trust in Multiagent Systems*. Utrecht, Netherlands, July 2005.

Balaji Viswanathan and Marie desJardins. "A model for large-scale team formation for a disaster rescue problem." In *Working Notes of the 2nd Workshop on the Coordination of Large-Scale Multi-Agent Systems (LSMAS 2005)* (held in conjunction with AAMAS-05). Utrecht, Netherlands, July 2005.

Marie desJardins, Eric Eaton, and Kiri Wagstaff. "A context-sensitive and user-centric approach to developing personal assistants." In *Working Notes of the AAAI Spring Symposium on Persistent Assistants*, pp. 98-100, Palo Alto, CA, March 21-23, 2005.

Matthew E. Gaston and Marie desJardins. "Social network structures and their impact on multi-agent system dynamics." In *Proceedings of the 18th International Conference of the Florida Artificial Intelligence Research Society (FLAIRS-05)*, pp. 32-37, Clearwater Beach, FL, May 2005. *Acceptance rate: 53.4%*.

Qianjun Xu, Marie desJardins, and Kiri Wagstaff. "Constrained spectral clustering under a local proximity assumption." In *Proceedings of the 18th International Conference of the Florida Artificial Intelligence Research Society (FLAIRS-05)*, pp. 866-867, Clearwater Beach, FL, May 2005. *Combined paper/poster acceptance rate: 66.8%*.

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Matthew E. Gaston, John Simmons, and Marie desJardins. "Adapting network structure for efficient team formation." In *Working Notes of the AAMAS-04 Workshop on Learning and Evolution in Agent-Based Systems*, New York, NY, July 2004. *A longer version was published in the Working Notes of the AAAI-2004 Fall Symposium on Learning in Multiagent Systems, Washington, D.C., October 2004.*

Matthew Gaston and Marie desJardins. "Team formation in complex networks." In *Proceedings of the North American Association for Computational Science and Organizational Science (NAACSOS) Conference*, Pittsburgh, PA, June 22-25, 2003.

Mithun Sheshagiri, Marie desJardins, and Tim Finin. "A planner for composing services described in DAML-S." In *Proceedings of the ICAPS-03 Workshop on Planning for Web Services*, Trento, Italy, June 2003. Also published in *Proceedings of the AAMAS-03 Workshop on Web Services and Agent-Based Engineering*, Melbourne, Australia, July 2003.

Mithun Sheshagiri and Marie desJardins. "Data persistence: A design principle for hybrid robot architectures." In *Proceedings of the 2002 International Conference on Knowledge-Based Computing Systems*, Mumbai, India, December 2002.

Marie desJardins. "Research directions in interactive AI." In *Working Notes of the AAAI Fall Symposium on Personalized Agents*, North Falmouth, MA, November 15-17, 2002.

Karen L. Myers, Michael J. Wolverton, W. Mabry Tyson, Peter A. Jarvis, Thomas J. Lee, and Marie desJardins. "PASSAT: User-centric planning technology." In *Proceedings of the Third International NASA Workshop on Planning and Scheduling for Space*, Houston, Texas, October 27-29, 2002.

Priyang Rathod, Marie desJardins, and Suryakant Sansare. "Interactive, incremental scheduling for Virtual Telescopes in Education." In *Proceedings of the Third International NASA Workshop on Planning and Scheduling for Space*, Houston, Texas, October 27-29, 2002.

Kishalay Kundu, Chad Sessions, Marie desJardins, and Penny Rheingans. "Three-dimensional visualization of hierarchical task network plans." In *Proceedings of the Third International NASA Workshop on Planning and Scheduling for Space*, Houston, Texas, October 27-29, 2002.

Marie desJardins, Lise Getoor, and Daphne Koller. "Using feature hierarchies in Bayesian network learning (extended abstract)." In *Proceedings of the Symposium on Abstraction, Reformulation and Approximation (SARA-2000)*, Lago Vista, Texas, July 2000, AAAI Press.

David Wilkins and Marie desJardins. "A call for knowledge-based planning." *AI Magazine* 22(1): 99-115, Spring 2001. (An earlier version was published in the *Proceedings of the Second International NASA Workshop on Planning and Scheduling for Space*, San Francisco, CA, pp. 187-192, 2000.)

Charles L. Ortiz, Jr., Eric Hsu, Marie desJardins, Timothy Rauenbusch, Barbara Grosz, Osher Yadgar, and Sarit Kraus. "Incremental negotiation and coalition formation for resource-bounded agents." In *Working Notes of the AAAI Fall Symposium on Negotiation Methods for Autonomous Cooperative Systems*, North Falmouth, MA, Nov. 2-4, 2001.

Marie desJardins, Karen Myers, David Morley, and Michael Wolverton. "Research summary: Communication-sensitive decision making in multi-agent, real-time environments." In *Working Notes of the AAAI Spring Symposium on Robust Autonomy*, Stanford, CA, March 2001.

Marie desJardins and Penny Rheingans, "Visualization of high-dimensional model characteristics." In *Working Notes of the CIKM-99 Workshop on New Paradigms in Information Visualization and Manipulation*, ACM Press, 1999.

Marie desJardins, Anthony Francis, and Michael Wolverton. "Hybrid planning: An approach to integrating generative and case-based planning." In *Working Notes of the AAAI-98 Workshop on Case-Based Reasoning Integrations* (available as AAAI Technical Report WS-98-15). AAAI Press, 1998.

Denise W. Gürer, Marie desJardins, and Mark Schlager. "Representing a student's learning states and transitions." In *Working Notes of the AAAI Spring Symposium on Representing Mental States and Mechanisms*, Stanford, CA, March 1995. Published as a AAAI Technical Report.

Marie desJardins. "Knowledge acquisition techniques for a military planning system." In *Proceedings of the 6th International Conference on Tools with AI*, New Orleans, November 6-9, 1994. IEEE Computer Society Press.

Marie desJardins. "The use of relevance to evaluate learning biases." In *Working Notes of the AAAI Fall Symposium on Relevance*, New Orleans, November 4-6, 1994. Published as a AAAI Technical Report.

Roberto V. Desimone and Marie E. desJardins. "The application of uncertain reasoning during battle planning." In *Proceedings of the Symposium on Command and Control Research and Decision Aids*, 1994.

Marie desJardins, "Knowledge development methods for planning systems." In *Working Notes of the AAAI Fall Symposium on Planning and Learning*, New Orleans, November 1994, AAAI Press Technical Report.

Marie desJardins. "An integrated architecture for autonomous intelligent agents." In *Working Notes of the AAAI Workshop on Learning Action Models*, Washington, D.C., July 1993. Published as a AAAI Technical Report.

Roberto Desimone, David E. Wilkins, Marie Bienkowski, and Marie desJardins. "SOCAP: Lessons learned in automating military operations planning." In *Proceedings of the Sixth International Conference on Industrial and Engineering Applications of AI and Expert Systems*, Edinburgh, Scotland, June, 1993.

Marie desJardins and Denise Gürer. "Machine learning-based adaptive training systems." In *Working Notes of the AI in Education Workshop on Collaborative Problem Solving*, Edinburgh, Scotland, 1993.

Marie desJardins. "Goal-directed learning: A decision-theoretic model for deciding what to learn next." In *Proceedings of the Machine Discovery Workshop*, Aberdeen, Scotland, 1992.

Marie desJardins. "Probabilistic evaluation of bias for learning systems." In *Proceedings of the Eighth International Workshop on Machine Learning*, pp. 495-499, Evanston, Illinois, Morgan Kaufmann, 1991.

Other Publications

"Investigating Practices of Inclusivity in a Youth Oriented Makerspace," Gabrielle Salib, Amy Hurst, and Marie desJardins, Equity and Inclusivity Workshop at the ACM SIGCHI Interaction Design for Children (IDC) Conference,

June 2017.

“T-SITE: A UMBC Community of Transfer Scholars in Computing, Information Technology, and Engineering,” 2017 ASEE Annual Conference (NSF Grantees Poster Session), Danyelle Tauryce Ireland, Penny Rheingans, Lee Blaney, Marie desJardins, E. F. Charles LaBerge, Carolyn Seaman, Gymama Slaughter, Anne Marie Spence, and Susan Martin, June 2017.

Marie desJardins, “Dismayed by ‘Sex’ Cover” (Letter to the Editor), *Communications of the ACM*, Vol. 60 No. 2, Pages 8-9

Marie desJardins, “Explainer: What it will take to make computer science education available in all schools,” *The Conversation*, October 22, 2015. Reposted in *Fortune Insider* as “The real reason U.S. students lag behind in computer science,” October 22, 2015.

Marie desJardins, “Creating AP CS Principles: Let Many Flowers Bloom,” *ACM Inroads*, December 2015 (to appear).

Marie desJardins and Penny Rheingans, “Women in AI and CS: Pipelines, Pathways, and Patterns,” Working Notes of the IJCAI-15 Workshop on Women in AI and CS, July 2015.

<http://www-users.cs.umn.edu/~gini/ijcai2015/women-ai-cs.pdf>

Joe Greenawalt, Dianne O’Grady-Cunniff, and Marie desJardins, “CS Matters in Maryland,” *CSTA Voice*, July 2015.

Marie desJardins, “ACTIVE-ating Artificial Intelligence: Integrating Active Learning in an Introductory Course,” *AI Magazine* 35:4, Winter 2014.

James MacGlashan, Monica Babes-Vroman, Marie desJardins, Michael Littman, Smaranda Muresan and *Shawn Squire*, “Translating English to reward functions,” Brown University Tech Report CS-14-01, April 2014.

Marie desJardins, Mehran Sahami, and Kiri Wagstaff, “EAAI-10: The First Symposium on Educational Advances in Artificial Intelligence,” *AI Magazine*, 2011.

Penny Rheingans, Marie desJardins, and *Blazej Bulka*, “Exploring interrelated spatial partitions,” *UMBC Dept. of CS&EE Technical Report TR-CS-10-xx*, November 2010.

Blazej Bulka, Penny Rheingans, and Marie desJardins, “Color selection for visualizing multiple related categorical properties,” *UMBC Dept. of CS&EE Technical Report TR-CS-10-xx*, November 2010.

Joshua Jones and Marie desJardins, “Learning of branching lexical preference models,” *UMBC Dept. of CS&EE Technical Report TR-CS-10-05*, June 2010.

Marie desJardins, *Matthew E. Gaston*, and Dragomir Radev, “Introduction to the special issue on AI & networks,” *AI Magazine*, Fall 2008.

Cecilia Shore, Zachary Birchmeier, Marie desJardins, Wanda Pratt, and Hugo Schielka, “Time-to-degree: Some suggestions for keeping on schedule as a PhD student,” *APS Observer Student Notebook*, November 2007.

Marie desJardins. “Machine learning” (sidebar entry). In *Van Nostrand Encyclopedia of Science 9/e*, John Wiley and Sons, New York, 2002.

Patricia Hennings and Marie desJardins. “A young poet sings.” *Pan Pipes*, Summer 2001, pp. 5-7.

Marie desJardins. “Knowledge acquisition tools for planning systems.” In Austin Tate, ed., *Advanced Planning Technology: Technological Achievements of the ARPA/Rome Laboratory Planning Initiative*, pp. 124-129, AAAI Press, Menlo Park, CA, 1996.

Marie desJardins. “How to succeed in graduate school: A guide for students and advisors.” *Crossroads: The Online ACM Student Magazine*, 1.2 (December 1994) and 1.3 (January 1995). Also published in *IAPPP Communications* (Winter 1995, no. 58) and excerpted in *SHPE* (the official magazine of the Society of Hispanic Professional Engineers), Winter 2000, and in *IEEE Potentials* (August/September 1996).

Marie desJardins. *Dissertation Abstract: PAGODA: A Model for Autonomous Learning in Probabilistic Domains. AI*

Magazine, Spring 1993, 75-76.

Marie desJardins. *PAGODA: A Model for Autonomous Learning in Probabilistic Domains*. Ph.D. dissertation, University of California, Berkeley, 1992. Also published as UC Berkeley Technical Report No. UCB/CSD 92/678.

ADDITIONAL INVITED LECTURES, PRESENTATIONS, AND MEDIA COVERAGE

2017

- Lakeland Elementary School Lunchtime Career Series, December 13, 2017.
- “Implicit Bias,” UMBC faculty workshop (with Shawn Bediako), December 1, 2017.
- Panelist, “CS in the Workforce,” Howard County Public School System / Bright Minds, November 27, 2017.
- “Preparing for Graduate School: Making a Game Plan,” Center for Women in Technology IMPACT Series, October 13, 2017.
- “ABIE Award Winners Panel,” Grace Hopper Celebration of Women in Computing, October 6, 2017.
- “Women in Tech Town Hall,” Voice of America, Grace Hopper Celebration of Women in Computing, October 5, 2017.
- “Teaching Circles,” poster presentation at UMBC’s Provost’s Teaching & Learning Symposium, September 22, 2017.
- “Microchips Implanted into Employees of Wisconsin Business,” NBC Nightly News (interview), August 1, 2017.
- “Wisconsin company now offering to microchip employees,” Morning Dose (interview), July 25, 2017.
- “Succeeding in Research,” Meyerhoff Scholars Orientation guest presentation, June 19, 2017.
- “Meet These Incredible Women Advancing A.I. Research, Maria Yao, Forbes, May 18, 2017.
- “NSF CAREER Program: A Workshop for Beginning Faculty,” May 12, 2017, UMBC.
- Computer Science Education “Meet Your Professor” session, May 8, 2017, UMBC.
- “Microchip implants help employees access data; experts worry about ‘slippery slope’ for privacy” (quoted), Hope Reese, TechRepublic, April 14, 2017.
- Panelist, “Building a Statewide Coalition for Computer Science,” Building State Leadership Capacity: K-12 Computer Science Education Workshop, Cambridge MA, April 4, 2017.
- “Planning and Learning in Complex Stochastic Domains: AMDPs, Option Discovery, Learning Transfer, Language Learning, and More,” University of Maryland CLIPS Laboratory Seminar, March 29, 2017.
- “Microsoft competition asks PhD students to create advanced AI to play Minecraft,” Hope Reese, TechRepublic, March 16, 2017.
- “Battling Sexism In Artificial Intelligence” (quoted), *Boss Magazine*, March 2017.
- “Finding Balance and Joy in AI,” AAAI-17 Workshop on Diversity in Artificial Intelligence (invited speaker), February 5, 2017.
- “Presenting Your Research: Papers, Presentations, and People,” AAAI Doctoral Consortium (keynote), February 4, 2017.
- “Planning and Learning in Complex Stochastic Domains: AMDPs, Option Discovery, Learning Transfer, Language Learning, and More,” SRI International Artificial Intelligence Seminar Series, February 3, 2017.
- “Google’s AI-powered AlphaGo revealed as mystery online gaming champ” (quoted), Hope Reese, TechRepublic, January 5, 2017.

2016

- “Artificial intelligence: The 3 big trends to watch in 2017,” Hope Reese, *TechRepublic*, December 20, 2016.
- “In Hour of Code, UMBC students give Baltimore youth hands-on intro to computing careers,” Megan Hanks, *UMBC News*, December 13, 2016.
- “City students get early exposure to computer careers at UMBC,” Jon Bleiweis, *Baltimore Sun*, December 12, 2016.
- “14 Women in AI You Should Follow on Twitter,” Craig Newman, *craigconnects.*, December 8, 2016.
- “OpenAI unveils ‘Universe,’ a platform that helps AI learn from complex environments” (quoted), Hope Reese, TechRepublic, December 5, 2016.

- CRA-W Career Mentoring Workshop, panelist on “Being an Effective Leader,” “Learning How to Lead,” and “Managing Down and Up,” November 19–20, 2016.
- “White House honors 5 technology innovators with the Presidential Medal of Freedom” (quoted), Hope Reese, November 17, 2016.
- “AI tool successfully predicted Trump win; still, experts are skeptical” (quoted), Hope Reese, TechRepublic, November 10, 2016.
- “Surviving 50 Shades of Academic Motherhood” (panelist), Grace Hopper Celebration of Women in Computing, July 2016.
- “AI is booming, but can the benefits live up to the hype?” (quoted), Hope Reese, TechRepublic, August 15, 2016.
- “Police use robot to kill for first time; AI experts say it’s no big deal but worry about future” (quoted), Hope Reese, TechRepublic, July 14, 2016.
- “Programs for High Achieving Students” (panelist), CRA Conference at Snowbird, July 2016.
- “CS Matters in Maryland: A Collaborative CS Principles Course,” Marie desJardins, Jan Plane, Megean Garvin, Dianne O’Grady-Cunniff, Joe Greenawalt and Christina Morris, 2016 CSTA Annual Conference, San Diego, CA, July 10–12, 2016.
- Featured in “2016 Maryland Computing Education Summit” video, MSDE TV, April 2017.
<https://www.youtube.com/watch?v=bajasia45S8>
- “How the Microsoft Tay chatbot debacle could have been prevented with better AI” (quoted), Hope Reese, TechRepublic, April 7, 2016.
- “Ten AI Researchers to Follow on Twitter” (listed), Hope Reese, TechRepublic, February 23, 2016.
- UMBC Honors College Lunch in the Lounge, April 2016.
- “NSF CAREER Program: A Workshop for Beginning Faculty,” May 11, 2016.
- “Institutionalizing a First-Year Seminar for Computing Majors through Collaboration,” poster presentation, 35th Annual Conference on The First-Year Experience, Orlando, Florida, February 20–23, 2016.
- Hope Reese, “Q&A: Former AAAI chair discusses future of AI research and what’s coming up at AAAI next month” (interview), *TechRepublic*, January 6, 2016.
- Barb Freda, “How artificial intelligence makes higher ed smarter,” *University Business*, January 27, 2016.
- Megean Garvin, Shawn Squire, and Marie desJardins, “Increasing Teacher Productivity and Participation in Curriculum Development Via a Customized Content Management System,” Roundtable Session on Teacher Education in Cyberspace: Tech-based Platforms and Practices, American Educational Research Association (AERA) Annual Meeting, Washington, D.C., April 8-12, 2016.

2015

- Josephine Wolff, “Hackathons Have a Gender Problem” (quoted), *Slate*, November 11, 2015.
- Sarah Todd, “Inside the surprisingly sexist world of artificial intelligence” (quoted), *Quartz*, October 25, 2015.
- “Subgoal Discovery and Language Learning in Reinforcement Learning Agents,” Worcester Polytechnic Institute CS Seminar Series, August 28, 2015.
- Computer Science Principles Curricula: On-the-Ground, Adoptable, Adaptable, Approaches to Teaching, SIGCSE-2015 Special Session (Owen Astrachan, lead).
- Daniel Leaderman, “UM professors try to give computing broader appeal” (quoted), *Daily Record*, July 15, 2015.
- Invited speaker, “Being a Woman in AI: Finding Balance and Joy,” IJCAI-15 Workshop on Women in AI and CS, Buenos Aires, Argentina, July 26, 2015.
- Invited panelist, “Careers in AI,” IJCAI-15 Doctoral Consortium, Buenos Aires, Argentina, July 27, 2015.
- Invited panelist, “Integrating women into AI and CS: How to effect positive change,” IJCAI-15, Buenos Aires, Argentina, July 31, 2015.
- “Subgoal Discovery and Language Learning in Reinforcement Learning Agents,” Union College Computer Science Seminar, April 9, 2015.

2014

- “A New Approach to Creating a Computing Curriculum” (featured), NSF Discovery, December 10, 2014.

- “Coding Opportunities for Girls Expanding in Howard,” Blair Ames, *Baltimore Sun*, December 2, 2014. (Story about HowGirlsCode, an initiative for which I serve on the advisory board.)
- Invited panelist, “Computer Science Initiative: Bits about Computer Science and Coding for the Future in Maryland” (sponsored by the Maryland State Department of Education), November 3, 2014, Annapolis, MD.
- “Subgoal Discovery and Language Learning in Reinforcement Learning Agents,” talk given at Université Paris Descartes (September 30, 2014), Université Paris Jussieu (October 2, 2014; as part of the Séminaire DAPA (Donnes et Apprentissage Artificiel)), Florida Institute for Human and Machine Cognition (October 27, 2014), Brown University (November 6, 2014).
- Keynote speaker, UMBC Fall Convocation, August 26, 2014.
- Panelist, “Recruiting Domestic Students to Ph.D. Programs: From Data to Recommendations,” Snowbird Conference 2014, July 22, 2014.
- “Coding and the Computer Science Conundrum,” invited guest on WAMU’s *Kojo Nnamdi Show*, June 17, 2014.
- “ACTIVE Center: Active Computing Teaching and Innovation Environment,” UMBC, April 28, 2014.
- “High School Students Are All About Computers But Get Little Instruction in Computer Science,” Donna St. George, *Washington Post*, April 23, 2014.
- “My Life as a Prof.,” Roland Park Career Day, Roland Park Country School, Baltimore MD, March 12, 2014.
- “Education Key Theme for International Women’s Day,” *Voice of America* (video recording and accompanying news article), March 7, 2014.

2013

- Panelist, “Individual States’ Efforts to Broaden Access to Computer Science,” Summit on Computing Education in South Carolina, Columbia, SC, November 8-9, 2013.
- “Diversity in CS Education and Research,” Data Innovation–DC Women in Data Science Meetup, Washington, DC, September 23, 2013.
- Panelist, “How to Be a Successful PhD Student and Transition to a Great Job,” Mid-Atlantic Student Colloquium on Speech, Language and Learning, October 11, 2013.
- Panelist, “Great Teachers on Teaching,” UMBC Faculty Development Center, September 2013.
- Panelist, “Your Research Career,” AAI/SIGART Doctoral Consortium, July 2013.
- “Back Story: The Hrabowski Fund for Innovation,” *UMBC Magazine*, Summer 2013.
- “Companies Back STEM Efforts as Maryland Seeks to Revamp Science Education” (quoted), *Baltimore Sun*, Scott Dance, June 23, 2013.
- “Computer Science after High School: The Path to College Success,” 2013 Collaborative Technology Workshop for Montgomery County Public Schools MS & HS Teachers, Rockville, Maryland, May 2, 2013.
- “Broadening Research in Computer Science through Individual and Intellectual Diversity,” Mt. St. Mary’s University, Frederick, Maryland, April 7, 2013.

2012

- “Using Sample Distributions to Accurately Calibrate Model Confidence,” BBN Technologies AI seminar series, July 27, 2012.
- “Puzzle Power,” *UMBC Magazine*, Fall 2012.
- “The Power of Computing” (quoted), *USA Today College*, Sonia Su, June 4, 2012.
- “Using Sample Distributions to Accurately Calibrate Model Confidence,” research presentation at the UMBC CSEE Research Review Day, May 4, 2012.
- “Computer Science for the Rest of Us” (quoted), *New York Times*, Randall Stross, March 31, 2012.
- “Using Sample Distributions to Accurately Calibrate Model Confidence,” Workshop on Architectures for Uncertainty in Knowledge at Scale, Johns Hopkins University Applied Physics Laboratory, February 21, 2012.
- “Major Decisions: Demystifying COEIT Majors,” panel presentation at Bits & Bytes event for prospective undergraduates, February 20, 2012.

2011

- “Major Decisions: Demystifying COEIT Majors,” panel presentation at CWIT/ISCOM forum for undergraduate engineering / information technology majors, October 19, 2011.

- “Broadening Research in Computer Science through Individual and Intellectual Diversity,” UMBC Honors Forum, September 20, 2011.
- “Trust in Multi-Agent Systems,” Baldwin-Wallace College Computer Science Department, April 8, 2011.
- Panelist, SIGCSE-2011 panel on Educational Advances in Artificial Intelligence, March 2011.
- “Writing in Computer Science,” panel presentation in ENGL 393 (Technical Writing), February 28, 2011.

2010

- Panelist, “CWIT Graduate School Panel,” UMBC, November 2, 2010.
- Panelist, “Getting Off to a Great Start in Academia: Advice from the Other Side of the Tenure Track,” Grace Hopper Celebration of Women in Computing, September 30, 2010.
- “Broadening Research in Computer Science through Individual and Intellectual Diversity,” UMBC Honors Forum, September 20, 2010.
- Panelist, “Attracting and Retaining Diverse Students,” UMBC University Retreat, August 18, 2010.
- CRA-W/CDC Distinguished Lecture, University of Waterloo, “Multiagent Communities: Trust, Networking, and Swarms,” Ontario, Canada, May 31, 2010.
- “Modeling and Learning User Preferences for Sets of Objects,” UMBC CS&EE Research Review Day, May 7, 2010.
- “Modeling and Learning User Preferences for Sets of Objects,” Rutgers University CS Department, February 19, 2010.

2009

- Panelist, “Turning Failures into Lessons Learned,” WISE Grad panel, UMBC, November 12, 2009.
- “Academia and Artificial Intelligence,” UMBC Honors Forum, September 28, 2009.
- “Reinforcement Learning,” UMBC (guest lecture in CMSC 478H/678 (Machine Learning)), March 25, 2009.

2008

- “My Life as a Prof,” Reservoir High School Career Day, November 25, 2008.
- “Presenting Your Research: Papers, Presentations, and People,” KOCSEA Technical Symposium, October 25, 2008.
- “AI and Research Careers,” UMBC Honors Forum, September 22, 2008.
- “How to Present Your Research,” AAAI/SIGART Doctoral Consortium, July 14, 2008.
- “Organizational Learning via Network Adaptation in Multi-Agent Systems,” Rutgers University, April 22, 2008.
- “Heuristic Search and Information Visualization Methods for School Redistricting,” North Carolina State University, April 15, 2008.
- “Organizational Learning via Network Adaptation in Multi-Agent Systems,” Harvard University AI Research Group Seminar Series, April 9, 2008.
- “Heuristic Search and Information Visualization Methods for School Redistricting,” George Mason University GRAND Seminar Series, April 1, 2008.
- Plenary session speaker, *AAAI Spring Symposium on AI Education*, March 27, 2008.
- “Multiagent Communities: Trust, Networking, and Swarms,” Colorado State University (guest lecture in CS 540, “Artificial Intelligence”), March 24, 2008.
- “Approaches to Modeling and Learning User Preferences,” SRI International, March 10, 2008.
- “Heuristic Search and Information Visualization Methods for School Redistricting,” City University of New York Graduate Center, February 29, 2008.
- “Multiagent Communities: Trust, Networking, and Swarms,” Brooklyn College, February 28, 2008.
- “Bayesian Network Learning with Abstraction Hierarchies and Context-Specific Independence,” Georgetown University, February 22, 2008.

2007

- “AI and Memory,” UMBC Honors Forum, November 5, 2007.

- Panel presentation on “Balancing Work and Family” at the Faculty Horizons Workshop, UMBC, July 14, 2007.

2006

- “Heuristic Search and Information Visualization Methods for School Redistricting,” CMSC 201H Guest Lecture, November 15, 2006.
- “Towards Transparent Machine Learning: Beyond Black Boxes,” Lockheed Martin / Advanced Technologies Laboratory Speaker Series, Cherry Hill, NJ, October 12, 2006.
- “Modeling and Learning User Preferences for Sets of Objects,” Machine Learning: Theory, Applications, Experiences: A Workshop for Women in Machine Learning, collocated with the Grace Hopper Celebration of Women in Computing, San Diego, CA, October 4, 2006. (Invited speaker and panelist.)
- “AI and Nature,” UMBC Honors Forum, September 18, 2006.
- “Persistence, Perseverance, and Handling Rejection,” panel presentation at the Faculty Horizons Workshop, UMBC, July 15, 2006.
- “Agent-Organized Networks for Dynamic Team Formation,” SRI International, July 6, 2006.
- “Agent-Organized Networks for Dynamic Team Formation,” MITRE Survey of Current and Future Development of Intelligent Agent Software, May 22, 2006.
- “Incorporating Feature Hierarchies into Bayesian Network Learning,” UMBC CSEE Research Review, May 5, 2006.
- “Bayesian Network Learning with Abstraction Hierarchies and Context-Specific Independence,” Colorado State University, March 24, 2006.

2005

- “Machine Learning,” University of Maryland, College Park, guest lecture in CMSC 421, November 22, 2005.
- “Artificial Intelligence: Fact or Fiction?” UMBC Honors Forum, November 14, 2005.
- “Incorporating Feature Hierarchies into Bayesian Network Learning,” University of Alberta Artificial Intelligence Seminar Series, Edmonton, Canada, October 14, 2005.
- “First-Order Logic Inference,” University of Maryland, College Park, guest lecture in CMSC 421, October 11, 2005.
- “Constrained clustering with feature-relevance annotations,” Computer Science Seminar Series, Rutgers University, February 7, 2005.
- “Presenting Your Research: Papers, Presentations, and People,” Rutgers Laboratory for Real-Life Reinforcement Learning, February 7, 2005.

2004

- “Presenting Your Research: Papers, Presentations, and People,” University of Maryland College Park Lyceum Dinner Series, sponsored by the UMCP Graduate Student Services Network, December 3, 2004.
- “Adapting Network Structures for Efficient Team Formation,” Computer Science Seminar Series, Bryn Mawr College, November 5, 2004.
- “IS vs. CS,” UMBC CWIT Seminar Series, November 3, 2004.
- “Artificial Intelligence: Fact or Fiction?” UMBC Family Weekend, October 23, 2004.
- “How to Publish Scholarly Papers and Present Your Work,” UMBC Graduate Student Success Seminar, October 20, 2004.
- “Communication for Intelligent Agents: A Research Case Study,” CMSC 201H Guest Lecture, October 20, 2004.

2002

- “Research Directions in Interactive AI,” Mitsubishi Electric Research Laboratory, Cambridge, MA, November 14, 2002.
- “Communication-Sensitive Decision Making in Multi-Agent, Real-Time Environments,” Vanderbilt University, Nashville, TN, October 30, 2002.

- “Interactive Planning and Scheduling at UMBC,” Naval Research Laboratory, Arlington, VA, September 26, 2002.
- “Communication-Sensitive Decision Making in Multi-Agent, Real-Time Environments,” Information Sciences Institute, Marina del Rey, CA, April 26, 2002.
- “Communication-Sensitive Decision Making for Multi-Agent Systems,” NASA–Ames, Mt. View, CA, March 28, 2002.
- “Using Feature Hierarchies in Bayesian Network Learning,” Institute for the Study of Learning and Expertise (ISLE), Stanford, CA, March 28, 2002.
- “Using Feature Hierarchies in Bayesian Network Learning,” SRI International, Menlo Park, CA, March 27, 2002.
- “Communication-Sensitive Decision Making for Multi-Agent systems,” AAAI-2002 Spring Symposium on Intelligent Distributed and Embedded Systems, Stanford, CA, March 25-27, 2002.

2001

- “Using Feature Hierarchies in Bayesian Network Learning,” UMD College Park, CMSC 726 (Machine Learning, Dr. Reggia), November 2001.
- “Communication for Intelligent Agents: A Research Case Study,” UMBC, CMSC 201H (Computer Science I for Majors, Ms. Bogar), November 2001.
- “Communication-Sensitive Decision Making: A Research Case Study,” UMBC, CMSC 691B (Engineering Multi-Agent Systems, Dr. Cost), October 2001.
- “Communication-Sensitive Decision Making in Multi-Agent Systems,” George Mason University, October 2001.
- “Communication-Sensitive Decision Making in Multi-Agent Systems,” UMBC graduate colloquium, August 2001.

2000 and earlier

- “Model-Based Visualization,” NASA-Ames AI Research Center, December 2000.
- “Model-Based Visualization,” UMBC Dept. of CSEE, October 2000.
- “Distributed Planning and Information Management,” Armed Forces Communications and Electronics Association Professional Development Seminar on Highly Mobile Tactical Operations Centers, Ft. Monmouth, NJ, February 1999.
- “PAGODA: A Model for Autonomous Learning in Probabilistic Domains,” Stanford University, October 1995; Mills College, Oakland, CA, February 1994; Computer Science Department Seminar, UC Berkeley, February 1992; NASA Ames AI Research Lab, Moffett Field, CA, September, 1991.
- “Representing and Reasoning with Probabilistic Knowledge in an Inductive Learning System,” Stanford University, November 1994.
- “The Operator Learner: An Architecture for Learning Planning Knowledge,” University of Massachusetts, October 1994; Carnegie Mellon University, October 1994; Mills College, October 1994; NASA Ames AI Research Lab, Moffett Field, CA, September, 1992.
- “Adaptive Training Systems: Modeling a Student Using Machine Learning Techniques,” University of Massachusetts, October 1994.
- “Goal-Directed Learning in Autonomous Intelligent Agents,” Stanford University AI Seminar Series, February 1994; UC Berkeley AI Seminar Series, November 1993.
- “How to Do Graduate Research,” WICSE Conference on Women in Engineering: Panel on The Graduate Experience: What to Expect, UC Berkeley, October 1993.

FUNDED PROJECTS (AT UMBC) (\$6.65M as PI or co-PI)

- PI, Mind, Body, Coding Summer Camp, NSA, \$55,000.
- PI, Google CS4HS Workshop, \$25,113. Duration: 5/15/17–5/31/18.
- PI, CS 10K: Collaborative Research: A Structured CS Principles Approach to Professional Development for Maryland High School Teachers, NSF Computing Education for the 21st Century / CS10K (REU supplement), \$15,500. Duration: 5/1/17–12/13/17.

- PI, NRI: Collaborative Research: A Framework for Hierarchical, Probabilistic Planning and Learning (REU supplement), \$8,000. Duration: 4/28/17 - 12/31/19.
- PI, A Framework for Hierarchical, Probabilistic Planning and Learning, NSF National Robotics Initiative, \$365,437.00. Duration: 9/1/2016–08/31/2019. Collaborative research with Dr. Michael Littman and Dr. Stefanie Tellex (Brown University).
- PI, Hierarchical, Probabilistic Planning and Learning, DARPA seed funding, \$24,963. Duration: 10/1/15–5/31/16. Subaward from Brown University; PIs on main award: Dr. Michael Littman and Dr. Stefanie Tellex.
- PI, Community Building and Strategic Planning in Maryland, Expanding Computing Education Pathways (ECEP) Alliance Mini-Grant (NSF), \$23,045. Duration: 9/1/15–5/31/16.
- PI, The Athena Conference (May 10, 2014), Computer Science Teachers Association Mini-Grant, \$1,000.
- PI, CS 10K: Collaborative Research: A Structured CS Principles Approach to Professional Development for Maryland High School Teachers, NSF Computing Education for the 21st Century / CS10K, \$844,625. Duration: 1/1/14–12/13/17. Co-PI: Dr. Jan Plane (University of Maryland–College Park).
- PI, ACTIVE (Active Computing Teaching and InnoVation Environment) Center, Hrabowski Academic Innovation Fund, \$19,259. Duration: 1/25/13–6/30/14. Co-PIs: Dr. Penny Rheingans, Dr. Charles LaBerge, Dr. Tim Finin.
- Senior Personnel, MRI: Acquisition of Hybrid CPU/GPU Nodes for the Interdisciplinary UMBC High Performance Computing Facility, NSF CNS Award #1228778, \$300,000. Duration: 9/1/12–8/31/15. Lead PI: Dr. Matthias Gobbert.
- Co-PI, Transforming the Freshman Experience of Computing Majors, NSF TUES Award #1140589, \$154,389. Duration: 8/15/12–7/31/15. Co-PIs: Dr. Penny Rheingans (lead PI), Dr. Susan Martin, Dr. Carolyn Seaman.
- Co-PI, A Community of Transfer Scholars in Information Technology and Engineering, NSF SSTEM Award #1154300, \$599,977. Duration: 3/1/12–2/28/17. Co-PIs: Dr. Penny Rheingans (lead PI), Dr. Anne Spence, Dr. Carolyn Seaman, Dr. Taryn Bayles.
- PI, Summer Workshop for High School Computer Science Teachers, Google CS4HS Program, \$13,500. Duration: 5/1/13–8/31/13.
- PI, CE21 Maryland: Building Community and Knowledge to Increase Statewide Support for Computing Education, NSF CE21 Award #CNS-1160624, \$199,583. Duration: 3/1/12–8/31/15. Co-PIs: Susan Martin, Penny Rheingans.
- PI, Summer Workshop for High School Computer Science Teachers, Google CS4HS Program, \$14,000. Duration: 5/1/12–4/30/13. Co-PI: Dr. Susan Martin.
- PI, Teaching Computers to Follow Verbal Instructions, NSF IIS Award #1065228, \$296,003. Duration: 9/1/11–8/31/15. Collaborative research with Michael Littman and Smaranda Muresan (Rutgers University).
- Co-PI, Summer Workshop for High School Computer Science Teachers, Google CS4HS Program, \$15,000. Duration: 3/15/11–8/31/11. Co-PI: Dr. Susan Martin.
- Co-PI, REU Supplement: Innovative Analysis and Visualization Approaches for Understanding Model Uncertainty, NSF EAGER REU #1050168. \$16,300. Duration: 3/16/10–8/31/11. Co-PI: Penny Rheingans.
- Co-PI, Innovative Analysis and Visualization Approaches for Understanding Model Uncertainty, NSF EAGER Award #1050168. \$102,999. Duration: 9/1/10–8/31/11. Co-PI: Penny Rheingans.
- PI, Multivariate Time Series Analysis of Physiological and Clinical Data to Predict Patent Ductus Arteriosus (PDA) in Neo-Natal Patients (CRA-W Collaborative Research Experiences for Undergraduates (CREU)), \$20,000 (direct award to supported students). Duration: 8/10–8/11. Co-PIs: Marie desJardins and Patricia Ordóñez.
- PI, Research Experiences for Undergraduates (supplemental NSF funding on NSF CAREER award for two undergraduate research assistants), \$13,640. Duration: 8/10–4/11.
- PI, Research Experiences for Undergraduates (supplemental NSF funding on NSF ITR award for two undergraduate research assistants), \$13,640. Duration: 3/10–8/11.
- Co-PI, Acquisition of an Interdisciplinary Facility for High-Performance Computing (NSF MRI). NSF award CNS-0821258, 8/15/2008–7/31/2011. Lead PI: Matthias K. Gobbert. \$285,714 (including \$85,714 cost-sharing).
- PI, Modeling and Learning Preferences Over Sets (DARPA Perceptive Assistant that Learns (PAL) Program; SRI International, prime contractor). \$72,284. Duration: 12/06–12/07.
- PI, POIROT: Plan Order Induction by Reasoning from One Trial (DARPA Integrated Learning program; BBN, prime contractor). \$522,401. Duration: 8/06–7/10.
- PI, Organizational Adaptation in Artificial Agent Societies (NSF CAREER). \$500,000. Duration: 5/15/06–

5/14/11.

- Co-PI, Interactive Visual Methods for Partitioning Multidimensional Spatial Data (NSF Information and Intelligent Systems). Co-PI: Penny Rheingans. \$385,000. Duration: 9/15/05–8/31/10.
- Co-PI, Motion-Based Visualizations for Exploration and Deep Understanding of Relational, Spatio-Temporal Data (ARDA/NGA GI2Vis Program). Co-PIs: Tim Oates, Penny Rheingans, Jim Blythe (USC/ISI), Cathleen McGrath (Loyola Marymount). Duration: 9/05–8/07.
- ADVANCE Graduate Research Assistantship, \$18,000. Duration: 8/04–5/05.
- PI, Research Experiences for Undergraduates (supplemental NSF funding for two undergraduate research assistants), \$14,000. Duration: 8/04–6/05.
- PI, ITR: Knowledge-Enhanced Discovery System (KEDS): Incorporating Background Knowledge for Scientific Discovery (NSF ITR). Co-PI: Kiri Wagstaff (JHU/APL). \$770,000. Duration: 9/03–9/11.
- Co-PI, Developing an Integrated Toolkit to Explore Code/Genome Interaction (NSF). Lead PI: Steve Freeland. \$548,302. Duration: 11/03–10/07.
- Identifying and Visualizing Changing Patterns in Linked Data (NIMA G2IVis Program). Co-PIs: Tim Oates, Marie desJardins, Lise Getoor (UMd/UMIACS), Charles Nicholas, and Penny Rheingans. Duration: 9/02–9/04.
- Incorporating Partial Models and Qualitative Explanations into Bayesian Network Learning Methods. (UMBC Research Assistantship Support (RAS)). \$7,000. Duration: 8/02–8/03.
- Virtual Telescopes in Education (NSF). PI: Dr. Susan Hoban, GEST/GSFC. Duration: 10/01–9/04.
- Multi-agent systems and machine learning research (department startup funding). Duration: 1/02–8/02.

EXTERNAL FUNDING AT SRI INTERNATIONAL (\$4.76M as PI or co-PI; \$2.15M as coauthor with junior colleague)

- Incremental Negotiation and Coalition Formation for Resource-Bounded Reasoners. Defense Advanced Research Projects Agency (DARPA) Autonomous Negotiating Teams Program, \$2,150,000. Duration: August 1999–August 2002. (PI: Dr. Charlie Ortiz. Dr. Ortiz and I co-authored the proposal.)
- Mixed-Initiative Knowledge Acquisition. DARPA High-Performance Knowledge Bases Program, \$1,500,000. Duration: May 1997–April 2000. (Co-PI: Dr. Moises Goldszmidt.)
- Timely Information Distribution Environments. DARPA Intelligent Collaboration and Visualization Program, \$1,700,000. Duration: June 1997–May 2000. (PI: Dr. Michael Wolverton. Dr. Wolverton and I co-authored the proposal.)
- Joint Maritime Crisis Action Planning. Office of Naval Research, \$860,000. Duration: July 1996–December 1999.
- Scientific Discovery in Molecular Knowledge Bases. SRI internal research & development (IR&D) award, \$40,000. Duration: January 1996–December 1996.
- Adaptive Training Systems. SRI IR&D award, \$120,000. Duration: January 1994–December 1995. (Co-PI: Dr. Denise Güner.)
- Machine Learning for Military Operations Planning. DARPA/Rome Laboratory Planning Initiative Phase II, \$700,000. Duration: April 1993–September 1996.

TEACHING EXPERIENCE AT UMBC

CMSC 100	Introduction to Computers and Programming Undergraduate course for non-majors; completely redesigned; F12, F09, F08
CMSC 100H	Introduction to Computers and Programming–Honors Section Discussion section; conceived and designed; F11, F10, F09, F08
CMSC 101	Computational Thinking and Design Elective course for freshman computing majors; codesigned; F13
CMSC 104	Problem Solving and Computer Programming Elective undergraduate course (co-taught); F13
CMSC 201	Computer Science I for Majors Required undergraduate course; F06
CMSC 203	Discrete Structures Required undergraduate course; F02
CMSC 304	Social and Ethical Issues in Information Technology Required undergraduate course; completely redesigned; S13
CMSC 471	Introduction to Artificial Intelligence Undergraduate elective; S14, F11, F09, F04, F02
CMSC 477/677	Agent Architectures and Multiagent Systems Crosslisted undergraduate/graduate seminar; conceived and designed; S07, S05, S03, S02
CMSC 601	Research Skills for Computer Science Graduate elective; conceived and designed; S12, S09, S06, S04
CMSC 671	Introduction to Artificial Intelligence Graduate elective; F10, F05, F03, F01
CMSC 691P	Teaching Computer Science I in Python Graduate seminar (team taught); conceived and designed; S09
CMSC 691E	Emergence Graduate seminar; conceived and designed, F03
GCSP 301	Grand Challenge Orientation Seminar Seminar for Grand Challenge Scholars; conceived and designed; F17
GCSP 302	Grand Challenge Program Seminar Seminar for Grand Challenge Scholars; conceived and designed; S17
GCSP 401	Grand Challenge Leadership Seminar Seminar for Grand Challenge Scholars; conceived and designed; S17
HONR 300 / CMSC 491	Computation, Complexity, and Emergence Honors seminar; conceived and designed; S16, S12, S11

TEACHING EXPERIENCE OTHER THAN AT UMBC

Spring 1989	Seminar Coordinator, Redefining the Role of Women in the Sciences , UC Berkeley.
Summer 1987	Lecturer, CS7, Introduction to Programming for Scientists and Engineers , UC Berkeley.
Fall 1985/Spring 1986	Teaching Assistant, CS8, Introduction to Programming , UC Berkeley.
Fall 1984	Head Teaching Fellow, CS180, Introduction to Artificial Intelligence , Harvard University.
Spring 1984	Teaching Fellow, CS150, Advanced Computer Programming , Harvard University.
Fall 1983	Teaching Fellow, CS11, Introduction to Computer Programming , Harvard University.

STUDENT ADVISEMENT

Ph.D. students (primary or co-advisor, in progress):

- Ph.D. dissertation advisor, Shawn Squire. Research areas: Abstractions for efficient planning and learning in complex stochastic domains. Expected graduation date: May 2019.
- Ph.D. dissertation advisor, John Winder. Research area: Concept formation for reinforcement learning. Expected graduation date: May 2019.

M.S. students (primary advisor, in progress):

- M.S. thesis advisor, Michael Neary. Research area: Intelligent tutoring systems. Expected graduation date: May 2017.

Committee member (in progress):

- Ph.D. dissertation committee member, Nakul Gopalan (Dr. Stefanie Tellex, Brown University, advisor).
- Ph.D. dissertation committee member, Karan Budhraj (Dr. Tim Oates, advisor).
- Ph.D. dissertation committee member, Jonathan Ben-Joseph (Dr. Tim Oates, advisor).

Undergraduate research in progress:

- Khalil Anderson '18.
- Matt Bird, IS/Mathematics '17.
- Kayla Carrigan '19.
- Justin Chavez '17.
- Joseph Collins '19.
- Katie Dillon '17.
- Aniebiet Jacob '20.
- Caroline Kery '18.
- Matthew Landen '17.
- Josh Massey '18.
- Keith McNamara '18.
- Desiree Mercure '17.
- Stephanie Milani '17.
- Arielle-Cherie Paterson '19.
- Kyle Roberts '18.
- Connor Shaffer '19.
- Amit Singh '18.
- Brian Spiegel '18.
- Beatriz Tinoco '18.
- Nicholay Topin '17.
- Puja Trivedi '19.
- Taylor Webb '18.

Former postdoctoral students:

- Postdoctoral assistant co-supervisor, Joshua Jones (Ph.D., Georgia Institute of Technology, 2009), September 2009–September 2010.
- Postdoctoral assistant co-supervisor, Laura Zavala (Ph.D., University of South Carolina, 2009), November 2009–November 2010.
- Postdoctoral assistant co-supervisor, Fusun Yaman (Ph.D., University of Maryland College Park, 2006), September 2006–September 2008.

Ph.D. students graduated (primary advisor):

- Ph.D. dissertation co-advisor, Robert Holder, III, May 2016. (Co-advisor: Dr. Tim Finin.) Dissertation title: *Rapid Plan Adaptation Through Offline Analysis of Potential Plan Disruptors*.
- Ph.D. dissertation advisor, James MacGlashan, May 2013. Dissertation title: *Multi-Source Option-Based Policy Transfer*.
- Ph.D. dissertation advisor, Yasaman Haghpanagh, December 2012. Dissertation title: *A Trust and Reputation Mechanism Through Behavioral Modeling of Reviewers*.
- Ph.D. dissertation co-advisor, Patricia Ordóñez, May 2012. (Co-advisor: Dr. Tim Oates.) Research area: Time series retrieval, visualization, and classification for medical diagnosis.

- Ph.D. dissertation advisor, Don Miner, May 2010. Dissertation title: *A Framework for Predicting and Controlling System-Level Properties of Agent-Based Models*.
- Ph.D. dissertation advisor, Blazej Bulka, August 2009. Dissertation title: *Efficient Planning Using Plan Libraries to Capture the Structure of the State Space*.
- Ph.D. dissertation advisor, Adam Anthony, May 2009. Dissertation title: *Stochastic and Iterative Techniques for Relational Data Clustering*.
- Ph.D. dissertation advisor, Eric Eaton, May 2009. Dissertation title: *Selective Knowledge Transfer for Machine Learning*.
- Ph.D. dissertation advisor, Michael J. Smith, May 2009. Dissertation title: *A New Model for Trust and Reputation: Learning About Competence and Commitment*.
- Ph.D. dissertation advisor, Qianjun Xu, August 2006. Dissertation title: *Active Querying for Semi-Supervised Clustering*.
- Ph.D. dissertation advisor, Matt Gaston, December 2005. Dissertation title: *Organizational Learning and Network Adaptation in Multi-Agent Systems*.

M.S. students graduated (primary advisor):

- M.S. project advisor, Jonathan Clancy, May 2017. Research area: Recommender systems.
- M.S. project advisor, Alexander Pole, May 2016. Research area: Game playing strategies for asymmetric board games.
- M.S. project advisor, John Winder, May 2015. Paper title: “Feature Extraction for Concept Learning on Images.”
- M.S. project co-advisor, Ankita, May 2015. Research area: Affordable interfaces. (Co-advisor: Dr. Shaun Kane, Information Systems.)
- M.S. thesis advisor, Max Morawski, May 2013. Thesis title: *Modeling Individual Nodes In Dynamic Link Prediction*.
- M.S. thesis advisor, Zachary Kurtz, May 2013. Thesis title: *Simultaneous Feature Acquisition and Cost Estimation*.
- M.S. thesis advisor, Peter Hamilton, May 2011. Thesis title: *A Graph-Theoretic Approach to Collusion Detection in Multi-Agent Systems*.
- M.S. thesis advisor, David Walser, May 2011. Thesis title: *Problem Selection of Program Tracing Tasks in an Intelligent Tutoring System and Visual Programming Environment*.
- M.S. thesis advisor, Brandon Wilson, August 2008. Thesis title: *Test-Cost Sensitive Regression for Planner Runtime Prediction*.
- M.S. thesis advisor, J.C. Montminy, May 2008. Thesis title: *Improved Information Retrieval through Set-Based Preference Learning*.
- M.S. thesis advisor, Shivali Gupta, December 2007. Thesis title: *Clustering-Based Evolutionary Approaches for Increasing Solution Diversity in Multi-criteria Optimization*.
- M.S. thesis advisor, Adam Anthony, May 2007.
- M.S. thesis advisor, Jonathan Labin, May 2007. Thesis title: *Adaptation of Wireless Sensor Networks Through Node Relocation*.
- M.S. thesis advisor, Eric Eaton, December 2006. Thesis title: *Clustering with Propagated Constraints*.
- M.S. project advisor, Brandon Corfman, December 2004. Project title: *Fast Local Repair: A Local Repair Meta-Heuristic for the Traveling Salesperson Problem*.
- M.S. thesis advisor, Mithun Sheshagiri, August 2004. Thesis title: *Automatic Service Composition and Invocation Using the Semantic Web*.
- M.S. thesis advisor, Yan Hao, August 2004. Thesis title: *Multi-Objective Graph Partitioning*.
- M.S. thesis advisor, Priyang Rathod, May 2004. Research area: Stable team formation in multi-agent systems.
- M.S. project advisor, John Simmons, May 2004. Research area: Fault-tolerant multi-agent networks.
- M.S. project advisor, Sowmya Ponoguti, May 2004. Research area: Value grouping in decision tree learning.
- M.S. project advisor, Sohel Merchant, August 2003. Project title: *A General Procedure for Generating Customized Substitution Matrices for Multiple Sequence Alignment*.
- M.S. project advisor, Csaba Rozgonyi, August 2003. Project title: *Using Genetic Algorithms to Tune Motor Schema Parameters in a Multi-Goal Environment*.
- M.S. thesis advisor, Qianjun Xu, May 2003. Thesis title: *Many Features, Little Data: Feature Selection for*

Small Data Sets Using Probabilistic Background Knowledge.

- M.S. project advisor, Xuanxuan Su, December 2002. Project title: *Image Processing for Physical Data.*
- M.S. thesis advisor, Suryakant Sansare, August 2002. Thesis title: *Incorporating Constraint Checking Costs in Constraint Satisfaction Problems.*
- M.S. thesis advisor, Matt Gaston, May 2002. Thesis title: *Agent-Based Modeling and the Effects of Network Structure on the Dynamics of Multi-Agent Social Systems.*

M.S. and Ph.D. students graduated (committee member):

- Ph.D. dissertation committee member, Erin Buhler (Dr. Amy Hurst, Information Systems, advisor). On committee for proposal defense only.
- M.S. thesis committee member, Georgiy Frolov (Dr. Tim Oates, advisor), May 2016. Thesis topic: Extracting latent demographic information from social media data.
- Ph.D. dissertation committee member, Dana Wortman (Dr. Rheingans, advisor), May 2014. Dissertation topic: Visualizing sequential patterns in large datasets.
- Ph.D. dissertation committee member, Jie Du (Dr. Rada (Information Systems), advisor), December 2012. Dissertation title: “Incorporating Domain Knowledge into Memetic Algorithms for Financial Investing.”
- Ph.D. dissertation committee member, Niyati Chhaya (Dr. Oates, advisor), December 2012. Dissertation title: *Joint Inference for Extracting Soft Biometric Text Descriptors from Patient Triage Images.*
- Ph.D. dissertation committee member, David Trimm (Dr. Rheingans, advisor), May 2012. Dissertation topic: Visualization of time-varying path data.
- Ph.D. dissertation committee member, Justin Martineau (Dr. Finin, advisor), December 2011. Dissertation topic: Machine learning for sentiment analysis of text documents.
- M.S. thesis committee member, Daniel Millington (Dr. Oates, advisor), December 2011. Thesis topic: Machine learning techniques for recognition of voice characteristics.
- Ph.D. dissertation committee member, Dean Wright III (Dr. Oates, advisor), December 2011. Dissertation topic: Metacognition.
- Ph.D. dissertation committee member, Soumi Ray (Dr. Oates, advisor), May 2011. Dissertation topic: Discovery of theoretical entities.
- M.S. thesis committee member, Paul Guseman (Dr. Oates, advisor), May 2011. Thesis title: “Transform Extraction using a Growing Neural Gas.”
- M.S. thesis committee member, Niranjan Bhosarekar (Dr. Nicholas, advisor), August 2010. Thesis title: “Prediction of Oscar Award Nominations Based on Movie Scripts.”
- M.S. thesis committee member, Niyati Chhaya (Dr. Oates, advisor), May 2010. Thesis topic: Feature extraction from images of mass disaster victims.
- M.S. thesis committee member, David Feltenberger (Dr. Oates, advisor), August 2009. Thesis topic: Reinforcement learning for image understanding.
- M.S. thesis committee member, Sean Dukehart (Dr. Olano, advisor), May 2009. Thesis title: GPU random walkers for iterative image segmentation.
- M.S. thesis committee member, Shari Holstege (Dr. Rheingans, advisor), May 2009. Thesis topic: Exploring the space of scientific visualizations.
- Ph.D. dissertation committee member, Yi Lu (Dr. Freeland, biology, advisor), December 2007. Thesis topic: Evolution of amino acids.
- Ph.D. dissertation committee member, Alark Joshi (Dr. Rheingans, advisor), December 2007. Dissertation topic: Visualizing time-varying data using illustration-inspired techniques.
- M.S. committee member, Ajay Joglekar (Dr. Oates, advisor), August 2007. Thesis title: *Unsupervised Object Category Recognition in Images.*
- Ph.D. dissertation committee member, Indrajit Bhattacharya (Dr. Getoor, University of Maryland College Park, Department of Computer Science, advisor), May 2007. Dissertation topic: Relational clustering for entity resolution in structured and semi-structured databases.
- M.S. thesis committee member, Soumi Ray (Dr. Oates, advisor), May 2007. Thesis title: *Transfer in the Context of Reinforcement Learning by Mapping Q-Tables.*
- Ph.D. dissertation committee member, Gang Wu (Dr. Freeland, biology, advisor), December 2006. Dissertation

title: *Increasing Heterologous Gene Expression by Optimization of Codon Usage*.

- M.S. thesis committee member, Joseph Catalano (Dr. Oates, advisor), August 2006. Thesis topic: time series learning.
- M.S. thesis committee member, Balaji Viswanathan (Dr. Finin, advisor), May 2006. Thesis title: *MISSION: Multiagent Institutions for Sensor Networks*.
- M.S. thesis committee member, Suraj Amonkar (Dr. Oates, advisor), December 2005. Thesis topic: clustering microarray data for bioinformatics.
- M.S. thesis committee member, Kamalika Das (Dr. Rheingans, advisor), December 2005. Thesis topic: visualization of bioinformatics data.
- Ph.D. dissertation committee member, Eleanor Chlan (Dr. Rheingans, advisor), May 2005. Dissertation title: *A Botanically Inspired Information Visualization of Hierarchical Data Sets*.
- M.S. thesis committee, Srinivas Bhagavatula (Dr. Rheingans, advisor), December 2004. Thesis title: *Exploring the Volume Illustration Parameter Space*.
- Ph.D. dissertation committee member, Harry Chen (Dr. Finin, advisor), May 2005. Dissertation title: *A Broker-Centric Agent Architecture for Building Distributed Context-Aware Systems*.
- M.S. thesis committee member, Mitesh Vasa (Dr. Oates, advisor), December 2004. Thesis title: *Image Classification Within the Multiple Instance Learning Framework*
- M.S. thesis committee member, Poonam Shanbhag (Dr. Rheingans, advisor), August 2004. Thesis topic: visualization of time-varying data.
- Ph.D. dissertation committee member, Youyoung Zou (Dr. Finin, advisor), August 2004. Dissertation title: *Reasoning Agents for the Semantic Web*.
- M.S. thesis committee member, Devina Desai (Dr. Oates, advisor), December 2002. Thesis title: *Predicting Patterns in Multivariate Time Series Using Unsupervised Learning*.
- Ph.D. dissertation committee member, Kiri Wagstaff, Cornell University (Dr. Cardie, advisor), August 2002. Thesis title: *Intelligent Clustering with Instance-Level Constraints*.
- M.S. project reader, Pratik Phadke (Dr. Rheingans, advisor), August 2001.
- External Ph.D. dissertation reviewer, Sherlock Au, University of New South Wales, Australia (Dr. Parameswaran, advisor), June 2001.

Undergraduate research completed:

- David Atlas '17.
- Tawos Belle '18.
- Tristan Adams '17.
- Shane Parr, Wilde Lake H.S. '16, UMass-Amherst '20.
- Russell Nesbitt, Reservoir H.S. '17.
- Nick Haltmeyer '15.
- Phillip Hilliard '19.
- Enis Golaszewski '15.
- Michael Neary '15.
- Tenji Tembo '15.
- Gabrielle Salib, Interdisciplinary Studies '17 (co-mentor).
- Michael Bishoff '16.
- Rose Carignan, Computer Engineering '16.
- Briana Hall, Visual Arts '16.
- Patrick Roderick '14.
- Emily Scheerer '14.
- Abigail Williams, Computer Engineering '14.
- Alexander Morrow '14.
- Bhuvana Bellala '16.
- Wallace Brown '13.
- Rebecca Chhay '13.
- Ranjit Doraiswamy '14.
- Austin Duff '14.
- John Winder '13.
- Richard Adjogah '13.
- Clay Alberty '13.
- John Winder '13.
- Alisa Burdeyny '13.
- Shawn Squire '12.
- Rotem Ganel '13.
- Alexander MacDonald '13.
- Amy Ciavolino '12.
- Douglas Stull '13.
- Tim Gruber '13.
- Kerry Luke '12.
- Iris Kwok '11.
- Steven Lee '11.
- Robert Deloatch '11. education).
- Eliana Feasley '11.
- Chris Mai '11.
- Lan Mei, Brown '14 (summer intern).
- Eisha Nathan, UMd '14 (summer intern).
- Jennifer Adamshick '10.
- Taylor Evans '10.

- Mary Lewis '10.
- Teresa Oswald '10.
- Eric Wasser '10.
- Kevin Winner '10.
- Nathaniel Wise '10.
- Michael Lombardi '10.
- Gregory Handy '11.
- Paul Guseman '09.
- Peter Hamilton '09 (honors thesis advisor).
- Max Morawski '10.
- Steven Martin '08.
- John Stevenson '08.
- Jake Tanenbaum '08.
- James MacGlashan '06.
- Ryan Carr '07 (honors thesis advisor).
- Katerina Rohonyan '07.
- Patrick Geissel '06.
- Nataliya Lozova, Louisiana State University '06 (CRA-W Distributed Mentor Project participant).
- Julia Ferraioli, Bryn Mawr '07 (CRA-W Distributed Mentor Project participant).
- Craig Cambias '05.
- Kavita Krishnaswamy '07.
- Natalie Podrazik '06.
- Maria Vachino '05.
- Neeraj Kashyap '03 (Undergraduate Research Award recipient).
- Laurie Botto '03.
- David Dalrymple '03.
- Eric Eaton '03.
- Mike Furr '03.
- Joshua Barczak '03.
- Joshua Solomon '03.
- Thomas Walsh '03.
- Mitch White '04.

OTHER TEACHING AND MENTORING ACTIVITIES

- Program committee member for the AAAI-17 Doctoral Consortium.
- Mentor, AAAI-17 Women's Mentoring Breakfast, February 7, 2017.
- Faculty advisor, "Hour of Code," December 7-8, 2016.
- Student scholarship review, 2016 Grace Hopper Celebration of Women in Computing.
- Program committee member for the AAAI-16 Doctoral Consortium.
- Cochair, AAAI-15 Women's Mentoring Lunch, February 2015.
- Faculty advisor, The Athena Conference, May 10, 2014.
- Mentor and panelist ("Your Research Career") for the 2013 AAAI/SIGART Doctoral Consortium.
- BOF ("Birds of a Feather") session co-organizer, "Starting and Sustaining an Undergraduate Research Program in Computer Science," 44th ACM Technical Symposium on Computer Science Education (SIGCSE'13), March 2013.
- Departmental mentor for Max Morawski (Computer Science lecturer), Spring 2013.
- Organized departmental orientation for new faculty and adjunct instructors, January 2013.
- Created CSEE New Faculty Handbook, Fall 2012.
- Panel organizer and moderator, "Are We There in Mentoring for Diversity?" at the *Grace Hopper Celebration for Women in Computing*, October 2012.
- Panel organizer and panelist, "If I'd Only Known! Advice for Junior Faculty," at the *Grace Hopper Celebration for Women in Computing*, October 2012.
- Departmental mentor for Kevin Winner (Computer Science graduate TA instructor), Fall 2012–Spring 2013.
- Reviewer and mentor for the 2012 AAAI Doctoral Consortium.
- Formal departmental mentor for Ryan Bergeron (Computer Science lecturer) and Tinoosh Mohsenin (Computer Engineering assistant professor), 2011–present.
- Member, Ph.D. Forum Subcommittee, 2012 Grace Hopper Celebration of Women in Computing.
- Judge, Student Research Competition, 2011 Grace Hopper Celebration of Women in Computing.
- Program committee member for the 2011 IJCAI Doctoral Consortium.
- Reviewer for the 2011 AAAI/SIGART Doctoral Consortium.
- Faculty Advisor for WiML 2010 (the Fifth Workshop for Women in Machine Learning).
- Reviewer and mentor, 2010 AAAI/IJCAI Doctoral Consortium.
- Reviewer, 2009 AAAI/IJCAI Doctoral Consortium.
- Co-Chair and panelist, AAAI-08 AI Teaching Forum.
- Reviewer and panelist, 2008 AAAI/SIGART Doctoral Consortium.

- Reviewer and panelist, 2007 AAI/SIGART Doctoral Consortium.
- Mentor, Stephanie Riffle and Marc Attwater, Broadneck Senior High School, 2006–2007.
- Doctoral Consortium Co-Chair, 2006 International Conference on Automated Planning and Scheduling.
- Reviewer and Panelist, 2006 AAI/SIGART Doctoral Consortium.
- Evaluator, CWIT/ADVANCE Design Competition, February 2006.
- Organizer, “Great Student Talks” Colloquium, UMBC, December 2005.
- Doctoral Consortium Co-Chair, 2006 International Conference on Planning and Scheduling.
- Reviewer and Panelist, 2005 AAI/SIGART Doctoral Consortium.
- Mentor, Computing Research Association’s Distributed Mentor Project, 2005.
- Co-Chair (with Robert St. Amant), 2004 AAI/SIGART Doctoral Consortium.
- Chair, 2003 AAI/SIGART/IJCAI Doctoral Consortium.
- Co-chair (with Rob Holte), ICML-03 Mini-Tutorial on Paper Reviewing.
- Mentor, Russell Osborn, Mt. Hebron High School, 2001-2002.
- Judge and Award Presenter, WISE Outstanding Achievement Award, Howard County Science Fair, March 2002.
- Chair, 2002 AAI/SIGART Doctoral Consortium.
- Panelist and chair, 2001 IJCAI/AAI/SIGART Doctoral Consortium.
- Panelist, 2000 AAI/SIGART Doctoral Consortium.
- Mentor, UC Berkeley’s Women in Computer Science and Engineering Mentoring Program, 1997.
- Mentor, Telementoring Young Women in Science, Engineering, and Technology Project, 1996.
- President, UC Berkeley’s Women in Computer Science and Engineering, 1987-1988.
- Author, “How to Succeed in Graduate School” (see Publications list), a guide for graduate students that has been widely distributed on the web and made available at numerous universities as part of their graduate student orientation programs.
- Founder and Participant, “Big Sister” (peer mentoring program for women graduate students), UC Berkeley, 1988.
- Founder, Cal AI Students (CalAIS—student AI seminar series), UC Berkeley, 1987.

PROFESSIONAL SERVICE

UMBC university service:

- Academic Advising Task Force, 2017–present.
- UMBC CIRTL (Center for the Integration of Research, Teaching, and Learning) Steering Committee, Fall 2016–present.
- INDS Co-Mentor, Gabrielle Salib ’17.
- Member, Interdisciplinary Studies Advisory Board, Fall 2016–present.
- Member, Classroom Committee and Classroom Renovation Subcommittee, Fall 2016–Spring 2017.
- Member, Academic Standards Executive Committee, Spring 2016–present.
- Member, ADVANCE Leadership Alliance, 2009–present.
- Member, Valedictorian Selection Committee, 2014–2017 (chair, 2017).
- Member, Faculty Presidential Awards Committee, 2014–2017.
- Member, Interdisciplinary Studies Policy Review Committee, Fall 2015.
- UMBC Team Leader, WPI Institute for Project-Based Learning, June 25–27, 2015.
- Member, STEM Communications Manager Search, 2015.
- Member, Designated Research Initiative Fund (DRIF) Advisory Committee, Spring 2014.
- Member, Hrabowski Fund for Innovation Selection Committee, 2013–2014.
- External member, Information Systems Departmental Promotion & Tenure Committee, 2013–2014.
- Moderator, UMBC URCAD student presentation session, April 24, 2013.
- Member, Honors College Advisory Board (2009–2011 (Chair); 2012–2014 (Acting Chair, Spring 2012)).
- Member, Bioinformatics Steering Committee (Spring 2012–present).
- Chair, Honors College Associate Director Search Committee (Spring 2012).
- Chair, WISE Promotion & Tenure Sponsorship Committee (2011-2013).
- Moderator, UMBC URCAD student presentation session, April 25, 2012.

- Chair, UMBC Faculty Affairs Committee (2011-2012).
- Member, UMBC Faculty Affairs Committee (2010–2011).
- Faculty representative, Orientation Course Selection Days (Summer 2011).
- Member, UMBC Fulbright Committee (Fall 2011).
- Facilitator, UMBC New Student Book Experience (August 2011).
- Chair, Honors College Acting Associate Director Search Committee (Spring 2011).
- Member, UMBC Business and Academic Continuity Committee (2010-2011).
- Faculty Adviser, WISE—Graduate (Spring 2007–present).
- Member, Center for Women in Technology Advisory Board (Fall 2008–present).
- Interviewer, Scholar Selection Day (2005, 2008, 2009, 2010, 2011).
- Facilitator, UMBC New Student Book Experience (August 2010).
- Member, UMBC Undergraduate Council (2008–2010).
- Reviewer, URCAD Engineering Abstracts (March 2010).
- CSEE Faculty Senator (interim, October 2008–May 2009).
- Evaluator, TA Testing (August 2008).
- Judge, UMBC Graduate Research Conference (2006, 2007).
- Member, UMBC Faculty Development Steering Committee (2006–2008).
- Co-Host, CRA-W Distinguished Lecture Series, Dr. Barbara Grosz, Harvard University (April 2005).
- Center for Women in Information Technology (CWIT) Internal Board Member (Spring 2002–Spring 2005).
- Chair, GEST Graduate Fellowship Committee (Spring 2002–Spring 2004).
- Co-host, CWIT Guest Speaker Series, Dr. Allan Fisher (October 2002).
- Host, WISE Guest Speaker Series, Dr. Barbara Simons (April 2002).

UMBC departmental service:

- Member, CSEE Executive Committee (2010–2014).
- Founder and Organizer, Computer Science Interest Group (2013).
- Chair, CS Professor of the Practice Search Committee (2013–2014).
- Chair, CS/IS Lecturer Search Committee (2013–2014).
- Chair, Committee on Teaching Effectiveness (2013–2014).
- Member, CS Undergraduate Committee (2011–2013).
- Chair, Teaching Faculty Workload Committee (Spring 2013).
- Member, CSEE Professor of the Practice Search Committee (2012–2013).
- Chair, CS Adjunct Evaluation Committee (Spring 2012).
- Co-host (with Dr. Yun Peng), CRA-W Distinguished Lecture Series, Ellen Zegura (Georgia Tech) and Jeff Forbes (NSF/Duke University), April 2012.
- Computer Science Undergraduate Program Director (July 2008–July 2011).
- Host, CSEE Colloquium Series and PROMISE/WISE Distinguished Lecture, Manuel Pérez-Quiñones (Virginia Tech), April 2011.
- Host, CSEE Colloquium Series, Sanmay Das (RPI), March 2011.
- Host, CSEE Colloquium Series, Tom Walsh (UMBC '03; Rutgers Ph.D. '10), May 2010.
- Host, CSEE Colloquium Series, Mustafa Bilgic, April 2010.
- Co-advisor, Computer Science Graduate Student Association (Spring 2003–present).
- CS Scheduling Committee (Fall 2001–Fall 2003; Fall 2009–2013).
- Undergraduate academic advising (Spring 2002–present).
- Host, CSEE Colloquium Series, Dr. Lisa Meeden, Swarthmore College (March 2009).
- CMSC 345 Customer (Fall 2002, Spring 2003, Fall 2003, Fall 2004, Fall 2006, Spring 2009).
- Member, CS&EE Departmental Promotion & Tenure Committee (Fall 2008–present).
- Host, CSEE Colloquium Series, Dr. Eric Roberts, Stanford University (April 2008).
- Member, CS Undergraduate Committee (2006–2007).
- Host, CSEE Colloquium Series, Dr. Craig Boutilier, University of Toronto (April 2006).
- Chair, CSEE Colloquia Committee (Fall 2005–Spring 2006).
- Host, CSEE Colloquium Series, Dr. Adele Howe, Colorado State University (April 2005).
- Host, CSEE Colloquium Series, Dr. Michael Littman, Rutgers University (January 2003).

- CS Graduate Committee (Fall 2002–2005).
- CS Graduate Admissions Committee (Spring 2002–Fall 2007).
- Host, CSEE Colloquium Series, Dr. Sean Luke, George Mason University (March 2003).
- Host, CSEE Colloquium Series, Dr. Stephen Freeland, UMBC (November 2002).

Program chair/co-chair:

- Conference Chair of the 29th International Joint Conference on Artificial Intelligence (IJCAI-20).
- Program Cochair of the Twenty-Seventh AAAI Conference on Artificial Intelligence (AAAI-13).
- Chair of the Second Symposium on Educational Advances in Artificial Intelligence (EAAI-11).
- Co-Chair of the EAAI-10 (First Symposium on Educational Advances in Artificial Intelligence) Teaching and Mentoring Workshop.
- Workshops and Tutorials Chair, 2005 International Conference on Knowledge Capture (K-Cap'05).
- Co-Chair of the 2002 AAAI Workshop on Planning with and for Multiagent Systems (Chair: Michael Brenner).
- 2000 AAAI Workshop Program Chair (Co-chair: Berthe Choueiry).
- 1999 AAAI Workshop Program Co-Chair (Chair: David Leake).
- Chair of the 1998 AAAI Fall Symposium on Distributed Continual Planning.
- Co-chair of the 1994 AAAI Spring Symposium on Goal-Directed Learning.
- Chair of the 1992 AAAI Workshop on Constraining Learning with Prior Knowledge.

Program committees:

- Workshop Reviewer, Robotics: Science and Systems Conference, 2015.
- PC Member for the Thirtieth AAAI Conference on Artificial Intelligence (AAAI-16).
- PC Member for the Sixth Symposium on Educational Advances for Artificial Intelligence (EAAI-16).
- Advisory Committee Member for the Twenty-Ninth AAAI Conference on Artificial Intelligence (AAAI-15).
- Senior PC Member for the Twenty-Eighth AAAI Conference on Artificial Intelligence (AAAI-14).
- Organizing Committee Member for the Third Symposium on Educational Advances in Artificial Intelligence (EAAI-12).
- PC Member for the Ninth Symposium on Abstraction, Reformulation, and Approximation (SARA-11).
- Organizing Committee Member for the First Symposium on Educational Advances in Artificial Intelligence (EAAI-10).
- PC Member and Session Chair for the Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI-10).
- PC Member for the 27th International Conference on Machine Learning (ICML-10).
- Senior PC Member for the Ninth International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-10).
- Area Chair for the 26th International Conference on Machine Learning (ICML-09).
- Senior PC Member for the Eighth International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-09).
- PC Member for the 2008 Spring Symposium on Using AI to Motivate Greater Participation in Computer Science.
- PC Member for the AAAI-07 Student Abstract Program.
- Senior PC Member for the 2007 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-07).
- PC Member and AAAI-07 Best Paper Award Committee Member for the Twenty-Sixth National Conference on Artificial Intelligence (AAAI-2007).
- PC Member for SARA-06.
- Senior PC Member for the 23rd International Conference on Machine Learning (ICML-06).
- Senior PC Member for the 2006 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-06).
- PC Member for the Twenty-Second International Conference on Machine Learning (ICML-05).

- PC Member for the 2005 International Conference on Automated Planning and Scheduling (ICAPS-05).
- PC Member for the Twentieth National Conference on Artificial Intelligence (AAAI-05).
- PC Member for the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05).
- PC Member for the 2005 Fall Symposium on Mixed-Initiative Problem Solving Assistants.
- PC Member for the 2005 ICAPS Workshop on Multiagent Planning and Scheduling.
- PC Member for the 2004 AAAI Fall Symposium on Artificial Multiagent Learning.
- PC Member for the 2004 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-04).
- PC Member for the 2004 Conference on Innovative Applications of Artificial Intelligence (IAAI-04).
- PC Member for the Twenty-First International Conference on Machine Learning (ICML-04).
- PC Member for the 2004 National Conference on Artificial Intelligence (AAAI-04).
- PC Member for the Second International Conference on Knowledge Capture (K-CAP '03).
- PC Member and Registration Chair for the Twentieth International Conference on Machine Learning (ICML-03).
- PC Member for the 2003 AAMAS Workshop on Representations and Approaches for Time-Critical Decentralized Resource Allocation.
- PC Member for the 2003 International Conference on Innovative Applications of Artificial Intelligence.
- PC Member for the Second International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-03).
- PC Member for the 2002 AAMAS-02 Workshop on MAS Problem Spaces and Their Implications.
- PC Member for the 2002 Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-02).
- PC Member for the 2001 Autonomous Agents Workshop on Infrastructure for Agents and Multi-Agent Systems.
- PC Member for the 2000 International Conference on Multi-Agent Systems.
- PC Member for the 1999 Association for Computational Linguistics Workshop on Unsupervised Learning in Natural Language Processing.
- PC Member for the 1999 IJCAI Workshop on Intelligent Workflow and Process Management.
- PC Member for the 1999 AAAI Workshop on Agent-Based Systems in the Business Context.
- PC Member for the 1998 National Conference on Artificial Intelligence (AAAI-98).
- Session chair and reviewer for the AI & Expert Systems track, 1997 IEEE Conference on Military Communications (MILCOM-97).
- PC Member for the 1996 National Conference on Artificial Intelligence (AAAI-96).
- PC Member for the 1994 AAAI Spring Symposium on Integrated Planning Applications.
- PC Member for the 1994 International Conference on Machine Learning (ICML-94).
- PC Member for the 1994 Conference on Knowledge-Based AI Systems in Aerospace and Industry.
- PC Member for the 1993 National Conference on Artificial Intelligence (AAAI-93).

Editorial boards and guest editing:

- Member of the Advisory Board of the *Journal of Artificial Intelligence Research* (2016-2019).
- Associate Editor of the *Journal of Artificial Intelligence Research* (2010-2016).
- Member of the Editorial Board of *AI Magazine* (2004–present).
- Associate Editor of the *Journal of Autonomous Agents and Multi-Agent Systems* (2007–2013).
- Guest Editor (with Matthew Gaston and Dragomir Radev), Special Issue of *AI Magazine* on AI & Networks, Fall 2008.
- Member of the Editorial Board of the *Journal of Artificial Intelligence Research* (2002–2005, 2006–2009).
- Member of the Editorial Board of *Applied Intelligence* (1996–2005).
- Guest Editor (with Edmund H. Durfee, Charles L. Ortiz, Jr., and Michael Wolverton), Special Issue of *AI Magazine* on Distributed, Continual Planning (Winter 2001).
- Guest Editor (with Diana Gordon) of the *Machine Learning* Special Issue on Evaluation of Bias (20:1-2, July/August 1995).

Additional reviewing:

- Best Paper Selection Committee, Blue-Sky Track, AAAI 2015.
- External Reviewer for an NSF Proposal Review Panel, March 2012.
- Reviewer for an NSF Proposal Review Panel, January 2012.
- Reviewer for an NSF Proposal Review Panel, April 2011.
- Ad hoc reviewer for the 2010 ACM Symposium on User Interface Software and Technology.
- Reviewer for an NSF Proposal Review Panel, January 2011.
- Reviewer for an NIH Proposal Review Panel, August 2010.
- Reviewer for an NSF Proposal Review Panel, March 2010.
- Reviewer for an NSF Proposal Review Panel, July 2009.
- Reviewer for an NSF Proposal Review Panel, February 2009.
- Reviewer for an NIH Proposal Review Panel, January 2009.
- Emergency reviewer for the 40th ACM Technical Symposium on Computer Science Education (SIGCSE-09).
- Member of an NSF Proposal Review Panel, January 2008.
- Scholarship reviewer for the 2007 Grace Hopper Celebration of Women in Computing.
- Reviewer for VIS'07.
- Reviewer for an NSF Proposal Review Panel, March 2007.
- Reviewer for an Army Research Office research proposal, March 2005.
- Reviewer for the 2005 International Joint Conference on Artificial Intelligence.
- Member of an NSF Proposal Review Panel, March 2003.
- Reviewer for IJCAI-2003.
- Reviewer for the Norwegian Research Council, August 2002.
- Member of an NSF Proposal Review Panel, June 2002.
- NSF SBIR Reviewer, Spring 2002.
- External Reviewer for NASA's Applied Information Systems Research Program, December 2001.
- Reviewed papers submitted to *Artificial Intelligence*, *Machine Learning*, the *Journal of Machine Learning Research*, the *Journal of Artificial Intelligence Research*, *AI Magazine*, *Autonomous Agents and Multi-Agent Systems*, *IEEE Transactions*, and *Journal of Experimental and Theoretical Artificial Intelligence*, 1993–present.
- External Reviewer for NASA's Cross-Enterprise Technology Development Program, 1999 and 2000.
- Member of an NSF Proposal Review Panel, 1997.
- Reviewer for the 1996 National Academy of Sciences Report on Careers in Science and Engineering: A Student Planning Guide to Graduate School and Beyond.
- Reviewer for the 1995 International Joint Conference on Artificial Intelligence (IJCAI-95).

Other professional service:

- Member, Business Higher Education Forum Data Science & Analytics Working Group, 2016–present.
- CRA-W mentor, Grace Hopper Celebration of Women in Computing (GHC-16) Student Opportunity Lab.
- Outside reviewer, University of Nebraska at Omaha, MS program in Computer Science Education, March/April 2016.
- AAAI Conference Committee member, 2013–present.
- Steering committee member, Symposium on Educational Advances in Artificial Intelligence (EAAI), 2013–present.
- Member of the Intelligent Systems Review Group for ACM CS Curriculum 2013.
- Member of the search committee for Editor-in-Chief of *IEEE Intelligent Systems*, 2008.

ADDITIONAL ACTIVITIES AND COMMUNITY SERVICE

- 2017 American Crossword Puzzle Tournament, 23rd overall (top 4%), 3rd place in the Mid-Atlantic.
- Baltimore Symphony Orchestra Rusty Musicians (flute), September 8, 2015.

- Board Secretary, HowGirlsCode (Howard County, Maryland), 2015–present. (Founding member, 2013–present.)
- Member, UMBC Camerata choir, Fall 2011, Spring 2013, Fall 2013, Spring 2014, Fall 2015.
- Chair, Howard County Computer Science Curriculum Advisory Board, Fall 2012–present.
- Troop leader (Senior Troop 1022), Girl Scouts of Central Maryland, 2007–2014.
- Recording secretary, Reservoir High School PTSA, 2011–2012.
- School volunteer, Fulton Elementary School, Lime Kiln Middle School, and Reservoir High School, 2001–2014.
- Attendance Area Adjustment Committee, Howard County, Maryland, 2003, 2009.
- Gifted & Talented Parent Representative, Lime Kiln Middle School, 2007–2008.
- Board of Directors, Peninsula Women’s Chorus, 1999-2001.
- Board of Directors, Children’s Center of the Stanford Community, 1998-2001.
- Newsletter Editor, Children’s Center of the Stanford Community, 1995-2001.
- Newsletter Editor, Peninsula Women’s Chorus, 1998-2001.
- Manager, Perfect Fifth Chamber Choir, UC Berkeley, 1987-1989.

AFFILIATIONS

- American Association for the Advancement of Science (since 2016; current Member-at-Large, Section T).
- Computer Science Teachers Association (since 2011; founding member and university liaison).
- University of Maryland Institute for Advanced Computing Studies (2003–2012).
- UMBC Center for Women and Information Technology (internal board member).
- UMBC Graduate Faculty (regular member).
- Association for the Advancement of Artificial Intelligence (former councillor).
- Association for Computing Machinery (former SIGART Vice-Chair).
- American Association of University Women.
- American Civil Liberties Union.