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PERSONAL INFORMATION

Education

- 1997 **Ph.D. in Computer Science, Carnegie Mellon University**
Topic: "Goal-Directed Acting with Incomplete Information"
Advisor: Simmons, Thesis Committee: Simmons, Mitchell, Moore, Korf (UCLA)
- 1993 **M.S. in Computer Science (Specialization: Artificial Intelligence), Carnegie Mellon University**
Advisor: Simmons
- 1992 Diplom (German M.S.) in Computer Science (Specialization: Compiler Construction), University of Hamburg
Advisor: Neumann
- 1991 **M.S. in Computer Science (Minor: Linguistics), University of California at Berkeley**
Advisors: Russell and Norvig, Second Reader of Master's Thesis: Zadeh
- 1991 Diplom (German M.S.) in Business Administration (Specialization: Marketing/EDP), University of Hamburg
Advisor: Preßmar, Second Reader of Master's Thesis: Hummeltenberg
- 1987 Vordiplom (German B.S.) in Business Administration, University of Hamburg
- 1986 Vordiplom (German B.S.) in Computer Science, University of Hamburg

Professional Experience

- Aug 2003-now **Associate Professor, Computer Science Department, USC**
Director of the Research Group on Intelligent Decision Making (IDM)
also affiliated with: Institute for Robotics and Intelligent Systems (IRIS), GamePipe Laboratory, and the Center for Robotics and Embedded Systems (CRES)
- Jan 1998-2003 **Assistant Professor, College of Computing, Georgia Institute of Technology**
Director of the Research Group on Intelligent Decision Making (IDM)
also affiliated with: Artificial Intelligence Laboratory, Mobile Robot Laboratory, Collaborative Perception, Planning, and Robotics (BORG) Laboratory, Computational Perception and Robotics Group, and the Center for Process Systems
- 2006-2007 Sabbatical Positions at California Institute of Technology, NICTA/Australian National University and University of California at Berkeley

Awards and Fellowships

- 2009 Mellon Mentoring Award: Faculty Mentoring Undergraduate Students (USC)
- 2007 ACM Senior Member
- 2006-2007 Invited Visit to the Australian National University and NICTA (Australia) - 4 months
- 2006 ACM Recognition of Service Award
- 2005 IEEE Senior Member
- 2004 Charles Lee Powell Foundation Award (USC)
- 2004 SAIC Advisement Award
- 2003 Invited Visit to the University of Alberta (Canada) - 2 weeks
- 2003 Outstanding Junior Faculty Research Award (Georgia Institute of Technology)
- 2001 IBM Faculty Partnership Award
- 2000 NSF Career Award
- 1999 Raytheon Faculty Research Award (Georgia Institute of Technology)
- 1995-1997 Fellowship from the German National Scholarship Foundation
- 1990-1997 Doctoral Fellowship (Carnegie Mellon University)
- 1990 Tong Leong Lim Pre-Doctoral Prize (University of California at Berkeley)
- 1990 Regents Fellowship (University of California at Berkeley) offered, but declined
- 1990 NRTS Fellowship (University of California at Berkeley) offered, but declined
- 1989-1990 Regents Fellowship (University of California at Berkeley)
- 1989 Fulbright Fellowship

1988-1991 Fellowship from the German National Scholarship Foundation

Membership in Professional Organizations

Association for Computing (ACM)

Association for the Advancement of Artificial Intelligence (AAAI)

The Institute of Electrical and Electronics Engineers (IEEE)

The Institute for Operations Research and the Management Sciences (INFORMS)

Gesellschaft fuer Informatik (GI) [German Computer Science Society]

TEACHING

Courses Taught at USC - Teaching Load: 3 classes / year (2.7 classes / year from 2011 on)

Spring 2010 Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CSCI460
Fall 2009 2x Artificial Intelligence (for graduate students) - 2x CSCI561 + DEN (= Distance Education Network)
Spring 2009 2x Artificial Intelligence (for graduate students) - 2x CSCI561 + DEN
Fall 2008 Artificial Intelligence (for graduate students) - CSCI561
Fall 2008 Designing and Implementing Games on Pinball Machines (for advanced undergraduate and graduate students) - CSCI499 - new [voluntary]
Spring 2008 Artificial Intelligence (for graduate students) - CSCI561 + DEN
Spring 2008 Advanced Topics in Search and Planning - CSCI599 - new
Fall 2007 Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CSCI460
(Teaching Assistant William Yeoh won Outstanding Teaching Assistant Award from the CS Department)
Spring 2006 Advanced Artificial Intelligence (for graduate students) - CSCI573 + DEN
Fall 2005 Artificial Intelligence (for graduate students) - CSCI561 + DEN
Spring 2005 Advanced Artificial Intelligence (for graduate students) - CSCI573 + DEN - revised
Spring 2005 Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CSCI460
Fall 2004 Artificial Intelligence (for graduate students) - CSCI561 + DEN - revised
Spring 2004 Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CSCI460 - revised
(Teaching Assistant Jonathan Kelly won Outstanding Teaching Assistant Award from the CS Department)
Spring 2004 Decision-Theoretic Planning (for graduate students) - CSCI599 - new

Additional Teaching at USC

Spring 2010 Creator of “A Project on Gesture Recognition with Neural Networks for Introduction to Artificial Intelligence Classes” for the “Computer Games in the Classroom” Project (with Xiaoming Zheng)
The project was chosen as a “Model AI Assignment” by the Symposium on Educational Advances in AI 2010.
Fall 2008 Creator of “A Project on Any-Angle Path Planning for Computer Games for Introduction to Artificial Intelligence Classes” for the “Computer Games in the Classroom” Project (with Kenny Daniel and Alex Nash)
The project was chosen as a “Model AI Assignment” by the Symposium on Educational Advances in AI 2010.
Spring 2008 Creator of “A Project on Fast Trajectory Replanning for Computer Games for Introduction to Artificial Intelligence Classes” for the “Computer Games in the Classroom” Project (with William Yeoh)
The project was chosen as a “Model AI Assignment” by the Symposium on Educational Advances in AI 2010.
2008 Organizer of 2 Ethics Lectures in the Seminar in Computer Science Research (with Raymond Rakhshani)

Courses Taught at Georgia Institute of Technology - Teaching Load: 2 classes / year

Spring 2003 Artificial Intelligence Planning (for graduate students) - CS7612A
Spring 2003 Artificial Intelligence Planning (for junior and senior undergraduate students) - CS4612A - new
Spring 2003 Intelligent Systems Seminar (for graduate students, with Ashok Goel) - CS8001IS [voluntary]
Fall 2002 Artificial Intelligence (for graduate students, with Ashok Goel) - CS8803B
Fall 2002 Introduction to Intelligent Systems (for junior and senior undergraduate students) - CS4600
Fall 2002 Intelligent Systems Seminar (for graduate students, with Ashok Goel) - CS8001IS [voluntary]
Spring 2002 Intelligent Systems Seminar (for graduate students, with Ashok Goel) - CS8001D [voluntary]
Fall 2001 Intelligent Systems Seminar (for graduate students, with Ashok Goel) - CS8803I [voluntary] - new
Spring 2001 Intelligent Decision Making - Decision-Theoretic Planning (for graduate students) - CS8803C - new
Fall 2000 Introduction to Intelligent Systems (for junior and senior undergraduate students) - CS4600
Spring 2000 Introduction to Intelligent Systems (for junior and senior undergraduate students) - CS4600 - revised
Fall 1999 Intelligent Agents (for graduate students) - CS6660 - revised
Spring 1999 Intelligent Decision Making - Modern Approaches to Planning (for graduate students) - CS8113 - new
Spring 1999 Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CS3361
Winter 1999 Advanced Artificial Intelligence Systems Development (for graduate students) - CS7360 [voluntary] - revised

Winter 1999 Artificial Intelligence (for graduate students) - CS6361
 Fall 1998 Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CS3361 - revised
 Spring 1998 Intelligent Decision Making - Adaptive and Time-Critical Decision Making (for graduate students) - CS8113 - new
 Winter 1998 Artificial Intelligence (for graduate students) - CS6361 - revised

Additional Teaching at Georgia Institute of Technology

Spring 2000 Organizer of the Reinforcement-Learning Seminar
 Spring 2000 Organizer of the Uncertainty Seminar (with Chris Atkeson)
 Summer 1998 Lecturer for the Summer Intern Program of the College of Computing

Teaching Assistant at Carnegie Mellon University

1993 Knowledge-Based Systems (for seniors and graduate students, Carbonell and Perlin)
 1992 Artificial Intelligence (for juniors and seniors, Mitchell)

Teaching Assistant at the University of Hamburg

1986 Computer Science Theory (for sophomores, Kudlek)
 1986 COBOL (for all students, mainly attended by non-computer science majors, Trost)
 1985-1987 Orientation Course (first course for freshmen)

STUDENT SUPERVISION AND ADVISING

Note: All supervision at Georgia Institute of Technology from 2004 on was officially done by other professors.

Ph.D. Students at USC

2006-now Alex Nash (passed qualifying exam)
 2006-now Kenny Daniel (passed screening)
 2007: 6th Place in the ACM Southern California Regional Programming Contest (out of 63 teams)
 2007: 1st Place in the USC Programming Contest (out of 31 students)
 2006: 2nd Place in the ACM Southern California Regional Programming Contest (out of 73 teams)
 2006: 2nd Place in the USC Programming Contest (out of 49 students)
 2004-now Xiaoming Zheng (passed qualifying exam)
 2005-now Xiaoxun Sun (passed screening)
 2007: USC Annenberg Graduate Fellowship
 2004-now William Yeoh (switched advisors, passed qualifying exam)
 2010: Outstanding Research Assistant Award from the Computer Science Department of USC
 2009: Nomination for the AAMAS 2009 Pragnesh Jay Modi Best Student Paper Award
 2008: Award for Excellence in Teaching from the USC Center for Excellence in Teaching
 2008: Nomination for the University Outstanding Teaching Assistant Award
 2007: Outstanding Teaching Assistant Award from the Computer Science Department of USC

Research Project Supervision Resulting in Publications at USC

Syed Ali (joint with Milind Tambe), Sumit Borar (joint with Milind Tambe), Darren Earl, Rahul Iyer (joint with Milind Tambe), Sonal Jain, Janusz Marecki (joint with Milind Tambe), Allen Pan, Selby Shlosberg, Jaspreet Singh, Ilgaz Sungur, Daniel Wong, Ryan Zink and Fred Zyda

Ph.D. Committees in Computer Science at USC

2010 Jonathan May, Weighted Tree Automata and Transducers for Syntactic Natural Language Processing, Knight - Defense
 2009 Mahyar Salek, Combinatorial and Computational Aspects of Mechanism Design, Kempe - Proposal
 2009 Sujith Ravi, Natural Language Decipherment: Solving Problems in Natural Language Processing without Labeled Data, Knight - Proposal
 2009 Jing Jin, Interactive Querying of Temporal Data using a Comic Strip Metaphor, Szekely - Proposal (2008) and Defense
 2008 Michael Rubenstein, Relentless Self-Assembly and Differentiation in a Realistic Homogeneous Group of Distributed Robots, Shen - Proposal
 2008 Rattapoom Tuchinda, Building Mashups by Example, Knoblock - Proposal (2007) and Defense
 2008 Dusan Jan, Virtual Extras: Multiparty Dialog Simulation for Background Virtual Humans, Traum - Proposal
 2007 Marin Kobilarov, Discrete Geometric Motion Control of Autonomous Vehicles, Sukhatme - Proposal
 2007 Pradeep Varakantham, Towards Efficient Planning for Real World Partially Observable Domains, Tambe - Proposal (2006) and Defense

- 2006 Jonathan Pearce, Local Optimization in Agent Networks in Cooperative and Noncooperative Settings, Tambe - Proposal
- 2005 Jan Peters, Machine Learning of Motor Skills for Robotics, Schaal - Proposal
- 2004 Maxim Batalin, Cooperative Algorithms for Mobile Robots and a Sensor Network, Sukhatme - Proposal
- 2004 Chris Jones, A Formal Design Methodology for Coordinated Multi-Robot Systems, Mataric - Proposal
- 2004 Aaron D'Souza, Towards Tractable Parameter-Free Learning, Schaal - Defense
- 2004 Ranjit Nair, Coordinating Multiagent Teams in Uncertain Domains using Distributed POMDPs, Tambe - Proposal (2003) and Defense

Ph.D. Committees in Industrial and Systems Engineering at USC

- 2008 Zhihong Shen, Routing and Inventory Models for Emergency Response to Minimize Unmet Demand, Dessouky and Ordonez - Proposal (2006) and Defense
- 2007 Ilgaz Sungur, The Robust Vehicle Routing Problem, Ordonez and Dessouky - Proposal (2006) and Defense

Ph.D. Committees in Computational Biology at USC

- 2005 Hyunju Lee, Analysis of Protein-Protein Interactions using Multiple Biological Data Sets, Chen - Proposal

M.S. Committees in Computer Science at USC

- 2004 Steven Okamoto: The State of DCOP in LA: Relaxed, Tambe - Defense

Visitors and Postdoctoral Researchers at USC

- 2009 Visitor: Carlos Hernandez Ulloa, Associate Professor, Universidad Católica de la Santísima Concepción, Chile (3.5 months)
- 2006-2007 Visitor: Ariel Felner, Assistant Professor, Ben-Gurion University, Israel (6 months)
- 2005 Visitor: Vadim Bulitko, Assistant Professor, University of Alberta, Canada (2 weeks)

Additional Advising at USC

- Summer 2009 Advisor for the REU Site Program (Jieming Zeng, University of North Carolina at Chapel Hill)
- Summer 2008 Advisor in the Viterbi School of Engineering Merit Research Program (Daniel Wong)
- Fall 2007 Mentor for the W.V.T. Rusch Engineering Honors Program (Daniel McGeever)
- 2005-2009 Coach of USC Teams for 5 ACM Southern California Regional Programming Contests (with David Kempe and, since 2008, Suya You) 2005: *USC placed 5th (out of 66)*, 2006: *2nd (out of 73)*; 2007: *6th (out of 63)*; 2008: *8th (out of 71)*; 2009: *5th (out of 62)*
- Summer 2004 Advisor of a Merit Scholar Undergraduate Student of the Computer Science Department (John Reynolds)

Ph.D. Students at Georgia Institute of Technology

- 1997-2005 Yaxin Liu (graduated, first job: Research Scientist, University of Texas at Austin; now: Google)
Thesis: "Decision-Theoretic Planning Under Risk-Sensitive Planning Objectives"
2007: *Outstanding Dissertation Award from the College of Computing for 2005-2006*
2003: *IBM Fellowship Award*
2002: *Outstanding Graduate Research Assistant Award from the College of Computing*
2002: *IBM Fellowship Award*
- 1997-2004 David Furcy (graduated; first job: Assistant Professor, University of Wisconsin at Oshkosh)
Thesis: "Speeding up the Convergence of Online Heuristic Search and Scaling up Offline Heuristic Search"
2004: *Runner-Up for Best Paper Award at ICAPS (I was not a co-author of this paper)*
- in progress I gave up students who were not yet working on their dissertation proposals when moving to USC

Research Project Supervision Resulting in Publications at Georgia Institute of Technology

Amin Atrash - 1999: *2 out of 8 Main UROC Research Competition Awards from the College of Computing*, Colin Bauer, Marc Berhault (joint with Pinar Keskinocak) - 2004: *Best Paper Award in the SAIC Paper Competition*, Sam Greenberg (joint with Craig Tovey), William Halliburton, Maxim Likhachev, Vangelis Markakis (joint with Michail Lagoudakis and Pinar Keskinocak), Lisa McCrickard (joint with Norberto Ezquerro), Apurva Mudgal (joint with Craig Tovey), and Ananth Ranganathan (independent of publications: 19 Ph.D. special problems students, 4 M.S. special problems students and 19 B.S. special problems students)

Ph.D. Committees in Computer Science at Georgia Institute of Technology

- 2004 Darrin Bentivegna: Learning from Observation using Primitives, Atkeson - Proposal (2002) and Defense
- 2003 Alexander Stoychev: Robot Tool Behavior: The Use and Discovery of Tools by Robots, Arkin - Proposal
- 2002 Mark Devaney: Plan Recognition in Large-Scale Multiagent Real-World Domains, Ram - Proposal (1999) and Defense
- 2000 William Murdock: Model-Based Reflection for Agent Evolution, Goel - Defense

- 1999 David Brogan: Simulation Levels of Detail for Control and Animation, Hodgins - Proposal (1999) and Defense
- 1999 Gordon Shippey: Planning as a Framework for Multistrategy Learning, Ram - Proposal
- 1999 Khaled Ali: Multiagent Telerobotics: Comparing Systems to Tasks, Arkin - Defense

Ph.D. Committees in Industrial and Systems Engineering at Georgia Institute of Technology

- 1999 Vijai Nori: Algorithms for Dynamic and Stochastic Logistics Problems, Kleywegt and Savelsbergh - Proposal (1998) and Defense
- 1998 Dirk Guenther: Airline Yield Management, Advisors: Johnson and Chen - Defense

Ph.D. Committees in Chemical Engineering at Georgia Institute of Technology

- 2002 Jong Min Lee: A Study on Methodology, Architecture, and Applications of Simulation-Based Approaches to Optimal Control, Lee - Proposal
- 2002 Jaemin Choi: Algorithmic Framework for Improving Heuristics in Stochastic, Stage-Wise Optimization Problems, Lee - Proposal
- 2000 Kenneth Kirschner: Empirical Learning Methods for the Induction of Knowledge from Optimization Models, Realf - Defense

Ph.D. Qualifying Examinations in Computer Science at Georgia Institute of Technology

- 2002 Yoichiro Endo (Intelligent Systems)
- 2002 Patrick Yaner (Intelligent Systems)
- 2002 Amin Atrash (Intelligent Systems)
- 2001 Jonathan Diaz (Intelligent Systems)
- 2001 Darrin Bentivegna (Intelligent Systems)
- 2000 Brad Singletary (Intelligent Systems)
- 2000 Alexander Stoytchev (Intelligent Systems)
- 2000 Michael Cramer (Intelligent Systems)
- 1999 Patrawadee Prasangsit (Intelligent Systems)
- 1999 Margaret Loper (Systems)

Visitors and Postdoctoral Researchers at Georgia Institute of Technology

- 2004-2005 Postdoctoral Researcher: Michail Lagoudakis (1.5 years), now: Assistant Professor at the Technical University of Crete
- 2002 Visitor: Jonas Svennebring, Sweden (1 semester)

Additional Advising at Georgia Institute of Technology

- Summer 2000 Advisor for the Summer Intern Program of the College of Computing (James Irizarry Huertas)
- Fall 1999 Studio Project Group (for undergraduate students): WebmailExpressGT Email System - CS3351

Member of External Thesis Committees

- 2010 Evan Sultank, Automatic Construction, Maintenance and Optimization of Dynamic Agent Organizations, Drexel University, Regli and Shokoufandeh - Dissertation Proposal
- 2009 Christian Fritz, Monitoring the Generation and Execution of Optimal Plans, University of Toronto (Canada), McIlraith - External Examiner of Dissertation and Dissertation Defense
- 2009 Carl Crous, Autonomous Robot Path Planning, University of Stellenbosch (South Africa), van der Merwe - Evaluation of Master's Thesis
- 2008 Frank Broz, Planning for Human-Robot Interaction: Representing Time and Human Intention, Carnegie Mellon University, Nourbakhsh and Simmons - Dissertation Proposal (2005) and Defense
- 2007 Ulas Bardak, Information Elicitation in Scheduling Problems, Carnegie Mellon University, Carbonell and Fink - Dissertation Proposal (2006) and Defense
- 2005 Maxim Likhachev, Search-Based Planning for Large Dynamic Environments, Carnegie Mellon University, Thrun and Gordon - Dissertation Proposal (2003) and Defense
- 2003 Matt Mitchell, An Architecture for Situated Learning Agents, Monash University (Australia), Albrecht and Nicholson - Evaluation of Dissertation
- 2003 Stefan Edelkamp, Heuristic Search, Albert-Ludwigs-University of Freiburg (Germany), Ottmann - Evaluation of Habilitation
- 2002 Georgios Theocharous, Hierarchical Learning and Planning in Partially Observable Markov Decision Processes, Michigan State University, Mahadevan - Dissertation Defense

Member of Doctoral Consortia

- 2010 ICAPS Doctoral Consortium
- 2010 AAAI/SIGART Doctoral Consortium

2009 ICAPS Doctoral Consortium - Program Committee only
 2009 AAAI/SIGART Doctoral Consortium
 2008 ICAPS Doctoral Consortium
 2008 SIGART/AAAI Doctoral Consortium - Reviewer
 2007 ICAPS Doctoral Consortium
 2006 SIGART/AAAI Doctoral Consortium
 2005 SIGART/AAAI Doctoral Consortium
 2004 ICAPS Doctoral Consortium
 2003 SIGART/AAAI/IJCAI Doctoral Consortium
 2003 ICAPS Doctoral Consortium
 2002 SIGART/AAAI Doctoral Consortium

TALKS

Invited Talks at Conferences

2010 AAAI Robotics Workshop on Enabling Intelligence through Middleware (as NSF representative)
 2010 AAAI Workshop on Bridging the Gap between Task and Motion Planning (BTAMP)
 2010 International Symposium on Combinatorial Search (SoCS)
 2010 Dagstuhl Seminar on Cognitive Robotics (all talks in Dagstuhl seminars are invited)
 2010 ICRA Workshop on Search and Pursuit/Evasion in the Physical World: Efficiency, Scalability, and Guarantees (all talks in this ICRA workshop were invited)
 2008 IAAI (Israeli Association for Artificial Intelligence) Symposium - Keynote Address
 2007 IROS Workshop on Algorithmic Motion Planning (all talks in this IROS workshop were invited)
 2006 Invited Session on "Search and Optimization Techniques and their Applications" at the International Symposium on Artificial Intelligence and Mathematics (ISAIM)
 2003 IJCAI Workshop on Artificial Intelligence and Autonomic Computing
 2002 Joint AAAI/KDD/UAI Workshop on Real-Time Decision Support and Diagnosis Systems
 2001 Dagstuhl Seminar on Plan-Based Control of Robotic Agents (all talks in Dagstuhl seminars are invited)
 1999 IJCAI Workshop on Robot Action Planning

Invited Commentaries at Conferences

2008 ICAPS Workshop on a Reality Check for Planning and Scheduling under Uncertainty
 2007 Session on On-Line Planning and Execution at the International Conference on Automated Planning and Scheduling (ICAPS)

Invited Sessions at Summer Schools

2006 Americas School on Agents and Multiagent Systems (USA)
 2006 ICAPS Summer School on Artificial Intelligence Planning (Great Britain, with Maxim Likhachev)
 2005 Brazil Agents School (Brazil)
 2005 Americas School on Agents and Multiagent Systems (USA)
 2004 Hyderabad Multi-Agent Systems School (India)
 2002 PLANET International Summer School on Artificial Intelligence Planning (Italy)

Conference Tutorials

2010 ICRA Tutorial on Real-Time Planning in Dynamic and Partially-Known Domains (with Maxim Likhachev from the University of Pennsylvania)
 2009 IJCAI Tutorial and ICAPS Tutorial on Real-Time Planning in Dynamic and Partially-Known Domains (with Maxim Likhachev from the University of Pennsylvania)
 2008 AAAI Tutorial on Path Planning (with Michael Buro and Nathan Sturtevant from the University of Alberta)
 2006 AAAI Tutorial and AAMAS Tutorial on Auction-Based Agent Coordination and ICRA Tutorial on Auction-Based Robot Coordination (with Bernardine Dias, Gil Jones, Nidhi Kalra and Robert Zlot from Carnegie Mellon University, Pinar Keskinocak from Georgia Institute of Technology, and Michail Lagoudakis from the Technical University of Crete)
 2003 IJCAI Tutorial on State of the Art in Ant Robotics and ICRA Tutorial on Ant-Based Mobile Robots: Robust Navigation and Coverage with Single Robots and Robot Teams (with Israel Wagner from the Technion, Andrew Russell from Monash University, and David Payton and Richard Vaughan from HRL Laboratories)
 2002 AIPS Tutorial on Greedy On-Line Planning
 2002 AAAI Tutorial and ICRA Tutorial on Greedy On-Line Planning (with Anthony Stentz from Carnegie Mellon University)

Talks at Research Institutions

AT&T Labs Research (Murray Hill) 1997; Australian National University (Australia) 2006; Bar-Ilan University (Israel) 2008; California Institute of Technology 2006 (2x), 2007 (2x); Carnegie Mellon University 2001, 2005, 2007; CSTAR at Andersen Consulting (Chicago) 1997; Columbia University 1997; Georgia Institute of Technology 1997; IBM T.J. Watson Research Center (New York) 2001; IIT Madras (India) 2004; Information Sciences Institute (Los Angeles) 2004; Iowa State University 1997; Jet Propulsion Laboratory (California Institute of Technology) 2002, 2005; Massachusetts Institute of Technology 1997; McGill University (Canada) 1997; Michigan State University 1997; Monash University (Australia) 2007 (2x); NASA Ames Research Center (Mountain View) 1997, 2002; National Science Foundation (Washington, D.C.) 2010; Naval Research Laboratory (Navy Center for Applied Research in AI Seminar Series) 2001; NEC Research Institute (Princeton) 1997; Rensselaer Polytechnic Institute 1997; Stanford Research Institute International (Menlo Park) 1997; Stanford University 1997, 2002, 2004, 2008; Technion - Israel Institute of Technology (Israel) 2008; University of Alberta (Canada) 2001, 2003 (3x), 2007; University of California at Berkeley 2002, 2007; University of California at Irvine 2002, Computer Science Department Distinguished Lecturer Seminar 2010; University of California at Los Angeles 2002; University of Iowa 1997; University of Kansas 1997; University of Nevada at Reno 2009; University of New Mexico 1997; University of New South Wales (Australia) 2006; University of North Texas 1997; University of Southern California 2002, 2003; University of Toronto (Canada) 2009; University of Sydney (Australia) 2007; University of Technology, Sydney (Australia) 2007; University of Washington 2002; University of Waterloo (Canada) 1997; University of West Florida 1997; York University (Canada) 1997.

Presentations at Conferences without Proceedings (not all talks were given by me)

R. Borie, C. Tovey, K. Daniel and **S. Koenig**, ESP: Pursuit Evasion on Series-Parallel Graphs, Symposium on Combinatorial Search (SoCS), 2009.

Y. Liu, R. Goodwin, and **S. Koenig**, Risk-Sensitive Planning in Artificial Intelligence with Nonlinear Utility Functions, INFORMS Computing Society Conference (ICS), 2005.

S. Koenig, M. Berhault, W. Elmaghraby, P. Griffin, H. Huang, S. Jain, P. Keskinocak, A. Kleywegt, and M. Lagoudakis, Using Auctions for the Coordination of Robot Teams, INFORMS Computing Society Conference (ICS), 2005.

C. Tovey, S. Greenberg, W. Halliburton, **S. Koenig**, A. Mudgal, Y. Smirnov, and D. Vroom, Analysis of Robot Navigation Tasks and Methods [Minipresentation], INFORMS Computing Society Conference (ICS), 2005.

M. Berhault, H. Huang, P. Keskinocak, **S. Koenig**, W. Elmaghraby, P. Griffin, and A. Kleywegt, Robot Exploration with Combinatorial Auctions, INFORMS Annual Meeting (INFORMS), 2003.

W. Elmaghraby, P. Griffin, P. Keskinocak, A. Kleywegt, and **S. Koenig**, The Dynamic Stochastic Newspaper Routing Problem, Triennial Conference of the International Federation of Operational Research Societies (IFORS), 2002.

PUBLICATIONS

Journal Articles

1. A. Nash, K. Daniel, **S. Koenig** and A. Felner, Any-Angle Path Planning on Grids, *Journal of Artificial Intelligence Research*, 2010 (accepted).
2. W. Yeoh, A. Felner and **S. Koenig**, BnB-ADOPT: An Asynchronous Branch-and-Bound DCOP Algorithm, *Journal of Artificial Intelligence Research*, Volume 38, pages 85-133, 2010.
3. X. Zheng, **S. Koenig**, D. Kempe and S. Jain, Multi-Robot Forest Coverage for Weighted and Unweighted Terrain, *IEEE Transactions on Robotics*, 2010 (conditionally accepted).
4. C. Tovey and **S. Koenig**, Localization: Approximation and Performance Bounds for Minimizing Travel Distance, *IEEE Transactions on Robotics*, Volume 26(2), pages 320-330, 2010.
5. **S. Koenig**, J. Mitchell, A. Mudgal and C. Tovey, A Near-Tight Approximation Algorithm for the Robot Localization Problem, *SIAM Journal on Computing*, Volume 39(2), pages 461-490, 2009.
6. **S. Koenig** and X. Sun, Real-Time and Incremental Heuristic Search for Real-Time Situated Agents, *Journal of Autonomous Agents and Multi-Agent Systems*; Volume 18(3), pages 313-341, 2009.
7. A. Mudgal, C. Tovey, S. Greenberg and **S. Koenig**, Bounds on the Travel Cost of a Mars Rover Prototype Search Heuristic, *SIAM Journal on Discrete Mathematics*, Volume 19(2), pages 431-447, 2005.
8. **S. Koenig** and M. Likhachev, Fast Replanning for Navigation in Unknown Terrain, *Transactions on Robotics (and Automation)*, Volume 21(3), pages 354-363, 2005.
9. **S. Koenig**, M. Likhachev, and D. Furcy, Lifelong Planning A*, *Artificial Intelligence Journal*, Volume 155(1-2), pages 93-146, 2004.
10. J. Svennebring and **S. Koenig**, Building Terrain-Covering Ant Robots, *Autonomous Robots*, Volume 16(3), pages 313-332, 2004.
11. **S. Koenig**, Y. Smirnov, and C. Tovey, Performance Bounds for Planning in Unknown Terrain, *Artificial Intelligence Journal*, Volume 147(1-2), pages 253-279, 2003.

12. **S. Koenig** and Y. Liu, The Interaction of Representations and Planning Objectives for Decision-Theoretic Planning Tasks, *Journal of Experimental and Theoretical Artificial Intelligence*, Volume 14, pages 303-326, 2002.
13. **S. Koenig**, B. Szymanski, and Y. Liu, Efficient and Inefficient Ant Coverage Methods, *Annals of Mathematics and Artificial Intelligence - Special Issue on Ant Robotics*, Volume 31, pages 41-76, 2001.
14. **S. Koenig**, Agent-Centered Search, *Artificial Intelligence Magazine*, Volume 22(4), pages 109-131, 2001.
15. R.G. Simmons, R. Goodwin, K. Haigh, **S. Koenig**, J. O'Sullivan, Xavier: Experience with a Layered Robot Architecture, *Sigart Bulletin*, Volume 8(1-4), pages 22-33, 1997.
16. **S. Koenig** and R.G. Simmons, The Effect of Representation and Knowledge on Goal-Directed Exploration with Reinforcement-Learning Algorithms, *Machine Learning*, Volume 22(1-3), pages 227-250, 1996. Appeared also as a book chapter in: *Recent Advances in Reinforcement Learning*, L.P. Kaelbling (editors), Kluwer Academic Publishers, 1996.

Magazine Articles

1. **S. Koenig**, M. Likhachev, Y. Liu and D. Furcy, Incremental Heuristic Search in Artificial Intelligence, *Artificial Intelligence Magazine*, Volume 25(2), pages 99-112, 2004.
2. **S. Koenig**, Agent-Centered Search, *Artificial Intelligence Magazine*, Volume 22(4), pages 109-131, 2001.
3. R. Simmons, J. Fernandez, R. Goodwin, **S. Koenig**, and J. O'Sullivan, Lessons Learned from Xavier, *IEEE Robotics and Automation Magazine*, Volume 7(2), pages 33-39, 2000.

Book Chapters

1. W. Yeoh, **S. Koenig** and A. Felner, IDB-ADOPT: A Depth-First Search DCOP Algorithm, *Lecture Note in Artificial Intelligence*, Volume 5655: *Recent Advances in Constraints - 13th Annual ERCIM International Workshop on Constraint Solving and Constraint Logic Programming, CSCLP 2008, Rome, Italy, June 18-20, 2008, Revised Selected Papers*, F. Fages, A. Oddi and F. Rossi (editors), Springer, pages 132-146, 2009. Appeared also in: *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, pages 60-70, 2007.
2. C. Tovey, M. Lagoudakis, S. Jain and **S. Koenig**, The Generation of Bidding Rules for Auction-Based Robot Coordination, in: *Multi-Robot Systems: From Swarms to Intelligent Automata*, Volume 3, L. Parker, F. Schneider, and A. Schultz (editors), Springer, pages 3-14, 2005.
3. J. Svennebring and **S. Koenig**, Towards Building Terrain-Covering Ant Robots, *Lecture Notes in Computer Science*, Volume 2463: *Ant Algorithms*, M. Dorigo, G. Di Caro, and M. Sampels (editors), Springer, pages 202-215, 2002.
4. M. Likhachev and **S. Koenig**, Lifelong Planning for Mobile Robots, *Lecture Notes in Artificial Intelligence*, Volume 2466: *Advances in Plan-Based Control of Robotic Agents*, M. Beetz, J. Hertzberg, M. Ghallab, and M. Pollack (editors), Springer, pages 140-156, 2002.
5. R. Simmons, R. Goodwin, **S. Koenig**, J. O'Sullivan, and G. Armstrong, Xavier: An Autonomous Mobile Robot on the Web, in: *Beyond Webcams: An Introduction to Online Robots*, K. Goldberg and R. Siegwart (editors), MIT Press, pages 81-97, 2001.
6. **S. Koenig**, Planning-Task Transformations for Soft Deadlines, *Lecture Notes in Artificial Intelligence*, Volume 1986, *Intelligent Agents VII - Agent Theories, Architectures, and Languages (ATAL)*, C. Castelfranchi and Y. Lesperance (editors), Springer, pages 305-319, 2000.
7. **S. Koenig**, R. Goodwin, and R.G. Simmons, Robot Navigation with Markov Models: A Framework for Path Planning and Learning with Limited Computational Resources, *Lecture Notes in Artificial Intelligence*, Volume 1093: *Reasoning with Uncertainty in Robotics*, L. Dorst, M. van Lambalgen, and R. Voorbraak (editors), Springer, pages 322-337, 1996.

Invited Publications

1. **S. Koenig** and R.G. Simmons, Xavier: A Robot Navigation Architecture Based on Partially Observable Markov Decision Process Models, invited book chapter in: *Artificial Intelligence Based Mobile Robots: Case Studied of Successful Robot Systems*, D. Kortenkamp, R. Bonasso, R. Murphy (editors), MIT Press, pages 91-122, 1998.
2. M. Lagoudakis and **S. Koenig**, Planning, *Berkshire Encyclopedia of Human-Computer Interaction*, W. Bainbridge (editors), Berkshire Publishing Group, pages 554-560, 2004.
3. D. Furcy and **S. Koenig**, STRIPS, *Encyclopedia of Cognitive Science*, Macmillan, 2002.

Selective Archival Conferences (roughly 15-35% percent acceptance rate)

"In Computer Science, unlike many other fields, conference papers are rigorously reviewed, with top conferences having low acceptance rates; publications in these conferences are considered archival and comparable to journal papers" [Martha Pollack's CV, as retrieved on July 22, 2009 from www.eecs.umich.edu/~pollackm/vita.pdf]. Sample acceptance rates for full papers (unless noted otherwise) are: IJCAI 2007: 16% (papers with plenary presentation), IJCAI 2005: 18% (full papers) and 22% (posters), AAAI 2010: 27%, AAAI 2007: 27%, AAAI 2005: 18%, ICAPS 2005: 35%, AAMAS 2008: 22%, AAMAS 2007: 22%, AAMAS 2006: 23%, NIPS 2003: 28%, UAI 2005: 34%, and SODA 2006: 31%.

General Artificial Intelligence (AAAI, IJCAI)

1. A. Nash, **S. Koenig** and C. Tovey, Lazy Theta*: Any-Angle Path Planning and Path Length Analysis in 3D, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2010 (in print). An abstract of this paper appeared also in: Proceedings of the International Symposium on Combinatorial Search (SoCS), 2010.
2. X. Zheng and **S. Koenig**, Sequential Incremental-Value Auctions, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2010 (in print).
3. **S. Koenig**, C. Tovey and P. Keskinocak, Progress on Agent Coordination with Cooperative Auctions [Senior Member Paper], Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2010 (in print)
4. X. Sun, W. Yeoh and **S. Koenig**, Efficient Incremental Search for Moving Target Search, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 615-620, 2009. A short version of this paper appeared also in: Proceedings of the ICAPS-09 Doctoral Consortium, pages 29-32, 2009.
5. A. Nash, **S. Koenig** and M. Likhachev, Incremental Phi*: Incremental Any-Angle Path Planning on Grids, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), page 1824-1830, 2009. A version of this paper was also presented in: International Symposium on Combinatorial Search (SoCS), 2009.
6. R. Borie, C. Tovey and **S. Koenig**, Algorithms and Complexity Results for Pursuit-Evasion Problems, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 59-66, 2009.
7. X. Zheng and **S. Koenig**, K-Swaps: Cooperative Negotiation for Solving Task-Allocation Problems, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 373-379, 2009.
8. W. Yeoh, X. Sun and **S. Koenig**, Trading Off Solution Quality for Faster Computation in DCOP Search Algorithms, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), page 354-360, 2009. A version of this paper was also presented in: International Symposium on Combinatorial Search (SoCS), 2009. Earlier versions of this paper appeared also in: W. Yeoh, **S. Koenig** and X. Sun, Trading Off Solution Cost for Smaller Runtime in DCOP Search Algorithms [Poster Abstract], Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 1445-1448, 2008. Proceedings of the Tenth International Workshop on Distributed Constraint Reasoning (DCR), pages 25-35, 2008.
9. **S. Koenig**, X. Zheng, C. Tovey, R. Borie, P. Kilby, V. Markakis and P. Keskinocak, Agent Coordination with Regret Clearing. Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 101-107, 2008.
10. J. Marecki, **S. Koenig** and M. Tambe, A Fast Analytical Algorithm for Solving Markov Decision Processes with Real-Valued Resources, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 2536-2541, 2007.
11. **S. Koenig**, C. Tovey, X. Zheng and I. Sungur, Sequential Bundle-Bid Single-Sale Auction Algorithms for Decentralized Control [Plenary Presentation], Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 1359-1365, 2007.
12. X. Sun and **S. Koenig**, The Fringe-Saving A* Search Algorithm - A Feasibility Study [Plenary Presentation], Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 2391-2397, 2007.
13. A. Nash, K. Daniel, **S. Koenig** and A. Felner, Theta*: Any-Angle Path Planning on Grids, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 1177-1183, 2007.
14. P. Haslum, A. Botea, M. Helmert, A. Bonet and **S. Koenig**, Domain-Independent Construction of Pattern Database Heuristics for Cost-Optimal Planning, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 1007-1012, 2007.
15. Y. Liu and **S. Koenig**, Functional Value Iteration for Decision-Theoretic Planning with General Utility Functions, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 1186-1193, 2006.
16. **S. Koenig**, C. Tovey, M. Lagoudakis, V. Markakis, D. Kempe, P. Keskinocak, A. Kleywegt, A. Meyerson and S. Jain, The Power of Sequential Single-Item Auctions for Agent Coordination [Nectar Paper], Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 1625-1629, 2006.
17. D. Furcy and **S. Koenig**, Limited Discrepancy Beam Search, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 125-131, 2005.
18. Y. Liu and **S. Koenig**, Risk-Sensitive Planning with One-Switch Utility Functions: Value Iteration, Proceedings of the Twentieth AAAI Conference on Artificial Intelligence (AAAI), pages 993-999, 2005.
19. D. Furcy and **S. Koenig**, Scaling up WA* with Commitment and Diversity [Poster Abstract], Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 1521-1522, 2005 [Acceptance Rate 20%].
20. Y. Liu, **S. Koenig**, and D. Furcy, Speeding Up the Calculation of Heuristics for Heuristic Search-Based Planning, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 484-491, 2002.
21. **S. Koenig** and M. Likhachev, D* Lite, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 476-483, 2002.
22. D. Furcy and **S. Koenig**, Speeding up the Convergence of Real-Time Search, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 891-897, 2000.

23. C. Tovey and **S. Koenig**, Gridworlds as Testbeds for Planning with Incomplete Information, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 819-824, 2000.
24. **S. Koenig** and B. Szymanski, Value-Update Rules for Real-Time Search, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 718-724, 1999.
25. **S. Koenig** and R.G. Simmons, Easy and Hard Testbeds for Real-Time Search Algorithms, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 279-285, 1996.
26. Y. Smirnov, **S. Koenig**, M.M. Veloso, and R.G. Simmons, Efficient Goal-Directed Exploration, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 292-297, 1996.
27. **S. Koenig**, Agent-Centered Search: Situated Search with Small Look-Ahead [Student Abstract], Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), page 1365, 1996.
28. R. Simmons, S. Thrun, G. Armstrong, R. Goodwin, K. Haigh, **S. Koenig**, S. Mahamud, D. Nikovski, and J. O'Sullivan, Amelia [Robot Competition Abstract], Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), page 1358, 1996.
29. **S. Koenig** and R.G. Simmons, Real-Time Search in Non-Deterministic Domains, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 1660-1667, 1995.
30. R. Simmons and **S. Koenig**, Probabilistic Robot Navigation in Partially Observable Environments, Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), pages 1080-1087, 1995.
31. **S. Koenig** and R.G. Simmons, Complexity Analysis of Real-Time Reinforcement Learning, Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), pages 99-105, 1993.

Planning (ICAPS and its predecessors AIPS and ECP)

32. C. Hernandez, P. Meseguer, X. Sun and **S. Koenig**, Path-Adaptive A* for Incremental Heuristic Search in Unknown Terrain [Poster Abstract], Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS), pages 358-361, 2009 [Acceptance Rate: 36.8%].
33. **S. Koenig** and M. Likhachev, A New Principle for Incremental Heuristic Search: Theoretical Results [Poster Abstract], Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS), pages 402-405, 2006.
34. Y. Liu and **S. Koenig**, Probabilistic Planning with Nonlinear Utility Functions [Poster Abstract], Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS), pages 410-413, 2006.
35. M. Likhachev and **S. Koenig**, A Generalized Framework for Lifelong Planning A*, Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS), pages 99-108, 2005.
36. **S. Koenig**, D. Furcy, and C. Bauer, Heuristic Search-Based Replanning, Proceedings of the International Conference on Artificial Intelligence Planning Systems (AIPS), pages 294-301, 2002.
37. D. Furcy and **S. Koenig**, Combining Two Fast-Learning Real-Time Search Algorithms Yields Even Faster Learning, Proceedings of the European Conference in Planning (ECP), 2001.
38. **S. Koenig** and Y. Liu, Representations of Decision-Theoretic Planning Tasks, Proceedings of the International Conference on Artificial Intelligence Planning Systems (AIPS), pages 187-195, 2000.
39. **S. Koenig** and Y. Liu, Sensor Planning with Non-Linear Utility Functions, Lecture Notes in Artificial Intelligence, Volume 1809: Recent Advances in AI Planning (ECP), S. Biundo and M. Fox (editors), Springer, pages 265-277, 1999. Appeared also in: Proceedings of the AIPS-00 Workshop on Decision-Theoretic Planning, pages 88-92, 2000.
40. **S. Koenig** and R.G. Simmons, Solving Robot Navigation Problems with Initial Pose Uncertainty Using Real-Time Heuristic Search, Proceedings of the International Conference on Artificial Intelligence Planning Systems (AIPS), pages 145-153, 1998. A version of this paper appeared also as: **S. Koenig**, Software Demonstration: The Min-Max LRTA* Planning Software, Proceedings of the IJCAI-01 Workshop on Planning under Uncertainty and Incomplete Information, 2001.
41. **S. Koenig** and R.G. Simmons, How to Make Reactive Planners Risk-Sensitive, Proceedings of the International Conference on Artificial Intelligence Planning Systems (AIPS), pages 293-298, 1994.

Agents (AAMAS and its predecessor Autonomous Agents)

42. X. Sun, W. Yeoh and **S. Koenig**, Moving Target D* Lite, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2010 (in print).
43. X. Sun, W. Yeoh and **S. Koenig**, Generalized Fringe-Retrieving A*: Faster Moving Target Search on State Lattices, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2010 (in print).
44. K. Daniel, R. Borie, **S. Koenig** and C. Tovey, ESP: Pursuit Evasion on Series-Parallel Graphs [Poster Abstract], Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2010 (in print).
45. X. Sun, W. Yeoh, P. Chen and **S. Koenig**, Simple Optimization Techniques for A*-Based Search, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 931-936, 2009.
46. W. Yeoh, P. Varakantham and **S. Koenig**, Caching Schemes for DCOP Search Algorithms, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 609-616, 2009. (*This paper*

was nominated for the AAMAS 2009 Pragnesh Jay Modi Best Student Paper Award.)

47. X. Sun, W. Yeoh and **S. Koenig**, Dynamic Fringe-Saving A*, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 891-898, 2009. A version of this paper was also presented in: International Symposium on Combinatorial Search (SoCS), 2009.
48. K. Daniel and **S. Koenig**, Fast Winner Determination for Agent Coordination with SBB Auctions [Poster Abstract], Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 1197-1198, 2009.
49. Y. Liu and **S. Koenig**, An Exact Algorithm for Solving MDPs under Risk-Sensitive Planning Objectives with One-Switch Utility Functions, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 453-460, 2008.
50. X. Zheng and **S. Koenig**, Reaction Functions for Task Allocation to Cooperative Agents, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 559-566, 2008.
51. W. Yeoh, A. Felner and **S. Koenig**, BnB-ADOPT: An Asynchronous Branch-and-Bound DCOP Algorithm, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 591-598, 2008. A version of this paper appeared also in: Proceedings of the Ninth International Workshop on Distributed Constraint Reasoning (DCR), 2007.
52. X. Sun, **S. Koenig** and W. Yeoh, Generalized Adaptive A*, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 469-476, 2008.
53. **S. Koenig**, M. Likhachev and X. Sun, Speeding up Moving-Target Search, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2007. A version of this paper was also presented in: AAAI-08 Workshop on Search Techniques in Artificial Intelligence and Robotics, 2008.
54. **S. Koenig** and M. Likhachev, Real-Time Adaptive A*, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 281-288, 2006 (plenary presentation). Appeared also in: Proceedings of the AAAI-06 Workshop on Learning for Search, pages 57-64, 2006.
55. S. Ali, **S. Koenig**, and M. Tambe, Preprocessing Techniques for Accelerating the DCOP Algorithm ADOPT, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 1041-1048, 2005. Appeared also in: Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR), 2004.
56. **S. Koenig** and M. Likhachev, Adaptive A* [Poster Abstract], Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 1311-1312, 2005.
57. **S. Koenig**, A Comparison of Fast Search Methods for Real-Time Situated Agents, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 864-871, 2004.
58. Y. Liu, R. Goodwin, and **S. Koenig**, Risk-Averse Auction Agents, Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), pages 353-360, 2003.
59. **S. Koenig** and Y. Liu, Terrain Coverage with Ant Robots: A Simulation Study, Proceedings of the Autonomous Agents (Agents), pages 600-607, 2001.
60. R. Simmons, R. Goodwin, K. Haigh, **S. Koenig**, J. O'Sullivan, A Layered Architecture for Office Delivery Robots, Proceedings of the International Conference on Autonomous Agents (Agents), pages 245-252, 1997.

Machine Learning, Numerical Artificial Intelligence and Control (COLT, ICML, NIPS and UAI)

61. **S. Koenig**, Open Problem: Analyzing Ant Robot Coverage, Proceedings of the International Conference on Learning Theory (COLT), 2010 (in print).
62. Y. Liu and **S. Koenig**, Existence and Finiteness Conditions for Risk-Sensitive Planning: Results and Conjectures, Proceedings of the International Conference on Uncertainty in Artificial Intelligence (UAI), pages 354-363, 2005. A version of this paper appeared also as: Y. Liu and **S. Koenig**, Existence and Finiteness Conditions for Risk-Sensitive Planning: First Results, Proceedings of the AAAI-04 Workshop on Learning and Planning in Markov Processes - Advances and Challenges, pages 49-54, 2004.
63. M. Likhachev and **S. Koenig**, Speeding Up the Parti-Game Algorithm, Advances in Neural Information Processing Systems (NIPS), MIT Press, pages 1563-1570, 2003.
64. **S. Koenig** and M. Likhachev, Incremental A* [Spotlight Presentation], Advances in Neural Information Processing Systems (NIPS), MIT Press, pages 1539-1546, 2002.
65. **S. Koenig**, Exploring Unknown Environments with Real-Time Search and Reinforcement Learning, Advances in Neural Information Processing Systems (NIPS), M. Kearns, S. Solla, and D. Cohn (editors), MIT Press, pages 1003-1009, 1999.
66. **S. Koenig** and R.G. Simmons, Passive Distance Learning for Robot Navigation, Proceedings of the International Conference on Machine Learning (ICML), pages 266-274, 1996. Appeared also in: Proceedings of the International Workshop on Learning for Autonomous Robots (ROBOLEARN), pages 64-72, 1996.
67. **S. Koenig** and Y. Smirnov, Graph Learning with a Nearest Neighbor Approach, Proceedings of the Annual ACM Conference on Computational Learning Theory (COLT), pages 19-28, 1996.

Knowledge Representation and Reasoning, including Constraint Programming (KR and CP)

68. S. Ali, M. Tambe, and **S. Koenig**, Preprocessing Techniques for Distributed Constraint Optimization [Poster Abstract], Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP), pages 706-710, 2004.
69. **S. Koenig** and R.G. Simmons, Risk-Sensitive Planning with Probabilistic Decision Graphs, Proceedings of the International Conference on Principles of Knowledge Representation and Reasoning (KR), pages 363-373, 1994.

Computer Science Theory (SODA)

70. **S. Koenig**, A. Mudgal and C. Tovey, A Near-Tight Approximation Lower Bound and Algorithm for the Kidnapped Robot Problem, ACM-SIAM Symposium on Discrete Algorithms (SODA), pages 133-142, 2006.

Other Conferences

Artificial Intelligence and Games Conferences (AIIDE and FDG)

1. D. Wong, D. Earl, F. Zyda, R. Zink, **S. Koenig**, A. Pan, S. Shlosberg, J. Singh and N. Sturtevant, Implementing Games on Pinball Machines, Proceedings of Foundations of Digital Games (FDG), 2010 (in print). An earlier version of the paper appeared also in: D. Wong, D. Earl, F. Zyda and **S. Koenig**, Teaching Robotics and Computer Science with Pinball Machines, Proceedings of the AAAI Spring Symposium on Educational Robotics and Beyond: Design and Evaluation, 2010.
2. J.-P. Kelly, A. Botea and **S. Koenig**, Offline Planning with Hierarchical Task Networks in Video Games, Proceedings of the Artificial Intelligence and Interactive Digital Entertainment Conference (AIIDE), 2008. A version of this paper appeared also as: J.-P. Kelly, A. Botea and **S. Koenig**, Planning with Hierarchical Task Networks in Video Games, Proceedings of the ICAPS-07 Workshop on Planning in Games, 2007.
3. M. Likhachev and **S. Koenig**, Incremental Heuristic Search in Games: The Quest for Speed [Poster Abstract], Proceedings of the Artificial Intelligence and Interactive Digital Entertainment Conference (AIIDE), pages 118-120, 2006.
4. A. Mudgal, C. Tovey, and **S. Koenig**, Analysis of Greedy Robot-Navigation Methods, Proceedings of the International Symposium on Artificial Intelligence and Mathematics (ISAIM), 2004.
5. A. Atrash and **S. Koenig**, Probabilistic Planning for Behavior-Based Robots, Proceedings of the International FLAIRS conference (FLAIRS), pages 531-535, 2001.
6. **S. Koenig** and Y. Liu, Simulating High-Stake Decisions, Proceedings of the Conference on Computer Generated Forces and Behavioral Representation (CGF-BR), pages 499-504, 1999.

Robotics Conferences

Sample acceptance rates for full papers are: RSS 2005: 27% (listed here for simplicity), IROS 2006: 45%, and ICRA 2009: 43%.

7. A. Ekici, P. Keskinocak and **S. Koenig**, Multi-Robot Routing with Linear Decreasing Rewards over Time, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 958-963, 2009.
8. X. Zheng and **S. Koenig**, Negotiation with Reaction Functions for Solving Complex Task Allocation Problems, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 4811-4816, 2009.
9. X. Zheng and **S. Koenig**, Robot Coverage of Terrain with Non-Uniform Traversability, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 3757-3764, 2007.
10. J. Melvin, P. Keskinocak, **S. Koenig**, C. Tovey and B. Yuksel Ozkaya, Multi-Robot Routing with Rewards and Disjoint Time Windows, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), page 2332-2337, 2007.
11. X. Zheng, **S. Koenig** and C. Tovey, Improving Sequential Single-Item Auctions, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 2238-2244, 2006. Appeared also in: Proceedings of the AAAI-06 Workshop on Auction-Mechanisms for Robot Coordination, 2006.
12. M. Lagoudakis, V. Markakis, D. Kempe, P. Keskinocak, **S. Koenig**, A. Kleywegt, C. Tovey, A. Meyerson and S. Jain, Auction-Based Multi-Robot Routing, Proceedings of the International Conference on Robotics: Science and Systems (RSS), pages 343-350, 2005 (plenary presentation).
13. X. Zheng, S. Jain, **S. Koenig** and D. Kempe, Multi-Robot Forest Coverage, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 2318-2323, 2005.
14. M. Lagoudakis, P. Keskinocak, A. Kleywegt, and **S. Koenig**, Auctions with Performance Guarantees for Multi-Robot Task Allocation, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 1957-1962, 2004.
15. A. Ranganathan and **S. Koenig**, PDRRTs: Integrating Graph-Based and Cell-Based Planning, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 2799-2808, 2004. A version of this paper appeared also in the Proceedings of the ICAPS-09 Workshop on Bridging the Gap between Task and Motion Planning.
16. C. Tovey and **S. Koenig**, Improved Analysis of Greedy Mapping, Proceedings of the IEEE International Conference on

Intelligent Robots and Systems (IROS), pages 3251-3257, 2003.

17. M. Berhault, H. Huang, P. Keskinocak, **S. Koenig**, W. Elmaghraby, P. Griffin, and A. Kleywegt, Robot Exploration with Combinatorial Auctions, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 1957-1962, 2003. (*This paper won a Best Paper Award in the SAIC Paper Competition.*)
18. A. Ranganathan and **S. Koenig**, A Reactive Robot Architecture with Planning on Demand, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 1462-1468, 2003.
19. J. Svennebring and **S. Koenig**, Trail-Laying Robots for Robust Terrain Coverage, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 75-82, 2003.
20. C. Tovey, S. Greenberg, **S. Koenig**, Improved Analysis of D*, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 3371-3378, 2003.
21. **S. Koenig** and M. Likhachev, Improved Fast Replanning for Robot Navigation in Unknown Terrain, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 968-975, 2002.
22. M. Likhachev and **S. Koenig**, Replanning for Mapping, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 667-672, 2002.
23. **S. Koenig**, C. Tovey and W. Halliburton, Greedy Mapping of Terrain, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 3594-3599, 2001.
24. C. Tovey and **S. Koenig**, Greedy Localization, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 427-432, 2001.
25. **S. Koenig** and Y. Smirnov, Sensor Planning with the Freespace Assumption, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 3540-3545, 1997.
26. **S. Koenig** and R.G. Simmons, Unsupervised Learning of Probabilistic Models for Robot Navigation, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 2301-2308, 1996.
27. E. Krotkov, R. Simmons, F. Cozman, and **S. Koenig**, Safeguarded Teleoperation for Lunar Rovers, Proceedings of the International Conference on Environmental Systems (ICES), 1996. A version of this paper appeared also as: E. Krotkov, R. Simmons, F. Cozman, and **S. Koenig**, Safeguarded Teleoperation for Lunar Rovers: From Human Factors to Field Trials, Proceedings of the IEEE Workshop on Planetary Rover Technology and Systems at the IEEE International Conference on Robotics and Automation (ICRA), 1996.
28. R. Simmons, E. Krotkov, L. Chrisman, F. Cozman, R. Goodwin, M. Hebert, L. Katragadda, **S. Koenig**, G. Krishnaswamy, Y. Shinoda, W. Whittaker, and P. Klarer, Experience with Rover Navigation for Lunar-Like Terrains, Proceedings of the IEEE International Conference on Intelligent Robots and Systems (IROS), pages 441-446, 1995.
29. R. Simmons, E. Krotkov, L. Chrisman, F. Cozman, R. Goodwin, M. Hebert, G. Heredia, **S. Koenig**, P. Muir, Y. Shinoda, and W. Whittaker, Mixed-Mode Control of Navigation for a Lunar Rover, Proceedings of the Princeton Space Manufacturing Conference, pages 209-215, 1995.

Symposia and Workshops

Workshop papers with a conference version are listed together with the conference paper and not repeated below if the workshop paper was published after 2001.

1. **S. Koenig**, Creating a Uniform Framework for Task and Motion Planning: A Case for Incremental Heuristic Search? [Overview Paper], Proceedings of the ICAPS-10 Workshop on Combining Action and Motion Planning (CAMP), pages 29-34, 2010.
2. T. Neller, J. DeNero, D. Klein, **S. Koenig**, W. Yeoh, X. Zheng, K. Daniel, A. Nash, Z. Dodds, G. Carenini, D. Poole, C. Brooks, Model AI Assignments, Proceedings of the AAI Symposium on Educational Advances in Artificial Intelligence (EAAI), 2010 (in print).
3. D. Wong, R. Zink and **S. Koenig**, Teaching Artificial Intelligence and Robotics via Games [Poster Abstract], Proceedings of the AAI Symposium on Educational Advances in Artificial Intelligence (EAAI), 2010 (in print).
4. W. Yeoh, R. Zivan and **S. Koenig**, Discrepancy-Based Approach for Solving Distributed Constraint Optimization Problems, Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR), pages 132-144, 2009.
5. M. Zyda and **S. Koenig**, Teaching Artificial Intelligence Playfully, Proceedings of the AAI-08 Education Colloquium, pages 90-95, 2008.
6. X. Zheng and **S. Koenig**, Greedy Approaches for Solving Task-Allocation Problems with Coalitions, Proceedings of the AAMAS-08 Workshop on Formal Models and Methods for Multi-Robot Systems, pages 35-40, 2008.
7. **S. Koenig**, Position Paper: Topics for Future Planning Competitions [Position Paper], Proceedings of the ICAPS-03 Workshop on the Competition: Impact, Organization, Evaluation, Benchmarks, 2003.
8. L. McCrickard, **S. Koenig**, T. Fox, and N. Ezquerra, Using Regression Techniques for the Automated Selection of Radio-surgery Plans, Proceedings of the International ICSC Symposium on Advanced Computing in Biomedicine (ACBM), pages 71-77, 2001.

9. Y. Liu, R. Goodwin, and **S. Koenig**, Risk-Averse Auction Planning and its Integration into Supply-Chain Management Systems, Proceedings of the AAAI-01 Spring Symposium on Game Theoretic and Decision Theoretic Agents, pages 60-69, 2001.
10. **S. Koenig**, High-Stake Planning, Proceedings of the NASA International Workshop on Planning and Scheduling for Space, pages 144-150, 2000.
11. **S. Koenig**, Overview and Examples of Real-Time Search in Unknown or Nondeterministic Domains, Proceedings of the IJCAI-99 Workshop on Robot Action Planning, pages 17-22, 1999 (invited paper). Appeared also in: Proceedings of the AAAI-99 Workshop on Search Techniques for Problem Solving under Uncertainty and Incomplete Information, pages 65-70, 1999.
12. **S. Koenig**, Real-Time Heuristic Search: Research Issues, Proceedings of the AIPS-98 Workshop on Planning as Combinatorial Search: Propositional, Graph-Based, and Disjunctive Planning Methods, pages 75-79, 1998.
13. **S. Koenig**, Representation Changes for Planning with Exponential Utility Functions, Proceedings of the Symposium on Abstraction, Reformulation, and Approximation (SARA), 1998.
14. R. Simmons, **S. Koenig**, J. Lopez, and R. Goodwin, Towards Self-Reliant Autonomous Systems [Abstract], Proceedings of the Workshop on Planning and Scheduling for Space, 1997.
15. **S. Koenig** and R.G. Simmons, Modeling Risk and Soft Deadlines for Robot Navigation, Proceedings of the AAAI Spring Symposium on Planning with Incomplete Information for Robot Problems (also available as AAAI Technical Report SS-96-04), pages 57-61, 1996.
16. **S. Koenig** and R.G. Simmons, Risk-Sensitive Planning, Proceedings of the AAAI Spring Symposium on Decision-Theoretic Planning (also available as AAAI Technical Report SS-94-06), pages 141-147, 1994.
17. **S. Koenig** and R.G. Simmons, Exploration with and without a Map, Proceedings of the AAAI-93 Workshop on Learning Action Models (also available as AAAI Technical Report WS-93-06), pages 28-32, 1993.

Reviews

1. **S. Koenig**, Book Review: From Animals to Animats 5, *Artificial Life*, Volume 6(3), pages 255-258, 2000.

Editorials

1. O. Brock, **S. Koenig**, N. Roy and G. Sukhatme, Editorial, *International Journal of Robotics Research* (Special Issue of Best Papers from Robotics: Science and Systems), pages 1163-1164, 2006.
2. **S. Koenig**, S. Kraus, M. Singh and M. Wooldridge, Editorial, Proceedings of the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), pages vi-vii, 2005.
3. C. Boutilier, T. Dean, and **S. Koenig**, Editorial, *Artificial Intelligence Journal* (Special Issue on Planning with Uncertainty and Incomplete Information), Volume 147(1-2), pages 1-4, 2003.
4. **S. Koenig** and R. Holte, Preface, *Lecture Notes in Computer Science*, Volume 2371: Abstraction, Reformulation, and Approximation, S. Koenig and R. Holte (editors), Springer, pages v-vi, 2002.

Conference Reports

1. R. Bunescu, V. Carvalho, J. Chomicki, V. Conitzer, M. Cox, V. Dignum, Z. Dodds, M. Dredze, D. Furcy, E. Gabrilovich, M. Göker, H. Guesgen, H. Hirsh, D. Jannach, U. Junker, W. Ketter, A. Kobsa, **S. Koenig**, T. Lau, L. Lewis, E. Matson, T. Metzler, R. Mihalcea, B. Mobasher, J. Pineau, P. Poupart, A. Raja, W. Ruml, N. Sadeh, G. Shani, D. Shapiro, S. Singh, M. Taylor, K. Wagstaff, T. Smith, W. Walsh, and R. Zhou, AAAI 2008 Workshop Reports, *Artificial Intelligence Magazine*, Volume 30(1), pages 108-118, 2009.
2. W. Achtner, E. Aimeur, S. Anand, D. Appelt, N. Ashish, T. Barnes, J. Beck, M. Dias, P. Doshi, C. Drummond, W. Elazmeh, A. Felner, D. Freitag, H. Geffner, C. Geib, R. Goodwin, R. Holte, F. Hutter, F. Isaac, N. Japkowicz, G. Kaminka, **S. Koenig**, M. Lagoudakis, D. Leake, L. Lewis, H. Liu, T. Metzler, R. Mihalcea, B. Mobasher, P. Poupart, D. Pynadath, T. Roth-Berghofer, W. Ruml, S. Schulz, S. Schwarz, S. Seneff, A. Sheth, R. Sun, M. Thielscher, A. Upal, J. Williams, S. Young and D. Zelenko, Reports on the Twenty-First National Conference on Artificial Intelligence (AAAI-06) Workshop Program, *Artificial Intelligence Magazine*, Volume 27(4), pages 92-102, 2006.
3. **S. Koenig**, S. Kraus, M. Singh and M. Wooldridge, AAMAS, the Fourth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-05), *Artificial Intelligence Magazine*, Volume 27(1), pages 103-107, 2006.
4. S. Zilberstein, J. Koehler and **S. Koenig**, ICAPS, the Fourteenth International Conference on Automated Planning and Scheduling (ICAPS-04), *Artificial Intelligence Magazine*, Volume 25(4), pages 101-104, 2004.
5. **S. Koenig** and R. Holte, SARA Conference Report, *Artificial Intelligence Magazine* Volume 24(1), pages 99-100, 2003.
6. D. Musliner, B. Pell, W. Dobson, K. Goebel, G. Vanderbilt, S. McIlraith, G. Gini, **S. Koenig**, S. Zilberstein and W. Zhang, Reports on the AAAI Spring Symposia, *Artificial Intelligence Magazine*, Volume 21(2), pages 79-84, 2000.

Edited Proceedings

1. D. Furcy, **S. Koenig**, W. Ruml and R. Zhou (editors), Proceedings of the AAAI-08 Workshop on Search in Artificial Intel-

- ligence and Robotics, AAAI Press (WS-08-10), 2008.
2. B. Dias, **S. Koenig** and M. Lagoudakis (editors), Working Notes of the AAAI-06 Workshop on Auction-Based Robot Coordination, AAAI Press, 2006.
 3. F. Dignum, V. Dignum, **S. Koenig**, S. Kraus, M. Singh and M. Wooldridge (editors), Proceedings of the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), Volumes 1-4, ACM, 2005.
 4. V. Bultiko and **S. Koenig** (editors), Proceedings of the IJCAI-05 Workshop on Planning and Learning in A Priori Unknown or Dynamic Domains, 2005.
 5. S. Zilberstein, J. Koehler, and **S. Koenig** (editors), Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS), AAAI Press, 2004.
 6. **S. Koenig** and R. Holte (editors), Lecture Notes in Artificial Intelligence, 2371: Abstraction, Reformulation, and Approximation (SARA), Springer, 2002.
 7. **S. Koenig** and R. Goodwin (editors), Proceedings of the AIPS-00 Workshop on Decision-Theoretic Planning, 2000.
 8. W. Zhang and **S. Koenig** (editors), Proceedings of the AAAI-99 Workshop on Search Techniques for Problem Solving under Uncertainty and Incomplete Information, AAAI Press (SS-99-07), 1999.
 9. **S. Koenig**, A. Blum, R. Korf, and T. Ishida (editors), Proceedings of the AAAI-97 Workshop on On-Line Search, AAAI Press (WS-97-10), 1997.

GRANTS AND CONTRACTS

Office of Naval Research: ANTIDOTE - Adaptive Networks for Threat and Intrusion Detection or Termination (MURI), PIs: G. Sukhatme, Co-PIs: researchers from different universities

National Science Foundation: A Symposium on Combinatorial Search, PIs: S. Koenig, W. Ruml and R. Zhou

National Science Foundation: REU Supplement: Coordinating Robot Teams Using Market-Based Mechanisms, PI: S. Koenig

USC: Undergraduate Research Associates Program, PI: S. Koenig

USC Rosehill Foundation Science and Engineering Fellowship Grant, PI: S. Koenig

US Army Research Office: Analysis, Evaluation and Improvement of Sequential Single-Item Auctions for the Cooperative Real-Time Allocation of Tasks, PIs: S. Koenig and C. Tovey

METRANS: Allocating Transportation Requests for Demand Responsive Transit Systems, PI: S. Koenig

National Science Foundation: REU Site - Coordination, Communication, Autonomy: Principles and Technologies, PIs: G. Sukhatme and L. Golubchik, Senior Personnel: different faculty members at USC

National Science Foundation: Collaborative Research: Coordinating Robot Teams Using Market-Based Mechanisms, PIs: S. Koenig and P. Keskinocak

National Science Foundation: A Symposium Series on Heuristic Search and Its Applications, PIs: D. Furcy, S. Koenig, W. Ruml and R. Zhou

USC: Teaching Artificial Intelligence with Computer Game Projects, Fund for Innovative Undergraduate Teaching, PI: S. Koenig

NASA's Jet Propulsion Laboratory: Auction-Based Multi-Robot Control, PIs: S. Koenig and B. Clement

Defense Advanced Research Projects Agency: Intelligent Coordination Support for Humans, PI: D. Musliner, Co-PIs: researchers from different universities

US Army (subcontract from USC ICT): Spatial Cognition, PI: S. Koenig

National Science Foundation: Incremental Heuristic Search, PI: S. Koenig

National Science Foundation: Artificial Intelligence Planning with Realistic Preference Models (CAREER), PI: S. Koenig

National Science Foundation: Understanding and Improving On-Line Planning Methods, PI: S. Koenig, Co-PI: C. Tovey

National Science Foundation: Auction Mechanisms for Complex Resource Allocation Problems (ITR), PI: P. Keskinocak, Co-PIs: W. Elmaghraby, P. Griffin, A. Kleywegt and S. Koenig

Defense Advanced Research Projects Agency: Multi-Level Learning in Hybrid Deliberative/Reactive Mobil Robot Architectural Software Systems, PI: R. Arkin, Co-PIs: T. Collins, S. Koenig and A. Ram

International Business Machines Corporation: IBM Faculty Partnership Award, PI: S. Koenig

plus a small amount of Georgia Institute of Technology Research Institute matching funds (for example, \$90,000 total for the three bottom-most NSF projects)

SERVICE TO THE UNIVERSITY

School Level at USC

2010-now	Dean-Engineering Faculty Council Standing Committee on Faculty Recruitment and Retention
2009-now	Viterbi School of Engineering Committee on Professional Masters Degree Program
2008-2009	Dean-Engineering Faculty Council Standing Committee on Academic Programs
2008-now	Engineering Faculty Council (2008-2009: Webmaster)
2008	Viterbi School of Engineering Committee on Serving the M.S. Students Better
2005	Engineering Faculty Council Subcommittee on the Annual Faculty Record (AFR) Websystem
2004-2006	Engineering Faculty Council

Department Level at USC

2009-2010	Computer Science IT Advisory Committee
2009	Appointment Committee
2007	Computer Science Department IT Service Survey and Evaluation
2006	Merit Review Committee
2006	Re-Appointment Subcommittee - Chair
2005-2009	Organizer of 10 USC Programming Competitions (with David Kempe and, since Spring 2009, Suya You)
2004	Hiring Subcommittee in Autonomy
2004-2005	Appointment Subcommittee - Chair
2004	Appointment Subcommittee - Chair
2004	Committee to Design Mathematics Courses for Computer Science Students
2003-2004	Ph.D. Committee
2003-2005	Promotion Subcommittee - Chair

University Level at Georgia Institute of Technology

1999-2001	Academic Senate
1999-2001	General Faculty Assembly

School Level at Georgia Institute of Technology

2003	Initiator of Informal Speaker Exchange Program with the AI Center at the University of Georgia
2001-2002	Honors and Awards Committee
2001	Reappointment, Tenure, and Promotion Subcommittee - Observer
2000-2001	Faculty Recruiting Committee
1999-2000	Undergraduate Curriculum Committee
1999	Temporary Area Advisor for Intelligent Systems (3 months)
1999	Cognitive Science Executive Committee
1999	Coordinator: Cognitive Science Colloquium Series
1998-1999	Graduate Curriculum Committee

SERVICE TO THE RESEARCH COMMUNITY

Associate Editor

2010-now	Autonomous Agents and Multi-Agent Systems (JAAMAS)
2007-now	Advances in Complex Systems (ACS)
2004/5-2007/8	Journal of Artificial Intelligence Research (JAIR)
2003-now	Computational Intelligence - Action Editor

Editor

2010-now	Artificial Intelligence Magazine
2006-now	International Journal of Advanced Robotic Systems - Editorial Consultant Board
2000-2003	Journal of Artificial Intelligence Research (JAIR)

Guest Editor of Special Journal Issues

2005-2006	International Journal of Robotics Research (Special Issue of Best Papers from Robotics: Science and Systems)
2004-2006	Journal of Machine Learning Research (Special Track on Learning in Large Probabilistic Environments)
2001-2003	Artificial Intelligence Journal (Special Issue on Planning with Uncertainty and Incomplete Information)

Member of Long-Term Conference Steering, Executive or Advisory Committees

2010-now	International Symposium on Combinatorial Search (SoCS) - Board of Directors
2007-2011	Journal of Artificial Intelligence Research (JAIR) - Advisory Board

- 2005-now Robotics: Science and Systems (RSS) - Co-Founder and Conference Board (2009-2010: Board of Directors, 2010-now: Advisory Board)
- 2004-2010 International Conference on Automated Planning and Scheduling (ICAPS) - Executive Council (2006: elected Secretary, 2008: re-elected Secretary)
- 2002-now Symposium on Abstraction, Reformulation, and Approximation (SARA) - Steering Committee
- 2003-2005 Americas School on Agents and Multiagent Systems - Advisory Committee

Program Committee of Special Journal Issues

- 1997 Autonomous Robots (Special Issue on Robot Learning)

Conference Chair or Co-Chair

- 2009 International Symposium on Combinatorial Search (SoCS) - Co-Founder - PC: 21
- 2004 International Conference on Automated Planning and Scheduling (ICAPS) - PC: 62
- 2002 (3-Day) Symposium on Abstraction, Reformulation, and Approximation (SARA) - PC: 28

Conference Program Chair or Co-Chair

- 2008 Nectar Program of AAAI Conference on Artificial Intelligence (AAAI) - PC: 69
- 2007 Nectar Program of AAAI Conference on Artificial Intelligence (AAAI) - PC: 60
- 2005 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) - SPC: 40, PC: 333

Member of Conference Organizing Committees

- 2005 Robotics: Science and Systems (RSS) - Workshop Co-Chair
- 2002 AAAI Conference on Artificial Intelligence (AAAI) - Student Abstract and Poster Program Co-Chair - PC: 28
- 1999-2000 2x AAAI Conference on Artificial Intelligence (AAAI) - Student Abstract and Poster Program Chair

Member of Senior Conference Program Committees

- 2010 AAAI Conference on Artificial Intelligence (AAAI)
- 2009 International Conference on Automated Planning and Scheduling (ICAPS)
- 2009 International Joint Conference on Artificial Intelligence (IJCAI) - Area Chair
- 2008 International Conference on Machine Learning (ICML)
- 2007 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2006 AAAI Conference on Artificial Intelligence (AAAI)
- 2006 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)

Member of Conference Program Committees

- 2010 AAAI Bridging the Gap between Task and Motion Planning (BTAMP)
- 2010 AAAI Workshop on Abstraction, Reformulation, and Approximation (WARA)
- 2010 AI and Interactive Digital Entertainment Conference (AIIDE)
- 2010 International Conference on Automated Planning and Scheduling (ICAPS)
- 2010 International Symposium on Combinatorial Search (SoCS)
- 2010 International Symposium on Artificial Intelligence and Mathematics (ISAIM)
- 2010 Educational Advances in Artificial Intelligence (EAAI)
- 2010 ICAPS Workshop on Planning in Games
- 2010 AAMAS Satellite Workshop on Emergent Intelligence on Networked Agents (WEIN)
- 2010 AAMAS Workshop on Agent Mediated Electronic Commerce (AMEC)
- 2010 AAMAS Workshop on Optimization in Multi-Agent Systems (OPTMAS)
- 2010 AAMAS Workshop on Multi-Agent Sequential Decision Making in Uncertain Domains (MSDM)
- 2010 ICRA Workshop on Search and Pursuit/Evasion in the Physical World
- 2009 AAMAS Workshop on Optimization in Multi-Agent Systems (OPTMAS)
- 2009 AAMAS Workshop on Multi-Agent Sequential Decision Making in Uncertain Domains (MSDM)
- 2009 AAMAS Workshop on Agent Mediated Electronic Commerce (AMEC)
- 2009 ICAPS Workshop on Heuristics for Domain-Independent Planning
- 2009 ICAPS Workshop on Bridging the Gap between Task and Motion Planning
- 2009 Conference on Auctions, Market Mechanisms and Their Applications (AMMA)
- 2009 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2008 International Conference on Automated Planning and Scheduling (ICAPS)
- 2008 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2008 Brazilian Symposium on Artificial Intelligence (SBIA)
- 2008 International Workshop on the Algorithmic Foundations of Robotics (WAFR)
- 2008 AAAI Education Colloquium
- 2008 AAMAS Workshop on Multi-Agent Sequential Decision Making in Uncertain Domains (MSDM)
- 2008 AAMAS Workshop on Optimization in Multi-Agent Systems (OPTMAS)

2008 ICAPS Workshop on Multiagent Planning (MASPLAN)
 2008 International Symposium on Artificial Intelligence and Mathematics (ISAIM)
 2007 International Conference on Automated Planning and Scheduling (ICAPS)
 2007 International Joint Conference on Artificial Intelligence (IJCAI)
 2007 Symposium on Abstraction, Reformulation, and Approximation (SARA)
 2007 AAMAS Workshop on Multi-Agent Sequential Decision Making in Uncertain Domains
 2007 AAMAS Workshop on Coordinating Agents' Plans and Schedules
 2006 European Conference on Artificial Intelligence (ECAI)
 2006 Robotics: Science and Systems (RSS)
 2006 AAAI Workshop on Learning for Search
 2006 International Conference on Automated Planning and Scheduling (ICAPS)
 2006 IEEE International Conference on Robotics and Automation (ICRA) - Poster Committee
 2006 International Conference on Intelligent Autonomous Systems (IAS)
 2006 International Symposium on Artificial Intelligence and Mathematics (ISAIM)
 2005 International Joint Conference on Artificial Intelligence (IJCAI) - Poster Committee
 2005 AAAI Conference on Artificial Intelligence (AAAI)
 2005 Symposium on Abstraction, Reformulation, and Approximation (SARA)
 2005 IEEE International Conference on Robotics and Automation (ICRA)
 2005 International Conference on Automated Planning and Scheduling (ICAPS)
 2005 Robotics: Science and Systems (RSS)
 2005 International Conference on Advanced Robotics (ICAR)
 2004 International Conference on Autonomous Agents and Multiagent Systems (AAMAS)
 2004 International Workshop on Ant Algorithms (ANTS)
 2004 International Symposium on Artificial Intelligence and Mathematics (ISAIM)
 2004 International Conference on Machine Learning (ICML)
 2004 International Conference on Intelligent Autonomous Systems (IAS)
 2003 International Conference on Automated Planning and Scheduling (ICAPS)
 2003 International Joint Conference on Artificial Intelligence (IJCAI) - Poster Committee
 2003 IEEE International Conference on Intelligent Robots and Systems (IROS)
 2003 IJCAI Workshop on Issues in Designing Physical Agents for Dynamic Real-Time Environments
 2003 ICAPS Workshop on Planning under Uncertainty and Incomplete Information
 2003 International Workshop on the Mathematics and Algorithms of Social Insects
 2002 International Conference on Artificial Intelligence Planning and Scheduling (AIPS)
 2002 AAAI Conference on Artificial Intelligence (AAAI)
 2002 International Conference on Machine Learning (ICML)
 2002 Joint AAAI/KDD/UAI Workshop on Real-Time Decision Support and Diagnosis Systems
 2001 IJCAI Workshop on Planning under Uncertainty and Incomplete Information
 2001 European Conference on Planning (ECP)
 2001 ICAI Special Session on Learning and Adapting in Artificial Intelligence Planning
 2000 International Conference on Machine Learning (ICML)
 2000 International Conference on Artificial Intelligence Planning and Scheduling (AIPS)
 2000 International Conference on Tools with Artificial Intelligence (ICTAI)
 2000 International Conference on Intelligent Autonomous Systems (IAS)
 1998 International Conference on Artificial Intelligence Planning and Scheduling (AIPS)
 1998 AAAI Conference on Artificial Intelligence (AAAI)

Member of Conference Boards of Reviewers

2010 IEEE International Conference on Intelligent Robots and Systems (IROS)
 2010 AAAI Student Abstract (and Poster) Program
 2009 IEEE International Conference on Robotics and Automation (ICRA)
 2008 IEEE International Conference on Robotics and Automation (ICRA)
 2007 AAAI Student Abstract (and Poster) Program
 2005 Neural Information Processing Systems (NIPS)
 2005 International Joint Conference on Artificial Intelligence (IJCAI) - SWAT Team
 2004 Neural Information Processing Systems (NIPS)
 2003 International Joint Conference on Artificial Intelligence (IJCAI)
 2003 Neural Information Processing Systems (NIPS)
 2002 Neural Information Processing Systems (NIPS)
 2001 Neural Information Processing Systems (NIPS)
 2001 International Joint Conference on Artificial Intelligence (IJCAI)

1999 International Joint Conference on Artificial Intelligence (IJCAI)
1997 International Joint Conference on Artificial Intelligence (IJCAI)

Conference Session Chair or Co-Chair

2010 Session “Paper Session II: Using Robots in Education”
at the Symposium on Educational Advances in Artificial Intelligence (EAAI)

2010 Session “Search 1”
at the AAAI Conference on Artificial Intelligence

2010 Session “Path Planning 2”
at the AAAI Conference on Artificial Intelligence

2009 Session on “Distributed and Multiagent Planning and Scheduling”
at the International Conference on Automated Planning and Scheduling (ICAPS)

2009 Session on “Advances in A* Search”
at the International Joint Conference on Artificial Intelligence (IJCAI)

2009 Session on “Search in Games”
at the International Joint Conference on Artificial Intelligence (IJCAI)

2009 Introduction of Invited Speaker Robert Holte
at the International Symposium on Combinatorial Search (SoCS)

2009 Untitled Session
at the ICAPS-09 Workshop on Bridging the Gap between Task and Motion Planning

2008 Session on “Applications of Reinforcement Learning”
at the Artificial Intelligence and Interactive Digital Entertainment Conference (AIIDE)

2008 Session on “Uncertainty in Planning and Scheduling”
at the International Conference on Automated Planning and Scheduling (ICAPS)

2008 Session on “Nectar: Learning and Activity Recognition”
at the AAAI Conference on Artificial Intelligence (AAAI)

2008 Session on “Planning with Uncertainty”
at the IEEE International Conference on Robotics and Automation (ICRA)

2007 Session on “Multi-Robot Path Planning”
at the IEEE International Conference on Intelligent Robots and Systems (IROS)

2007 Session on “On-Line Planning and Execution”
at the International Conference on Automated Planning and Scheduling (ICAPS)

2007 Session on “Heuristic Search 3”
at the AAAI Conference on Artificial Intelligence (AAAI)

2007 Session on “Optimization”
at the AAAI Conference on Artificial Intelligence (AAAI) - Ad-Hoc Replacement

2007 Session on “Collective Inference”
at the AAAI Conference on Artificial Intelligence (AAAI) - Ad-Hoc Replacement

2007 Session on “Multi-Agent Planning”
at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)

2007 Session on “Search 2”
at the International Joint Conference of Artificial Intelligence (IJCAI)

2007 Untitled Session
at the Symposium on Abstraction, Reformulation, and Approximation (SARA)

2006 Session on “Planning: Plan Recognition”
at the AAAI Conference on Artificial Intelligence (AAAI)

2006 Session on “Robotics III”
at the AAAI Conference on Artificial Intelligence (AAAI)

2006 Session on “Robotics”
at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)

2006 Session on “Markov Decision Processes”
at the International Symposium on Artificial Intelligence and Mathematics (ISAIM)

2005 Introduction of Invited Speaker Cynthia Breazeal
at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)

2005 Session on “Robotics”
at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)

2005 Session on “Markov Decision Processes 1”
at the AAAI Conference on Artificial Intelligence (AAAI)

2005 Session on “Multiagent Systems 2”
at the AAAI Conference on Artificial Intelligence (AAAI)

- 2005 Session on “Probabilistic Robotics”
at Robotics: Science and Systems (RSS)
- 2004 Introduction of Invited Speaker Reid Simmons
at the International Conference on Automated Planning and Scheduling (ICAPS)
- 2003 Introduction of Invited Speaker Daniela Rus
at the International Joint Conference on Artificial Intelligence (IJCAI)
- 2003 Session on “Computational Intelligence”
at the IEEE International Conference on Intelligent Robots and Systems (IROS)
- 2003 Session on “Architecture and Programming”
at the IEEE International Conference on Intelligent Robots and Systems (IROS)
- 2003 Session on “Sensing, Uncertainty and Incomplete Information”
at the International Conference on Automated Planning and Scheduling (ICAPS)
- 2002 Session on “Robotic Planning”
at the AIPS Workshop on Is There Life Beyond Operator Sequencing
- 2001 Session on “Localization”
at the IEEE International Conference on Intelligent Robots and Systems (IROS)
- 1998 Session on “Search and Limited Resources”
at the AAAI Conference on Artificial Intelligence (AAAI)
- 1998 Session on “Reinforcement Learning”
at the AAAI Conference on Artificial Intelligence (AAAI)

Workshop Chair or Co-Chair

- 2008 AAAI Workshop on Search in Artificial Intelligence and Robotics
- 2006 AAAI Workshop on Auction Mechanisms for Robot Coordination
- 2005 IJCAI Workshop on Planning and Learning in A Priori Unknown or Dynamic Domains
- 2000 AIPS Workshop on Decision-Theoretic Planning
- 1999 AAAI Spring Symposium on Search Strategies for Problem Solving under Uncertainty
- 1997 AAAI Workshop on On-Line Search

Member of Workshop Organizing Committees

- 2006 ECAI Workshop on Planning, Learning and Monitoring with Uncertainty and Dynamic Worlds
- 2002 AIPS Workshop on Is There Life Beyond Operator Sequencing? - Exploring Real World Planning

Member of Panels

- 2010 ICRA Workshop on Search and Pursuit/Evasion in the Physical World: Efficiency, Scalability and Guarantees
- 2010 AAMAS Workshop on Optimisation in Multi-Agent Systems (OPTMAS)
- 2009 AAMAS Workshop on Optimisation in Multi-Agent Systems (OPTMAS)
- 2008 AAAI Artificial Intelligence Teaching Forum
- 1994 AAAI Spring Symposium on Decision-Theoretic Planning

Judge

- 2010 SoCS Oral and Poster Presentation Awards
- 2007-2009 3x ICAPS Influential Paper Awards and ICAPS Best Dissertation Awards (2009: Chair)
- 2006 JAIR-IJCAI Best Paper Awards
- 2002-2005 3x Intel International Science and Engineering Fair (ISEF), representing AAAI
- 1999-2000 2x Robot Challenge Competition at the AAAI Conference on Artificial Intelligence (AAAI)

Research Program Reviewer

- 2005 JPL Research Program “Deep Space Mission Systems IT”

Conference Proposal Reviewer

- 2001-2002 2x AAAI Workshop Proposal

Research Proposal Reviewer

CUNY Collaborative Incentive Research Grant Program 2002; 7th European Union Framework Programme for Research and Technology Development (FP7) 2008, 2009, 2010; Israel Science Foundation 2008; NASA Grant Proposal Reviewer: Space Technology 7 2001; National University of Singapore: Academic Research Fund 2005; NSERC Discovery Grant Program 2004; NSERC Canada Research Chair Program 2005, 2008; NSF Grant Review Panel 1998, 2000, 2005, 2x 2007, 2009; U.S. Army Research Office 2008.

Journal Reviewer

Adaptive Behavior Journal 1996, 1999; Algorithmica 2002; Annals of Mathematics and Artificial Intelligence 2000, 2007;

Artificial Intelligence Journal 1999, 2000 (3x), 2003 (2x), 2007 (2x), 2008, 2010; Artificial Intelligence Review 2009; Autonomous Agents and Multi-Agent Systems Journal 1999, 2001 (2x), 2003, 2007, 2009, 2010; Autonomous Robots Journal 1997, 2000, 2003 (2x); Electronic Commerce Research Journal 2001; IEEE/ACM Transaction on Networking 2001; IEEE Transactions on Pattern Analysis and Machine Intelligence 1998; IEEE Transactions on Evolutionary Computation 2001; IEEE Transactions on Robotics 2004, 2005 (2x), 2006; IEEE Transactions on Robotics and Automation 1999 (2x), 2000, 2001 (3x); Information and Computation Journal 1998; International Journal of Robotics Research 2006, 2007 (2x), 2008, 2009 (3x), 2010; Journal of Artificial Intelligence Research (JAIR) 1994, 1996, 1998 (2x), 1999, 2000, 2003, 2004 (3x), 2005; Journal of the Association for Computing Machinery 1997, 2004; Journal of Field Robotics 2007; Machine Learning Journal 1993, 1994, 1998, 1999 (2x), 2000; Multiagent and Grid Systems 2008; Neural Computing and Applications 2009.

Conference Reviewer (of individual papers)

Australian Joint Conference on Artificial Intelligence 1999; Dagstuhl Seminar on Plan-Based Control of Robotic Agents 2001; International Conference on Artificial Intelligence Planning and Scheduling (AIPS) 1996; International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA/AIE) 1996; IEEE International Conference on Intelligent Robots and Systems (IROS) 2007, 2008; IEEE International Conference on Robotics and Automation (ICRA) 1996, 1997; International Conference on Tools for Artificial Intelligence (TAI) 1993; AAAI Conference on Artificial Intelligence (AAAI) 1993, 1996; Pacific Rim International Conference on Artificial Intelligence (PRICAI) 2000.

Book Proposal Reviewer

2000-2001	2x Prentice-Hall
1999	2x McGraw-Hill
1999	Kluwer

Others

2008	Invited Member of the IPTO Cognitive Mobile Robotics Technical Interchange Planning Meeting
2008-now	Member of the IEEE RAS Technical Committee on Algorithms for Planning and Control of Robot Motion
2007	Invited Member of the DARPA Information Science and Technology Study Group on “Engineering Ensemble Effects”
2006	Invited Participant in the Microsoft Academic Days on “Gaming Concepts and Technologies”
2004	Organizer of the ICAPS Logo Competition
2002-now	Creator and Maintainer of idm-lab.org/aaai posters.html (a webpage for the AAAI Student Abstract and Poster Program) since 2002, www.icaps-conference.org (the website of the ICAPS conference series) since 2003 and www.search-conference.org (the website of the SoCS symposium series) since 2008
1996	Member of Carnegie Mellon University’s Team: AAAI Robot Competition