

Sven Koenig

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My research focuses on decision-making techniques from artificial intelligence (AI) that enable single, situated agents (such as robots or decision-support systems) and teams of agents to act intelligently in real-time.

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, Artificial Intelligence)
University of Hamburg (overall grade: very good)
Advisor: Neumann
- 1991 **M.S. in Computer Science (Minor: Linguistics)**
University of California at Berkeley
Topic: “Optimal Probabilistic and Decision-Theoretic Planning using Markovian Decision Theory”
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 (overall grade: very good)
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

- Jan 2022-now **Dean’s Professor, Computer Science Department, USC**
- Feb 2011-now **Full Professor, Computer Science Department, USC**
Director of the Research Group on Intelligent Decision Making (IDM)
Member of the USC Autonomy and AI Center (AAI Center)
Member of the Robotics and Autonomous Systems Center (RASC)
- Sep 2003-2011 **Associate Professor, Computer Science Department, USC**
- Jan 1998-2003 **Assistant Professor, College of Computing, Georgia Institute of Technology**
Director of the Research Group on Intelligent Decision Making (IDM)
Affiliations: Artificial Intelligence Laboratory, Mobile Robot Laboratory, Collaborative Perception, Planning and Robotics (BORG) Laboratory, Computational Perception and Robotics Group and the Center for Process Systems
- 2022-2023 Visiting Position at Ben-Gurion University of the Negev (Israel) – 1 month
- 2018, 2019 Visiting Position at Monash University (Australia)
- 2013-2014 Sabbatical Positions at Carnegie Mellon University and NASA Ames Research Center
- Jun 2010-2012 Program Director at the National Science Foundation (NSF) as University Rotator
Directorate for Computer & Information Science & Engineering (CISE)

Division of Information and Intelligent Systems (IIS)

Robust Intelligence Cluster (RI)

Program Responsibilities: Information and Intelligent Systems: Core Programs, Faculty Early Career Development Program (CAREER), National Robotics Initiative (NRI), Interface between Computer Science and Economics & Social Science (ICES), Research Experiences for Undergraduates Sites (REU Sites) and Expeditions in Computing; additional responsibilities: one Engineering Research Center (ERC) proposal evaluation; one Expeditions in Computing project supervision (including third-year evaluation); Merit Review Working Group; RAPID Proposals to ENG, CISE and OISE on the 2011 Earthquakes in Japan and New Zealand; NSF-Deutsche Forschungsgemeinschaft (DFG) Collaborative Research (helped to initiate initiative); NSF European Extended Lab Visit Program for Graduate Students in Artificial Intelligence and Robotics (helped to initiate initiative); Furthering the Interface between Artificial Intelligence and Operations Research (helped to initiate initiative)

2006-2007 Sabbatical Positions at California Institute of Technology, National ICT Australia/Australian National University (Australia) and University of California at Berkeley

Recognition

2023 Classic Paper (= "Test of Time") Award of AAAI for "A. Nash, K. Daniel, S. Koenig and A. Felner, Theta*: Any-Angle Path Planning on Grids, AAAI Conference on Artificial Intelligence (AAAI), pages 1177-1183, 2007." (There were one winner and one honorable mention.)

2022-2023 Invited visit to Ben-Gurion University – 1 month

2022 SoCS-20 Best Student Paper Award for "E. Boyarski, S.-H. Chan, D. Atzmon, A. Felner and S. Koenig, On Merging Agents in Multi-Agent Pathfinding Algorithms, Symposium on Combinatorial Search (SoCS), 2022"

2022 IJCAI Certificate of Appreciation (International Joint Conference on Artificial Intelligence)

2021 Fellow of the Association for Computing Machinery (ACM) "for contributions to artificial intelligence, including heuristic search and multi-agent coordination"

2021 ICAPS-21 Best System Demonstration Award (Gold)

2021 IJCAI Certificate of Appreciation (International Joint Conference on Artificial Intelligence)

2021 2x AAAI Certificate of Appreciation (Association for the Advancement of Artificial Intelligence)

2020 Winning Team (Advisor) of the NeurIPS Flatland Competition (both rounds), a railway scheduling competition (The winning team consisted of our Ph.D. students Jiaoyang Li, Yi Zheng and Shao-Hung Chan plus Zhe Chen from Monash University.) An updated version of the software won again in the extended Flatland competition in 2021.

2020 Press Coverage for "J. Li, A. Tinka, S. Kiesel, J. Durham, S. Kumar and S. Koenig, Lifelong Multi-Agent Path Finding in Large-Scale Warehouses, International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2020", including in the ACM TechNews

2020 Lady Davis Visiting Professorship offered by the Technion (could not be started due to COVID-19 travel restrictions to Israel)

2020 Fellow of the Institute of Electrical and Electronics Engineers (IEEE) "for contributions to search algorithms and multi-agent coordination"

2020 ICAPS-20 Outstanding Student Paper Award for "H. Zhang, J. Li, P. Surynek, S. Koenig and S. Kumar, Multi-Agent Path Finding with Mutex Propagation, International Conference on Automated Planning and Scheduling (ICAPS), 2020"

2020 SoCS-20 Best Paper Honorable Mention for "H. Xu, K. Sun, S. Koenig and S. Kumar, Decision-Tree Learning-Inspired Dynamic Variable Ordering for the Weighted CSP, Symposium on Combinatorial Search (SoCS), 2020" (There were one winner and one honorable mention.)

2020 AAAI Certificate of Appreciation (Association for the Advancement of Artificial Intelligence)

2019 BRACIS Certificate of Appreciation (Brazilian Conference on Intelligent Systems)

2019 Invited Visit to Monash University (Australia) – 3 weeks

2019 Classic Paper (= "Test of Time") Honorable Mention of AAAI for "S. Koenig and M. Likhachev, D* Lite, AAAI Conference of Artificial Intelligence (AAAI), 2002" for or developing an incremental heuristic search algorithm for robot navigation in unknown terrain that is easy to understand, analyze and extend (There were one winner and one honorable mention.)

2019 Technology Commercialization Award (USC Stevens Center for Innovation)

2018-2022 5x Amazon Research Awards or equivalent (Amazon)

2018 Invited Visit to Monash University (Australia) – 6 weeks

- 2017 Fellow of the American Association for the Advancement of Science (AAAS) “for significant contributions to planning, decision making and coordination of robots and other situated agents”
- 2017 Computer Science and Engineering Undergraduate Teaching Award (IEEE Computer Society) "for his commitment to engaging students through project-based learning and mentoring that cultivates a passion for artificial intelligence"
- 2017 AAAI-17 Outstanding Senior Program Committee Member (There were 3 awards for 325 SPC members.)
- 2017 AAAI Certificate of Appreciation (Association for the Advancement of Artificial Intelligence)
- 2016 ICAPS-16 Outstanding Paper Award in the Robotics Track for "W. Hoenig, S. Kumar, L. Cohen, H. Ma, H. Xu, N. Ayanian and S. Koenig, Multi-Agent Path Finding with Kinematic Constraints, International Conference on Automated Planning and Scheduling (ICAPS), 2016"
- 2016 2x AAAI Certificate of Appreciation (Association for the Advancement of Artificial Intelligence)
- 2015 Dean’s Award for Innovation in Teaching and Education (USC)
- 2015 AAAI Certificate of Appreciation (Association for the Advancement of Artificial Intelligence)
- 2013-2019 Distinguished Speaker of the Association for Computing Machinery (ACM) – two terms
- 2013 Fellow of the Association for the Advancement of Artificial Intelligence (AAAI) “for significant contributions to planning, decision making and coordination of robots and other situated agents”
- 2012 WIC Certificate of Appreciation (Web Intelligence Consortium / World Intelligence Congress)
- 2011, 2012 2x Director’s Award for Collaborative Integration (National Science Foundation)
- 2009 Mellon Award: Faculty Mentoring Undergraduate Students (USC)
- 2009 AAMAS-09 Nomination for the Pragnesh Jay Modi Best Student Paper Award for “W. Yeoh, P. Varakantham and S. Koenig, Caching Schemes for DCOP Search Algorithms, International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2009” (There were 5 nominations.)
- 2008 AAAI Certificate of Appreciation (Association for the Advancement of Artificial Intelligence)
- 2007 ACM Senior Member (Association for Computing Machinery)
- 2006-2007 Invited Visit to National ICT Australia/Australian National University (Australia) - 4 months
- 2006 ACM Recognition of Service Award (Association for Computing Machinery)
- 2005 IEEE Senior Member (Institute of Electrical and Electronics Engineers)
- 2004 Charles Lee Powell Foundation Award (which provided USC start-up funding)
- 2004 SAIC Advisement Award (for graduate student performance in the Georgia Institute of Technology SAIC paper competition)
- 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 (International Business Machines)
- 2000 NSF Career Award (National Science Foundation)
- 1999 Raytheon Faculty Research Award (Georgia Institute of Technology)
- 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

- American Association for the Advancement of Science (AAAS)
- 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

Spring 2023	Video Course: Introduction to Artificial Intelligence (for Armenian students) – DEN (= Distance Education Network)
Fall 2022	2x Introduction to Artificial Intelligence (for junior undergraduate students) – 2x CSCI360
Fall 2021	2x Introduction to Artificial Intelligence (for junior undergraduate students) – 2x CSCI360
Fall 2019	2x Introduction to Artificial Intelligence (for junior undergraduate students) – 2x CSCI360
Fall 2018	2x Introduction to Artificial Intelligence (for junior undergraduate students) – 2x CSCI360
Fall 2017	2x Introduction to Artificial Intelligence (for junior undergraduate students) – 2x CSCI360
Fall 2016	2x Introduction to Artificial Intelligence (for junior undergraduate students) – 2x CSCI360
Spring 2016	Introduction to Artificial Intelligence (for junior undergraduate students) – CSCI360 (Teaching Assistants Tansel Uras and Liron Cohen won <i>Best Teaching Assistant Awards</i> from the CS Department)
Fall 2015	Introduction to Artificial Intelligence (for junior undergraduate students) – CSCI360
Spring 2015	Introduction to Artificial Intelligence (for junior undergraduate students) – CSCI360
Fall 2014	Introduction to Artificial Intelligence (for junior undergraduate students) – CSCI360 - new
Fall 2012	Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CSCI460
Spring 2010	Introduction to Artificial Intelligence (for junior and senior undergraduate students) - CSCI460
Fall 2009	2x Artificial Intelligence (for graduate students) - 2x CSCI561 + DEN
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 an <i>Outstanding Teaching Assistant Award</i> 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 an <i>Outstanding Teaching Assistant Award</i> from the CS Department)
Spring 2004	Decision-Theoretic Planning (for graduate students) - CSCI599 - new

Additional Teaching at USC

Fall 2019	Creator of “A Project on Multi-Agent Path Finding (MAPF)” (with Wolfgang Hoenig and Jiaoyang Li) The project was chosen as a <i>Model AI Assignment</i> by the Symposium on Educational Advances in AI 2020.
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 <i>Model AI Assignment</i> 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 <i>Model AI Assignment</i> 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 <i>Model AI Assignment</i> 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

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

2021-now Weizhe Chen, jointly advised with Bistra Dilkina
2021: Viterbi/Graduate School Fellowship
 2021-now Christopher Leet
2021: Viterbi/Graduate School Fellowship
 2019-now Taoan Huang, jointly advised with Bistra Dilkina (passed qualifying exam)
2019: USC Annenberg Graduate Fellowship
 2019-now Shao-Hung Chan (passed qualifying exam)
2022: Research Fellowship from Ben-Gurion University (Israel)
2022: SoCS-22 Best Student Paper Award
2020: Winning Team of the NeurIPS-20 Flatland Railway Scheduling Competition
2019: USC Annenberg Graduate Fellowship
 2019-now Yi Zheng, jointly advised with Satish Kumar
2020: Winning Team of the NeurIPS-20 Flatland Railway Scheduling Competition
 2019-now Han Zhang
2020: ICAPS-20 Outstanding Student Paper Award

- 2017-2022 *2019: USC Annenberg Graduate Fellowship*
 Jiaoyang Li (graduated, first job: Assistant Professor, Carnegie Mellon University)
 Dissertation: “Efficient and Effective Techniques for Large-Scale Multi-Agent Path Finding”
2023: Winner IFAAMAS Victor Lesser Distinguished Dissertation Award (presented at AAMAS 2023)
2023: Winner ICAPS Best Dissertation Award
2023: Winner William F. Ballhaus, Jr. Prize for Excellence in Graduate Engineering Research
2021: MIT Rising Stars in EECS
2021: Computer Science Best Research Assistant Award
2021: WISE Merit Award
2020: Winning Team of the NeurIPS-20 Flatland Railway Scheduling Competition
2020: ICAPS-20 Outstanding Student Paper Award
2020: WiSE Qualcomm Top-Off Fellowship
2019: Technology Commercialization Award (USC Stevens Center for Innovation)
2017: Viterbi/Graduate School Fellowship
- 2014-2019 Hong Xu - Physics student, jointly advised with Satish Kumar (graduated, first job: IBM)
 Dissertation: “Exploiting Structure in the Boolean Weighted Constraint Satisfaction Problem: A Constraint Composite Graph-Based Approach”
2020: SoCS-20 Best Paper Honorable Mention
2019: Technology Commercialization Award (USC Stevens Center for Innovation)
2016: ICAPS-16 Outstanding Paper Award in the Robotics Track
- 2014-2020 Hang Ma (graduated, first job: Assistant Professor, Simon-Fraser University)
 Dissertation: Target Assignment and Path Planning for Navigation Tasks with Teams of Agents
2021: Winner ICAPS Best Dissertation Award
2020: Runner Up for the IFAAMAS Victor Lesser Distinguished Dissertation Award 2020
2019: Technology Commercialization Award (USC Stevens Center for Innovation)
2016: ICAPS-16 Outstanding Paper Award in the Robotics Track
2014-2019: USC Annenberg Graduate Fellowship
- 2012-2020 Liron Cohen (graduated, first job: Waymo)
 Dissertation: “Efficient Bounded-Suboptimal Multi-Agent Path Finding and Motion Planning via Improvements to Focal Search”
2019: Technology Commercialization Award (USC Stevens Center for Innovation)
2016: Best Teaching Assistant Award from the Computer Science Department of USC
2016: ICAPS-16 Outstanding Paper Award in the Robotics Track
- 2011-2019 Tansel Uras (graduated, first job: Waymo)
 Dissertation: “Speeding Up Path Planning on State Lattices and Grid Graphs by Exploiting Freespace Structure”
2019: Technology Commercialization Award (USC Stevens Center for Innovation)
2016: Best Teaching Assistant Award from the Computer Science Department of USC
2014: Best Research Assistant Award from the Computer Science Department of USC
2012 and 2013: Fastest Entry in the Grid-Based Path Planning Competition (GPPC) among all Optimal Entries that Solved all Planning Problems for “Subgoal Graphs for Eight-Neighbor Gridworlds” by T. Uras, S. Koenig and C. Hernandez
- 2006-2012 Alex Nash (graduated, first job: Northrop Grumman Corporation)
 Dissertation: “Any-Angle Path Planning”
2006-2012: Fellowship from Northrop Grumman Corporation (and Full-Time Northrop Grumman Employee)
- 2004-2014 Xiaoming Zheng (graduated, first job: Facebook)
 Dissertation: “Auction and Negotiation Algorithms for Decentralized Task Allocation”
- 2005-2013 Xiaoxun Sun (graduated, first job: Google, from 2013 on: Founder and CEO, Laioffer)
 Dissertation: “Incremental Search-Based Path-Planning for Moving Target Search”
2007: USC Annenberg Graduate Fellowship
- 2004-2010 William Yeoh (graduated, first job: Postdoctoral Researcher, University of Massachusetts at Amherst, from Fall 2012 on: Assistant Professor, New Mexico State University, from 2017 on: Assistant and then Associate Professor, Washington University in St. Louis)

Dissertation: “Speeding up Distributed Constraint Optimization Search Algorithms”

2016: *IEEE Intelligent Systems’ AI’s 10 to Watch (for 2015)*

2009: *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 at USC Resulting in Publications

Syed Ali (joint with Milind Tambe), Sumit Borar (joint with Milind Tambe), Aliyah Arunasalam (joint with Satish Kumar), Eli Boyarski (visiting student), Marc-Etienne Brunet (summer student), Trevor Cai (joint with Satish Kumar), Cheng Cheng (joint with Satish Kumar), Kenny Daniel - 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)*, Darren Earl, Cheng Ge, Rahul Iyer (joint with Milind Tambe), Shiva Jahangiri (joint with Satish Kumar), Sonal Jain, Dylan Johnke (joint with Satish Kumar, summer student), Sangmook Jung (joint with Satish Kumar), Yutong Li, Eugene Lin, Minghua Liu, Ziang Liu, Janusz Marecki (joint with Milind Tambe), Masaru Nakajima (joint with Satish Kumar), Allen Pan, Selby Shlosberg, Jaspreet Singh, Kexuan Sun (joint with Satish Kumar), Ilgaz Sungur, Lucas Terr, Sumanth Varambally, Jiangxing Wang (joint with Satish Kumar), Daniel Wong, Xin-Zeng Wu (joint with Satish Kumar), Jingxing Yang (joint with Satish Kumar), Mingzhe Yao, Ka Wa Yip (joint with Satish Kumar), David Zhang (joint with Satish Kumar), Shuyang (Jessie) Zhang, Ryan Zink, Fred Zyda

Research Project Supervision at USC Resulting in Awards

Cheng Cheng (joint with Satish Kumar) – 2018: Computer Science Award for Excellence in Research, Sangmook Jung (joint with Satish Kumar) – 2014: Computer Science Award for Excellence in Research, 2014: Computer Engineering/Computer Science Outstanding Student Award, Yutong Li – 2022: Provost’s Research Fellowship, Nolan Miller (joint with Satish Kumar) – 2016: Computer Science Award for Outstanding Research, Kexuan (Kiana) Sun (joint with Satish Kumar) – 2018: Computer Science Award for Best Research, Jiangxing Wang (joint with Satish Kumar) – 2019: Best Research Award, Zhi Wang (joint with Satish Kumar) – 2017: Computer Science Award for Outstanding Research, Daniel Wong - 2009: USC Rosehill Foundation Science and Engineering Fellowship, Mingzhe Yao – 2021: Computer Science Outstanding Student Award, David Zhang (joint with Satish Kumar) – 2015: Computer Science Award for Excellence in Research, 2015: Computer Science Outstanding Student Award, 2015: USC Renaissance Scholar, Shuyang (Jessie) Zhang – 2021: Center for Undergraduate Research in Viterbi Engineering (CURVE) Symposium Winner, 2022: Computer Science Award for Outstanding Research

Ph.D. Qualifying Examinations in Computer Science at USC

2022	Heija Zhang, Nikolaidis
2022	Baskin Senbaslar, Sukhatme
2022	Anand Balakrishnan, Deshmukh
2022	Bryan Tjanaka, Nikolaidis
2022	Mozhdeh Gheini, May
2021	Ang Li, Kumar
2021	Binh Vu, Knoblock
2021	Heramb Nemlekar, Nikolaidis
2021	Gautam Salhotra, Sukhatme
2021	Jingyao Ren, Ayanian
2020	Jacqueline Brixey, Traum
2020	Emmanuel Johnson, Gratch
2020	Sarah Al-Hussaini, Gupta
2020	Rens Hoegen, Gratch
2019	Yilei Zeng, Ferrara
2019	Ali Jalal-Kamali, Morstatter and Pynadath
2019	Eric Heiden, Sukhatme

Ph.D. Committees in Computer Science at USC

2023	Jessie Hoegen, Facial Expression Modeling in Context: Using Affective Computing Methods to Examine How Expressions “Work” in Social Tasks, Gratch - Proposal
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- 2023 Baskin Senbaslar, Real-Time Trajectory Planning for Mobile Robot Navigation in Cluttered Environments, Sukhatme - Proposal
- 2022 Jiangyao Ren, Algorithm Selection and Empirical Hardness of Multi-Agent Path Finding Problems, Ayanian - Proposal
- 2022 Binh Vu, Building Semantic Descriptions of Data Sources, Knoblock - Proposal
- 2022 Eric Heiden, Closing the Reality Gap via Simulation-Based Inference and Control, Sukhatme – Proposal (2020) and Defense
- 2022 Abram Demski, Cognitive Equations: Fixed-Point Finding as an Intermediate Layer in Cognitive Architecture, Rosenbloom – Proposal (2015) and Defense
- 2021 Emmanuel Johnson, An Intelligent Tutoring System’s Approach for Negotiation Training, Gratch - Defense
- 2021 Shariq Iqbal, Structure for Cooperative Reinforcement Learning, Sha - Proposal
- 2021 Xusen Yin, Generalized Sequential Decision-Making via Language, May – Proposal (2020) and Defense
- 2020 Jonathan Mell, A Framework for Research in Human-Agent Negotiation, Gratch - Defense
- 2018 Wolfgang Hoenig, Motion Coordination for Large Multi-Robot Teams in Obstacle-Rich Environments, Ayanian – Proposal (2017) and Defense
- 2012 Arvind Pereira, Risk-Aware Path Planning for Autonomous Underwater Vehicles in the Real World, Sukhatme - Proposal
- 2012 Dusan Jan, Virtual Extras: Conversational Behavior Simulation for Background Virtual Humans, Traum - Proposal (2008) and Defense
- 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
- 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 Physics at USC

- 2022 Yuling Guan, Plasmons in Quantum Materials, Haas - Defense

Ph.D. Committees in Aerospace and Mechanical Engineering at USC

- 2019 Pradeep Rajendran, Speeding Up Trajectory Planning for Autonomous Robots Operating in Complex Environments, Gupta - Proposal (2018) 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 Ordóñez - Proposal (2006) and Defense
- 2007 Ilgaz Sungur, The Robust Vehicle Routing Problem, Ordóñez 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

- 2015 Ameer Hamza: Predicting Mission Power Requirement in Mobile Robots, Ayanian - Defense
2004 Steven Okamoto: The State of DCOP in LA: Relaxed, Tambe - Defense

Visitors and Postdoctoral Researchers at USC

- 2023 Postdoctoral Researcher: Thomy Phan
2022 Visitor: Pavel Surynek, Associate Professor, Czech Technical University, Czech Republic (3 weeks)
2022 Visitor: Orazio Rillo, Master's Student, Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland (6 months)
2022 Visitor: Cheng Ge, Undergraduate Student, Tsinghua University, China (4 ½ months)
2020-2022 Visitor: Yoni Sher, Graduate Student, The Hebrew University of Jerusalem, Israel (about 20 months)
2019 Visitor: Moli Yang, Graduate Student, University of Melbourne, Australia (3 months)
2019 Visitor: Jihee Han, Postdoctoral Researcher, Korea University, Korea (10 months)
2018 Visitor: Eli Boyarski, Graduate Student, Ben-Gurion University, Israel (6 ½ weeks)
2017 Visitor: Michael Rovatsos, Reader, University of Edinburgh, Great Britain (2 ½ weeks)
2017 Visitor: Masoumeh (Iran) Mansouri, Postdoctoral Researcher, Örebro Universitet, Sweden (2 weeks)
2012-2013 Visitor: Giuseppe Caggianese, Graduate Student, Università degli Studi della Basilicata, Italy (12 months)
2012-2013 Visitor: Marcello Cirillo, Postdoctoral Researcher, Örebro Universitet, Sweden (6 months)
2012-2015 Postdoctoral Researcher and then Research Scientist: Satish Thittamaranahalli (T.K. Satish Kumar)
2011-2013 Postdoctoral Researcher: Masabumi Furuhashi (34 ½ months)
2009, 2010, 2011, 2013, 2017, 2022 Visitor: Carlos Hernandez Ulloa, Associate Professor, Universidad Católica de la Santísima Concepción, Universidad Andrés Bello and then Universidad San Sebastián, Chile (3 ½ months in 2009, 1 month in 2010, 8 months in 2011/2012, 1 month in 2013, 1 month toward the beginning and another 1 ½ months toward the end of 2017 and 5 months in 2022)
2006-2007, 2017 Visitor: Ariel Felner, Assistant, Associate and Full Professor, Ben-Gurion University, Israel (6 months in 2006-2007 and 5 ½ months in 2017)
2005 Visitor: Vadim Bulitko, Assistant Professor, University of Alberta, Canada (2 weeks)

Additional Advising at USC

- Summer 2021 Advisor for the Tsinghua Summer Experience Program (Zhiqian Zhou, Tsinghua University) and the IUSSTF-Viterbi Summer Research Program (Sumanth Varambally, IIT Delhi)
Summer 2019 Advisor for the IUSSTF-Viterbi Summer Research Program (Venu Madhav Yatam, IIT Bhubaneswar) and the Viterbi Summer Undergraduate Research Experience Program (Gaurav Kuppa, San Jose State University), both joint with Satish Kumar, and a summer student from the Korea Aerospace University (Yoon Sun Byun), joint with Hang Ma
2019-now Faculty mentor of Research Assistant Professor Satish Kumar
Summer 2018 Advisor for the Viterbi Summer Undergraduate Research Experience Program (Baram Sosis, University of Maryland at College Park) and the Tsinghua Summer Experience Program (Minghua Liu, Tsinghua University)
Summer 2016 Advisor for the Viterbi Summer Undergraduate Research Experience Program (James Drain, Dartmouth) and the Tsinghua Summer Experience Program (Jiaoyang Li, Tsinghua University)
Summer 2015 Advisor for the Viterbi Summer Undergraduate Research Experience Program (Dylan Johnke, Cornell)
Summer 2013 Advisor for the Viterbi Summer Undergraduate Research Experience Program (Everardo Uribe, UC Irvine)
2012-2013 Advisor for the Viterbi School of Engineering Merit Research Program (Nick Halsey)
Summer 2012 Advisor for the Viterbi Summer Undergraduate Research Experience Program (Marc-Etienne Brunet, McGill University)
Summer 2011 Advisor for the REU Site Program (Maxwell Segal of Colgate University, Aaron Panchal of Westmont College)
Summer 2009 Advisor for the REU Site Program (Jieming Zeng, University of North Carolina at Chapel Hill)
Summer 2008 Advisor for 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, 2012 Coach of USC Teams for 5 ACM Southern California Regional Programming Contests (with David Kempe and, in 2008 and 2009, Suyu 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); 2012: 1st (out of 75)
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)
Dissertation: "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: Interim Professor, Blackburn College; now: Professor, University of Wisconsin at Oshkosh)
Dissertation: "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 I moved to USC

Research Project Supervision at Georgia Institute of Technology Resulting in Publications

Amin Atrash, Colin Bauer, Marc Berhault (joint with Pinar Keskinocak), Sam Greenberg (joint with Craig Tovey), William Halliburton, Maxim Likhachev, Vangelis Markakis (joint with Michail Lagoudakis and Pinar Keskinocak), Lisa McCrickard (joint with Norberto Ezquerra), Apurva Mudgal (joint with Craig Tovey), Ananth Ranganathan (independent of publications: 19 Ph.D. special problems students, 4 M.S. special problems students and 19 B.S. special problems students)

Research Project Supervision at Georgia Institute of Technology Resulting in Awards

Amin Atrash - 1999: 2 out of 8 Main UROC Research Competition Awards from the College of Computing, Marc Berhault (joint with Pinar Keskinocak) - 2004: Best Paper Award in the Georgia Institute of Technology SAIC Paper Competition

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, 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, Realff - 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: Associate Professor, 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

External Member of Thesis Committees

2023 Thomy Phan, Emergence and Resilience in Multi-Agent Reinforcement Learning, Ludwig-Maximilians-Universitaet Muenchen (Germany), Claudia Linnhoff-Popien – Dissertation Defense [written evaluation only]
2023 Paul Friedrich, Machine-Learning Enhanced Market Design for Drone Traffic Management, University of Zurich, Sven Seuken – Dissertation Proposal
2022 Orazio Rillo, The Minimum Weighted Vertex Cover Problem: A Substrate for the Weighted Constraint Satisfaction Problem, Swiss Federal Institute of Technology Lausanne (Switzerland) – Expert for the Master’s Thesis
2021 Lukas Chrpa, Efficient Modelling and Reformulation of Planning Tasks, Czech Technical University in Prague (Czech Republic) – Evaluation of Habilitation
2021 Arthur Queffelec, Connected Multi-Agent Path Finding: How Robots Get Away with Texting and Driving, Universite de Rennes 1 (France), Schwarzenruber and Sankur – Dissertation Defense
2021 Shuai Han, Toward Efficient and Optimal Multi-Robot Motion Planning: Provable Guarantees and Effective Heuristics, Rutgers University, Yu – Dissertation Defense
2020 Jiri Svancara, Multi-Agent Path Finding (MAPF), Charles University (Czech Republic), Bartak – Dissertation Defense
2018 John Drake, Planning for Non-Player Characters by Learning from Demonstration, University of Pennsylvania, Likhachev and Safonova – Dissertation Proposal (2017) and Defense
2016 Pavel Surynek, Cooperative Path Finding for Multiple Robots, Charles University (Czech Republic) – Evaluation of Habilitation
2015 Glenn Wagner, Subdimensional Expansion: A Framework for Computationally Tractable Multirobot Path Planning, Carnegie Mellon University, Choset – Dissertation Proposal (2014) and Defense [Honorable Mention: ICAPS Best Dissertation Award 2017]
2015 Mike Phillips, Experience Graphs: Leveraging Experience in Planning, Carnegie Mellon University, Likhachev – Dissertation Proposal (2014) and Defense [Honorable Mention: ICAPS Best Dissertation Award 2016]
2014 Bradford Heap, Sequential Single-Cluster Auctions for Multi-Robot Allocation, University of New South Wales (Australia), Pagnucco – Evaluation of Dissertation
2014 Daniel Harabor, Fast and Optimal Pathfinding, Australian National University (Australia), Botea, Grastien and Kilby – Evaluation of Dissertation [Honorable Mention: ICAPS Best Dissertation Award 2016]
2012 Ko-Hsin Cindy Wang, Scalable Cooperative Multi-Agent Pathfinding with Tractability and Completeness Guarantees, National ICT Australia/Australian National University (Australia), Botea, Kilby and Rintanen - Evaluation of Dissertation [Winner: ICAPS Best Dissertation Award 2013]
2012 Jordan Thayer, Heuristic Search under Time and Quality Bounds, University of New Hampshire, Ruml - Dissertation Proposal (2010) and Defense
2010 Evan Sultanik, Automatic Construction, Maintenance and Optimization of Dynamic Agent Organizations, Drexel University, Regli and Shokoufandeh - Dissertation Proposal (2010) and Defense
2009 Christian Fritz, Monitoring the Generation and Execution of Optimal Plans, University of Toronto (Canada), McIlraith - External Examiner of Dissertation and Dissertation Defense [Honorable Mention: ICAPS Best Dissertation Award 2010]
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 [Winner: ICAPS Influential Paper Award 2017]
- 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 [Winner: ICAPS Influential Paper Award 2012]
- 2002 Georgios Theodorou, Hierarchical Learning and Planning in Partially Observable Markov Decision Processes, Michigan State University, Mahadevan - Dissertation Defense

Doctoral Consortia, Undergraduate Consortia and Mentoring

- 2023 AAAI “Lunch with a Fellow” Program
- 2022 AAAI “Meet with a Fellow” Program
- 2022 AAAI Doctoral Consortium – Program Committee and Mentor
- 2022 AAAI Undergraduate Consortium - Mentor
- 2021 AAAI Doctoral Consortium – Program Committee and Panelist on the Career Panel
- 2021 AAAI Undergraduate Consortium – Program Committee and Mentor
- 2021 AAMAS Doctoral Consortium – Program Committee
- 2021 ICAPS Doctoral Consortium - Mentor
- 2020 ICAPS “Lunch with a Senior” Program
- 2020 ICAPS Doctoral Consortium – Mentor
- 2020 AAAI “Lunch with a Fellow” Program
- 2020 AAAI Undergraduate Consortium – Program Committee and Mentor
- 2020 AAAI/SIGAI Doctoral Consortium – Program Committee and Mentor
- 2020 AAMAS Doctoral Consortium _ Program Committee and Panelist on the Career Panel
- 2019 AAMAS Doctoral Consortium – Program Committee and Mentor
- 2019 AAAI “Lunch with a Fellow” Program
- 2019 AIES Student Program - Mentor
- 2019 AAAI/SIGAI Doctoral Consortium – Program Committee and Mentor
- 2019 SoCS Student Mentor
- 2018 AAMAS “Lunch with an Expert” Program
- 2018 AAMAS Doctoral Consortium
- 2018 AAAI “Lunch with a Fellow” Program
- 2018 AAAI/SIGAI Doctoral Consortium – Program Committee and Mentor
- 2017 IJCAI “Lunch with a Fellow” Program
- 2017 AAAI “Lunch with a Fellow” Program
- 2017 AAAI/SIGAI Doctoral Consortium – Program Committee and Mentor
- 2016 IJCAI “Lunch with a Fellow” Program
- 2016 IJCAI Doctoral Consortium – Mentor and Panelist on the Career Panel
- 2016 AAMAS “Lunch with a Fellow” Program
- 2016 AAAI “Lunch with a Fellow” Program
- 2016 AAAI/SIGAI Doctoral Consortium – Program Committee and Mentor
- 2015 AAAI/SIGART Doctoral Consortium - Mentor only
- 2014 AAAI/SIGART Doctoral Consortium - Mentor and Panelist on the Career Panel
- 2013 IJCAI Doctoral Consortium - Mentor and Panelist on the Career Panel
- 2013 AAAI “Lunch with a Fellow” Program
- 2013 AAAI/SIGART Doctoral Consortium - Mentor only
- 2013 ICAPS Doctoral Consortium
- 2012 AIIDE Doctoral Consortium - Panelist on the Young Faculty Career Panel
- 2012 AAMAS Doctoral Consortium - Panelist on the Career Panel (partly as NSF representative)
- 2012 ICAPS Doctoral Consortium

2011 AAAI/SIGART Doctoral Consortium - Panelist on “The Hiring Process and Finding Funding” panel (partly as NSF representative)

2011 AAMAS Doctoral Consortium

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 and Other Meetings

2023 International Symposium on Computational Geometry (SoCG)

2022 International Conference on Frontiers of Mathematics and Artificial Intelligence (CFMAI) – Keynote Speech

2022 IROS Workshop on Decision Making in Multi-Agent Systems (many talks were invited)

2022 International Conference on Automated Planning and Scheduling (ICAPS)

2022 AAMAS Workshop on Optimization and Learning in Multiagent Systems (OptLearnMAS)

2021 Las Jornadas Chilenas de Computación (JCC)

2021 SoCS Doctoral Consortium

2020 CP Doctoral Consortium

2019 Brazilian Conference on Intelligent Systems (BRACIS) [ACM DSP]

2019 IJCAI Doctoral Consortium

2018 Amazon Research Award Symposium (all talks were invited)

2018 Federated Artificial Intelligence for Robotics Workshop (F-Rob) at IJCAI

2018 Dagstuhl Seminar on Planning and Operations Research (all talks in Dagstuhl seminars are invited)

2017 ACM Turing 50th Celebration Conference, China (ACM TURC) - Keynote Speech (AI track)

2017 ICRA Workshop on AI Planning and Robotics: Challenges and Methods (several talks were invited)

2016 Dagstuhl Seminar on Planning and Robotics (all talks in Dagstuhl seminars are invited)

2015 ARL Science Planning and Strategy Meeting

2014 International Symposium on Combinatorial Search (SoCS)

2013 Minisymposium: Causal Algorithms for Optimal Control Problems at the SIAM Conference on Control and Its Applications (all talks were invited)

2012 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT) - Keynote Speech

2012 ICAPS Workshop on Combining Task and Motion Planning for Real-World Applications (TAMPRA)

2011 German Conference on Artificial Intelligence (KI) - Keynote Speech

2011 AAAI Fall Symposium Series: Workshop on Multi-Agent Coordination under Uncertainty

2011 AAMAS Workshop on Optimisation in Multi-Agent Systems (OPTMAS)

2011 IROS Special Session on US Government Robotics Programs (as NSF representative)

2011 AAAI Fall Symposium Series: Artificial Intelligence Funding Seminar (as NSF representative)

2011 AAAI Robotics Workshop on Embodied Intelligence (as NSF representative)

2011 Annual Consortium for Computing Sciences in Colleges - Southwestern Regional Conference (CCSC-SW)

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 Speech
- 2007 IROS Workshop on Algorithmic Motion Planning (all talks 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

- 2019 Third Summer School on Cognitive Robotics at USC (USA) – tutorial and exercise
- 2018 Second Summer School on Cognitive Robotics at MIT (USA) – tutorial
- 2017 First Summer School on Cognitive Robotics at MIT (USA) - tutorial
- 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

- 2022 AAAI Tutorial and AAMAS Tutorial on Recent Advances in Multi-Agent Path Finding (with Jiaoyang Li from USC, Daniel Harabor from Monash University and Ariel Felner from Ben-Gurion University)
- 2020 AAAI Tutorial on Recent Directions in Heuristic Search (with Ariel Felner from Ben-Gurion University and Nathan Sturtevant from the University of Alberta)
- 2019 AAMAS Tutorial on Heuristic Search (with Daniel Harabor from Monash University and Nathan Sturtevant from the University of Alberta)
- 2018 IJCAI Tutorial on Recent Directions in Heuristic Search (with Ariel Felner from Ben-Gurion University, Daniel Harabor from Monash University and Nathan Sturtevant from the University of Denver)
- 2017 AAAI Tutorial on Multi-Agent Path Finding (with Ariel Felner from Ben-Gurion University and Glenn Wagner from Carnegie Mellon University)
- 2013 IROS Tutorial on Search-Based Planning: Toward High Dimensionality and Differential Constraints (with Mihail Pivtoraiko from the University of Pennsylvania and Maxim Likhachev from Carnegie Mellon University)
- 2012 AAAI Tutorial on Search-Based Planning: Toward High Dimensionality and Differential Constraints (with Mihail Pivtoraiko from the University of Pennsylvania and Maxim Likhachev from Carnegie Mellon University)
- 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)

Internal USC Talks

- 2022 USC-THU Faculty Research Symposium (all talks in the USC-THU Faculty Research Symposia are invited)
- 2022 USC VSoE Special AI and Data Science Training Sessions: AI Ethics and Responsibility (25-minute talks, all of which were invited)
- 2021 USC AI Futures Symposium on AI and Data Science (10-minute talks, all of which were invited)
- 2022 ISE Eppstein Seminar

Other Invited Talks

ACM Sacramento Chapter 2015 [ACM DSP], 2018 [Future Worlds Symposium, ACM DSP]; AT&T Labs Research (Murray Hill) 1997; Australian National University (Australia) 2006; Bar-Ilan University (Israel) 2008, 2022; Ben-Gurion University (Israel) 2022; California Institute of Technology 2006 (2x), 2007 (2x); California State University at San Bernardino [Futures in Engineering Conference, ACM DSP]; Carnegie Mellon University 2001, 2005, 2007, 2013 (Search-Based Planning Laboratory), 2017 (Robotics Institute), 2019 (Reid Simmons' "60th" Birthday Celebration at the 40th Anniversary of the CMU Robotics Institute); CSTAR at Andersen Consulting (Chicago) 1997; Columbia University 1997; Data61 at Canberra (Australia) 2016, Drexel University 2011 [Jay Modi Memorial Lecture]; Georgia Institute of Technology 1997; IBM T.J. Watson Research Center (New York) 2001; IIT Madras (India) 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), 2017, 2018; NASA Ames Research Center (Mountain View) 1997, 2002, 2014; Institute of Cognitive Science and Technology, National Research Council of Italy (Italy) 2023; 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; New Mexico State University 2014 [ACM DSP]; North-East Ohio ACM Chapter 2014 [ACM DSP]; Orange County ACM Chapter 2019 [ACM DSP]; Pomona College 2015; Rensselaer Polytechnic Institute 1997; Royal Melbourne Institute of Technology (RMIT University, Australia) 2019; Shanghai Jiao Tong University (China) 2017 [ACM DSP]; Southwest Jiaotong University (China) 2017 [ACM DSP]; Stanford Research Institute International (Menlo Park) 1997; Stanford University 1997, 2002, 2004, 2008; Technion - Israel Institute of Technology (Israel) 2008, 2019, 2022 (2x, including as a guest lecturer for a robotics class); Tel Aviv University (Israel) 2023; Universidad de Monterrey (Mexico) 2015 [ACM DSP]; University of Alberta (Canada) 2001, 2003 (3x), 2007; University of California at Berkeley 2002, 2007, 2021 (Dorit Hochbaum's Research Group); University of California at Irvine 2002, 2010 [Computer Science Department Distinguished Lecturer Seminar], 2021, 2023; University of California at Los Angeles 2002; University of California at Riverside 2017; University of Denver 2016 [ACM DSP]; University of Electronic Science and Technology of China (China) 2017 [ACM DSP]; University of Iowa 1997, 2019 [University of Iowa Computing Conference, ACM DSP]; University of Kansas 1997; University of Minnesota 2016 [Cray Distinguished Speaker Series]; University of Nebraska at Lincoln 2016 [ACM DSP]; 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 Sydney (Australia) 2007; University of Technology, Sydney (Australia) 2007; University of Texas at El Paso 2014 [ACM DSP]; University of Toronto (Canada) 2009; University of Washington 2002; University of Waterloo (Canada) 1997; University of West Florida 1997; USC Information Sciences Institute (Los Angeles) 2004; Washington University in St. Louis 2013, York University (Canada) 1997.

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

- W. Chen, Z. Wang, J. Li, **S. Koenig** and B. Dilkina, No Panacea in Planning: Algorithm Selection for Suboptimal Multi-Agent Path Finding, AAAI-23 Workshop on Multi-Agent Path Finding.
- T. Huang, B. Dilkina and **S. Koenig**, ML-Guided Searches for Multi-Agent Path Finding, INFORMS Annual Meeting, 2022.
- T. Huang, J. Li, B. Dilkina and **S. Koenig**, Anytime Multi-Agent Path Finding via Machine Learning-Guided Large Neighborhood Search (Late-Breaking Poster), Symposium on Combinatorial Search, 2021.
- J. Li, Z. Chen, Y. Zheng, S.-H. Chan, D. Harabor, P. Stuckey, H. Ma and **S. Koenig**, Flatland Competition Winner Talks: Team An Old Driver, NeurIPS-20 Workshop: Competition Track.
- Y. Guan, A. Li, S. Haas, S. Kumar and **S. Koenig**, A Combinatorial Perspective on Ising Model Hysteresis, American Physical Society March Meeting, Bulletin of the American Physical Society 65(1), 2020.
- T. Huang, **S. Koenig** and B. Dilkina, Learning to Resolve Conflicts for Multi-Agent Path Finding with Conflict-Based Search, INFORMS Annual Meeting, 2020.

- E. Boyarski, L. Cohen, J. Li, A. Felner and **S. Koenig**, Using Incremental Search for the Low Level of Conflict-Based Search, IJCAI-19 Workshop on Multi-Agent Path Finding.
- G. Sartoretti, **S. Koenig** and H. Choset, A Combined Learning- and Graph-Based Approach to Complete Multi-Agent Path Finding, IJCAI-19 Workshop on Multi-Agent Path Finding.
- G. Belov, L. Cohen, M. Garcia de la Banda, D. Harabor, **S. Koenig** and X. Wei, Position Paper: From Multi-Agent Pathfinding to Pipe Routing, , IJCAI-19 Workshop on Multi-Agent Path Finding.
- H. Xu, X. Wu, S. Kumar and **S. Koenig**, The Buss Reduction for the k-Weighted Vertex Cover Problem [Late-Breaking Poster], Symposium on Combinatorial Search (SoCS), 2017.
- L. Cohen, G. Wagner, S. Kumar, H. Choset and **S. Koenig**, Rapid Randomized Restarts for Multi-Agent Path Finding Solvers [Late-Breaking Poster], Symposium on Combinatorial Search (SoCS), 2017.
- L. Cohen, S. Kumar, T. Uras and **S. Koenig**, The FastMap Algorithm for Shortest Path Computations [Late-Breaking Poster], Symposium on Combinatorial Search (SoCS), 2017.
- X. Wang, M. Dessouky, F. Ordenez, **S. Koenig** and M. Furuhashi, A Pickup and Delivery Problem for Ridesharing Considering Congestion, Industrial and Systems Engineering Research Conference (ISERC), 2013.
- S. Koenig**, We Should Talk to Other Decision-Making Communities, ICAPS Festivus, 2012.
- 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, Magazine and Newsletter Articles

- C. Hernandez, W. Yeoh, J. Baier, H. Zhang, L. Suazo, **S. Koenig** and O. Salzman, Simple and Efficient Bi-Objective Search Algorithms via Fast Dominance Checks, *Artificial Intelligence*, Volume 314, 2023.
- D. Atzmon, A. Felner, J. Li, S. Shperberg, N. Sturtevant and **S. Koenig**, Conflict-Tolerant and Conflict-Free Multi-Agent Meeting. *Artificial Intelligence*, 2023 (in print).
- G. Ragusa, S. Gupta, Q. Huang, Y. Chen, A. Madni, **S. Koenig** and L. Leung, Use of a Delphi Research Process for Designing, Developing, and Assessing the Importance of Contemporary Advanced Manufacturing Curriculum, *International Journal of Engineering Education*, Volume 39(2), pages 429-440, 2023.
- H. Zhang, J. Li, P. Surynek, S. Kumar and **S. Koenig**, Multi-Agent Path Finding with Mutex Propagation, *Artificial Intelligence*, Volume 311, 2022.
- J. Han and **S. Koenig**, A Multiple Surrounding Point Set Approach Using Theta* Algorithm on Eight-Neighbor Grid Graphs, *Information Science*, Volume 582, pages 618-632, 2022.
- J. Bailey, A. Nash, C. Tovey and **S. Koenig**, Path-Length Analysis for Grid-Based Path Planning, *Artificial Intelligence Journal*, Volume 301, pages 103560, 2021.
- J. Li, D. Harabor, P. Stuckey, H. Ma, G. Gange and **S. Koenig**, Pairwise Symmetry Reasoning for Multi-Agent Path Finding Search, *Artificial Intelligence Journal*, Volume 301, 2021.
- E. Heiden, L. Palmieri, L. Bruns, K. Arras, G. Sukhatme and **S. Koenig**, Bench-MR: A Motion Planning Benchmark for Wheeled Mobile Robots, *IEEE Robotics and Automation Letters*, Volume 6(3), pages 4536-4543, 2021. Was also presented in: IEEE International Conference on Robotics and Automation, 2021. A version also appeared as: E. Heiden, L. Palmieri, L. Bruns, K. Arras, G. Sukhatme and **S. Koenig**, Benchmarking Sampling-Based Motion Planning Pipelines for Wheeled Mobile Robots, ICAPS-21 Workshop on Planning and Robotics (PlanRob).
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D. Wong and **S. Koenig**, PinHorse: Teaching Old Pinball Machines New Tricks, www.pinballnews.com, 2009.

Edited Proceedings

E. Andre, **S. Koenig**, M. Dastani and G. Sukthankar (editors), International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), 2018.

M. de Weerd, **S. Koenig**, G. Roeger and M. Spaan (editors), International Conference on Automated Planning and Scheduling (ICAPS), 2018.

B. Bonet, **S. Koenig**, B. Kuipers, I. Nourbakhsh, S. Russell, M. Vardi and T. Walsh (editors): AAAI-16 Workshop on AI, Ethics and Society, AAAI Press (WS-16-02), 2016,

B. Bonet and **S. Koenig** (editors), AAAI Conference on Artificial Intelligence, AAAI Press, 2015.

D. Furcy, **S. Koenig**, W. Ruml and R. Zhou (editors), AAAI-08 Workshop on Search in Artificial Intelligence and Robotics, AAAI Press (WS-08-10), 2008.

B. Dias, **S. Koenig** and M. Lagoudakis (editors), Working Notes of the AAAI-06 Workshop on Auction-Based Robot Coordination, AAAI Press, 2006.

F. Dignum, V. Dignum, **S. Koenig**, S. Kraus, M. Singh and M. Wooldridge (editors), International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), Volumes 1-4, ACM, 2005.

V. Bultiko and **S. Koenig** (editors), IJCAI-05 Workshop on Planning and Learning in A Priori Unknown or Dynamic Domains, 2005.

S. Zilberstein, J. Koehler and **S. Koenig** (editors), International Conference on Automated Planning and Scheduling (ICAPS), AAAI Press, 2004.

S. Koenig and R. Holte (editors), Lecture Notes in Artificial Intelligence, 2371: Abstraction, Reformulation and Approximation (SARA), Springer, 2002.

S. Koenig and R. Goodwin (editors), AIPS-00 Workshop on Decision-Theoretic Planning, 2000.

W. Zhang and **S. Koenig** (editors), AAAI-99 Workshop on Search Techniques for Problem Solving under Uncertainty and Incomplete Information, AAAI Press (SS-99-07), 1999.

S. Koenig, A. Blum, R. Korf and T. Ishida (editors), AAAI-97 Workshop on On-Line Search, AAAI Press (WS-97-10), 1997.

SERVICE TO THE UNIVERSITY

University Level at USC

2023 Workshop on AI for Discovery in the Sciences – Organizer, Session Moderator, and Roundtable Moderator
2020 Ad-Hoc Google Scholarship Selection Committee

School Level at USC

2022	Viterbi Research IT Operational Support Committee
2022	Scholarship Interviewer for Prospective Undergraduate Students
2020	Internal Review of NSF Career Proposal (NSF funded it)
2018-2020	Engineering Faculty Council 2018-2019 and 2020: Faculty Affairs Committee
2014-2016	Engineering Faculty Council 2014-2015: Academic Instruction Committee; and 2015: Committee on Electronic Surveys and Voting
2014-2021	Faculty Mentor of the USC Student Chapter of the Association for the Advancement of Artificial Intelligence 2019: Chapter president Khyati Ganatra was inducted into the USC Order of Arete for her significant contributions in the areas of scholarship, leadership and service
2013	Grade Appeal Panel
2012-2013	Engineering Faculty Council
2010	Dean-Engineering Faculty Council Standing Committee on Faculty Recruitment and Retention
2009-2010	Viterbi School of Engineering Committee on Professional Masters Degree Program
2008-2009	Dean-Engineering Faculty Council Standing Committee on Academic Programs
2008-2010	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

2023-2025	Merit Review Committee (for tenure-track and tenured faculty members)
2023	Appointment Committee - Chair
2022	2x Promotion Committee, 1x Promotion Committee - Chair
2021-2022	Appointment Committee
2019-2020	Artificial Intelligence Faculty Hiring Committee
2019-2020	Promotion Committee - Chair
2019	Promotion Committee
2018-2019	Promotion Committee - Chair
2015	Appointment Committee
2012	Advisory Board of the Computer Science Undergraduate Curriculum Committee
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 Committee - Chair
2005-2009	Organizer of 10 USC Programming Competitions (with David Kempe and, since Spring 2009, Suya You) Spring 2013 and Fall 2014: casual help
2008-now	IT Support for the USC Programming Competitions (Wiki Maintenance)
2004	Hiring Subcommittee in Autonomy
2004-2005	Appointment Committee - Chair
2004	Appointment Committee - 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

2014-2020	Artificial Intelligence Journal (AIJ) Jan 2017-Dec 2019: Sponsorship Committee
2013-2015	AI Access (Nonprofit Book Publisher) [ceased to exist in 2015]
2010-now	Autonomous Agents and Multi-Agent Systems (JAAMAS)
2007-2021	Advances in Complex Systems (ACS)
2004/5-2007/8	Journal of Artificial Intelligence Research (JAIR)
2003-2015	Computational Intelligence (CI) - Action Editor

Editor

2015-now	Communications of the ACM (Research Highlights)
2013-2014	Artificial Intelligence Journal (AIJ)
2013-2016	Computational Cognitive Science (Springer) [ceased to exist in 2016]
2012-now	Progress in Artificial Intelligence (Springer)
2010-2018	Artificial Intelligence Magazine (but listed until 2020) 2012-2018: Competition Report Co-Editor (initiated effort, 32 published articles in total); and 2016-2018: AI in Industry Co-Editor (initiated effort, 7 published articles in total)
2006-2011	International Journal of Advanced Robotic Systems - Editorial Consultant Board
2000-2003	Journal of Artificial Intelligence Research (JAIR)

Guest Editor of Special Journal Issues

2020-2021	German Journal of Artificial Intelligence (Kuenstliche Intelligenz) - Special Issue on Education in Artificial Intelligence K-12
2018-2020	Artificial Intelligence Journal (AIJ) – Special Issue on Ethics for Autonomous Systems
2005-2006	International Journal of Robotics Research (IJRR) - Special Issue of Best Papers from Robotics: Science and Systems
2004-2006	Journal of Machine Learning Research (JMLR) - Special Track on Learning in Large Probabilistic Environments
2001-2003	Artificial Intelligence Journal (AIJ) - Special Issue on Planning with Uncertainty and Incomplete Information

Long-Term Organizational Steering, Executive or Advisory Committees

2021-now	National AI Institute on Advances in Optimization (AI4OPT) – Leadership Team
2021-2024	Computing Community Consortium (CCC) of the Computing Research Association (CRA) – Council 2021-2022: Taskforce on Computing Challenges to Humanity 2022-2023: Taskforce on Next-Generation Artificial Intelligence
2020-2026	International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS) – (elected) Member of the Board of Directors 2020-2022: Education and Training Committee
2020-2024	AAAS Steering Group for Section T on Information, Computing, and Communication – (elected) Member-at-Large

2019-now	ACM New Publications Committee
2019-2020	Optimorum AI, Inc. (optimorum.ai) – Volunteer Advisor
2014-now	ACM Special Interest Group on Artificial Intelligence (SIGAI) 2014-2016: Conference Coordination Officer 2016-2019: (elected) Chair 2018: SIGAI Nominating Committee 2019-2023: Past Chair
2017-2022	IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems (formerly: IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems) – Executive Committee (and part of the Working Group “Embedding Values into Autonomous Intelligent Systems”)
2014-now	Lifeboat Foundation - Advisory Board (Robotics/Artificial Intelligence)
2013-now	Association for the Advancement of Artificial Intelligence (AAAI) 2013-2016: Executive Council – (elected) Member 2013-2014: Conference Outreach Committee 2013-2016: International Committee 2013-2014: Government Liaison Committee 2014-now: Conference Committee – Chair in 2020-2022 (and ex-officio on the AAAI Executive Committee) 2014-2016: Membership Committee – Chair in 2016 2015-2016: Ethics Committee 2015-now: Education Committee 2016: Nominating Committee 2016: Policy and Government Relations Committee 2019-2020: Presidential Fellows Advisory Board – Working Group on the Future of the AAAI Conference 2019: AAAI@40 Blue Ribbon Panel
2011-2015	National ICT Australia Optimization Group - Advisory Board

Long-Term Editorial Steering, Executive or Advisory Committees

2019-now	Advanced Intelligent Systems (Wiley) – Executive Advisory Board
2018-2020	Artificial Intelligence Magazine (AAAI) – Advisory Board
2012	Versita Open Access Books Program in Engineering, Industry, Transportation [became inactive] – Advisory Board
2007/8-2016	Journal of Artificial Intelligence Research (JAIR) – Advisory Board

Conference Steering, Executive or Advisory Committees

2022	International Conference on Automated Planning and Scheduling (ICAPS) – Advisory Chair
2022	IJCAI-ECAI - Advisory Committee
2019	Third Summer School on Cognitive Robotics at USC – Steering Committee
2018-now	AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES) – Steering Committee
2017-unclear	Symposium on Educational Advances in Artificial Intelligence (EAAI) – Steering Committee (informal)
2013-2016	International Conference on Collaboration Technologies and Systems (CTS) – Advisory Committee
2010-now	International Symposium on Combinatorial Search (SoCS) 2010-2015: Governing Council 2019-2022: President (Innovations: SoCS was rated by CORE; SoCS did not lose any money despite COVID 2023: SoCS Working Group for CORE
2005-2014	Robotics: Science and Systems (RSS) - Co-Founder and Conference Board 2009-2010: Board of Directors; and 2010-2014: Advisory Board
2004-2010	International Conference on Automated Planning and Scheduling (ICAPS) - Executive Council (elected) 2006: elected Secretary; and 2008: re-elected Secretary
2002-2013	Symposium on Abstraction, Reformulation and Approximation (SARA) - Steering Committee [the last symposium was held in 2013]
2003-2005	Americas School on Agents and Multiagent Systems - Advisory Committee

Program Committees of Special Journal Issues

1997	Autonomous Robots - Special Issue on Robot Learning
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Conference Chair or Co-Chair

- 2022 International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR) – PC: 52
- 2018 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) - Area Chairs: 22, SPC: 101 and PC: 427 (Innovations: cooperation with two other major AI conferences, IJCAI and ICML, as well as SoCS and ICCBR to form the First Federated AI Meeting; first student lunch with an expert)
- 2017 Symposium on Educational Advances in Artificial Intelligence (EAAI) – PC: 50 (Innovations: New and Future AI Educator Fellowship Program; panels on AI Ethics Education, NSF “Research Experience for Undergraduates” (REU) Sites and Artificial Intelligence for Education; extensive fundraising)
- 2016 Symposium on Educational Advances in Artificial Intelligence (EAAI) – PC: 49 (Innovations: conference attendee survey)
- 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 Organizing Committees

- 2023 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) – JAAMAS Track Co-Chair
- 2021 AAAI Conference on Artificial Intelligence (AAAI) – Senior Member Presentation Track Co-Chair – PC: 37
- 2020 AAAI Conference on Artificial Intelligence (AAAI) – Senior Member Presentation Track Co-Chair – PC: 20
- 2019 Reid Simmons’ “60th” Birthday Celebration at the 40th Anniversary of the CMU Robotics Institute
- 2017 International Joint Conference on Artificial Intelligence (IJCAI) - Robot Competition and Exhibition Co-Chair
- 2016 AAAI Conference on Artificial Intelligence (AAAI) – AAAI/ACM SIGAI Job Fair Co-Organizer
- 2015 AAAI Conference on Artificial Intelligence (AAAI) – AAAI/ACM SIGAI Job Fair of the Initiator and Co-Organizer
- 2015 International Conference on Automated Planning and Scheduling (ICAPS) – Doctoral Consortium Co-Chair
- 2014 International Conference on Automated Planning and Scheduling (ICAPS) – Tutorial Co-Chair
- 2008 AAAI Conference on Artificial Intelligence (AAAI) – Nectar Program Co-Chair - PC: 69
- 2007 AAAI Conference on Artificial Intelligence (AAAI) – Nectar Program Co-Chair - PC: 60
- 2005 Robotics: Science and Systems (RSS) - Workshop Program 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

Conference Program Chair or Co-Chair

- 2023 International Conference on Automated Planning and Scheduling (ICAPS) – SPC: 22, PC: 191
- 2018 International Conference on Automated Planning and Scheduling (ICAPS) – PC: 202 (Innovation: experiment with a new paper review model)
- 2015 AAAI Conference on Artificial Intelligence (AAAI), the first AAAI conference in the winter - SPC: 89 and PC: 974 (Themes: robotics, ethics; Innovations: software demonstration programs; virtual agent exhibition; computer-game showcase; funding information session with program directors from different funding agencies; blue sky idea talks on visions intended to stimulate new directions in AI research; open house for the general public; substantially extended technical, mentoring and social activities for students; AAAI community meeting and the AAAI/ACM SIGAI job fair; conference schedule available via a phone and computer app. New cooperations: IEEE Robotics and Automation Society, RoboCup Federation and Robotics: Science and Systems Foundation in the context of the Shakey celebration; invited paper presentations from Robotics: Science and Systems 2014; invited presentations from robotics student fellowship recipients; robotics exhibition with RoboCup soccer exhibition match; NSF-sponsored workshop on Research Issues at the Boundary of AI and Robotics and many more activities; Received submissions: 1991 – a record in 2015)
- 2005 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) - SPC: 40, PC: 333

Conference Associate Program Chair

- 2021 International Joint Conference on Artificial Intelligence (IJCAI) – Associate Program Committee Chair
- 2013 AAAI Conference on Artificial Intelligence (AAAI) – Associate Chair

Area Chair of Conferences

- 2022 International Joint Conference on Artificial Intelligence and European Conference on Artificial Intelligence (IJCAI/ECAI)
- 2020 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) - Knowledge Representation, Reasoning and Planning Area
- 2020 AAAI Conference on Artificial Intelligence (AAAI)
- 2019 AAAI Conference on Artificial Intelligence (AAAI)
- 2019 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2018 AAAI Conference on Artificial Intelligence (AAAI)
- 2016 International Joint Conference on Artificial Intelligence (IJCAI)
- 2012 AAAI Conference on Artificial Intelligence (AAAI)
- 2011 International Joint Conference on Artificial Intelligence (IJCAI)
- 2009 International Joint Conference on Artificial Intelligence (IJCAI)

Senior Conference Program Committees

- 2023 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2022 International Conference on Automated Planning and Scheduling (ICAPS)
- 2022 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2021 International Conference on Automated Planning and Scheduling (ICAPS)
- 2020 International Conference on Automated Planning and Scheduling (ICAPS)
- 2019 International Joint Conference on Artificial Intelligence (IJCAI)
- 2019 International Conference on Automated Planning and Scheduling (ICAPS)
- 2017 AAAI Conference on Artificial Intelligence (AAAI)
- 2016 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2015 International Joint Conference on Artificial Intelligence (IJCAI) – Video Competition and Sister Conference Tracks
- 2015 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2014 AAAI Conference on Artificial Intelligence (AAAI)
- 2013 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) - Challenges and Vision Track
- 2013 International Joint Conference on Artificial Intelligence (IJCAI)
- 2012 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2011 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2010 AAAI Conference on Artificial Intelligence (AAAI)
- 2009 International Conference on Automated Planning and Scheduling (ICAPS)
- 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)

Conference Program Committees

- 2022 International Symposium on Combinatorial Search (SoCS)
- 2022 AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)
- 2022 International Workshop on the Algorithmic Foundations of Robotics (WAFR)
- 2021 AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)
- 2021 Symposium on Educational Advances in Artificial Intelligence (EAAI) – Model AI Assignment Track
- 2021 International Symposium on Combinatorial Search (SoCS)
- 2020 ACM SIGGRAPH Conference on Motion, Interaction and Games (MIG)
- 2020 International Workshop on the Algorithmic Foundations of Robotics (WAFR)
- 2020 International Symposium on Combinatorial Search (SoCS)
- 2020 FLAIRS Special Track on Autonomous Robots and Agents
- 2020 Symposium on Educational Advances in Artificial Intelligence (EAAI) – Model AI Assignment Track

2020 IJCAI Workshop on Multi-Agent Path Finding
 2020 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)
 2019 ICAPS Workshop on Planning and Robotics (PlanRob)
 2019 IEEE Conference on Games (CoG) – AI for Playing Games Track and Demonstration Papers Track
 2019 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE) – Research Track
 2019 International Symposium on Combinatorial Search (SoCS)
 2019 FLAIRS Special Track on Autonomous Robots and Agents
 2019 Symposium on Educational Advances in Artificial Intelligence (EAAI)
 2019 AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)
 2019 International Workshop on Optimization in Multiagent Systems (OptMAS)
 2019 ACM SIGGRAPH Conference on Motion, Interaction and Games (MIG)
 2018 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)
 2018 Symposium on Educational Advances in Artificial Intelligence (EAAI)
 2018 ACM SIGGRAPH Conference on Motion, Interaction and Games (MIG)
 2018 International Workshop on the Algorithmic Foundations of Robotics (WAFR)
 2018 AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)
 2018 IEEE Conference on Computational Intelligence in Games (CIG)
 2018 International Symposium on Combinatorial Search (SoCS)
 2018 AAAI Spring Symposium on Integrating Representation, Reasoning, Learning and Execution for Goal Directed Autonomy (SIRLE)
 2018 International Workshop on Optimization in Multiagent Systems (OptMAS)
 2018 AAAI Fall Symposium on Reasoning and Learning in Real-World Systems for Long-Term Autonomy (LTA)
 2018 ICAPS Workshop on Planning and Robotics (PlanRob)
 2017 International Symposium on Combinatorial Search (SoCS)
 2017 International Conference on Automated Planning and Scheduling (ICAPS) – Main Track and Robotics Track
 2017 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)
 2017 IEEE Conference on Computational Intelligence in Games (CIG)
 2017 ACM SIGGRAPH Conference on Motion in Games (MIG)
 2017 FLAIRS Special Track on Autonomous Robots and Agents
 2017 AAAI Workshop on Knowledge-Based Techniques for Problem Solving and Reasoning (KnowProS)
 2017 ICAPS Workshop on Planning and Robotics (PlanRob)
 2017 AAMAS Workshop on Optimization in Multi-Agent Systems (OPTMAS)
 2016 AAAI Conference on Artificial Intelligence (AAAI) – Senior Member Paper Track
 2016 International Conference on Automated Planning and Scheduling (ICAPS) – Journal Presentation Track
 2016 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)
 2016 FLAIRS Special Track on Autonomous Robots and Agents
 2016 International Symposium on Combinatorial Search (SoCS)
 2016 AAMAS Workshop on Optimization in Multi-Agent Systems (OPTMAS)
 2016 ICAPS Workshop on Planning and Robotics (PlanRob)
 2016 RSS Workshop on On-Line Decision-Making in Multi-Robot Coordination (DEMUR)
 2016 IJCAI Workshop on Knowledge-Based Techniques for Problem Solving and Reasoning (KnowProS)
 2016 RSS Workshop on Robot Learning and Planning (RLP)
 2016 International Conference on Motion in Games (MIG)
 2016 International Workshop on the Algorithmic Foundations of Robotics (WAFR)
 2015 International Conference on Automated Planning and Scheduling (ICAPS) – Robotics Track and Journal Presentation Track
 2015 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)
 2015 International Symposium on Combinatorial Search (SoCS)
 2015 International Conference on Motion in Games (MIG)
 2015 IROS Workshop on On-Line Decision Making in Multi-Robot Coordination (DEMUR)
 2014 International Conference on Automated Planning and Scheduling (ICAPS) – Main Track, Robotics Track and

Journal Presentation Track

2014 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)

2014 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) - Challenges and Vision Track

2014 Robotics: Science and Systems (RSS)

2014 Symposium on Educational Advances in Artificial Intelligence (EAAI)

2014 FLAIRS Special Track on Intelligent Autonomous Systems (IAS)

2014 International Symposium on Combinatorial Search (SoCS)

2014 ICAPS Workshop on Planning and Robotics (PlanRob)

2014 International Joint Workshop on Optimization in Multi-Agent Systems and Distributed Constraint Reasoning (OPTMAS-DCR)

2014 International Workshop on the Algorithmic Foundations of Robotics (WAFR)

2014 International Workshop on Intelligence on Networked Agents (WEIN)

2014 International Conference on Motion in Games (MIG)

2013 Symposium on Abstraction, Reformulation and Approximation (SARA)

2013 International Conference on Motion in Games (MIG)

2013 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)

2013 International Symposium on Combinatorial Search (SoCS)

2013 ICAPS Workshop on Planning and Robotics (PlanRob)

2013 Symposium on Educational Advances in Artificial Intelligence (EAAI)

2013 Robotics: Science and Systems (RSS)

2013 International Conference on Automated Planning and Scheduling (ICAPS) – Main Track and Journal Presentation Track

2013 AAMAS Workshop on Optimization in Multi-Agent Systems (OPTMAS)

2013 IJCAI Video Competition

2012 International Conference on Motion in Games (MIG)

2012 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)

2012 International Conference on Automated Planning and Scheduling (ICAPS)

2012 International Symposium on Combinatorial Search (SoCS)

2012 FLAIRS Special Track on Artificial Intelligence Education

2012 AAMAS Workshop on Optimization in Multi-Agent Systems (OPTMAS)

2012 ICAPS Workshop on Heuristics and Search for Domain-Independent Planning (HSDIP)

2012 ICAPS Workshop on Combining Task and Motion Planning for Real-World Applications (TAMPRA)

2011 International Symposium on Combinatorial Search (SoCS)

2011 International Conference on Automated Planning and Scheduling (ICAPS)

2011 Annual AAAI Conference on AI and Interactive Digital Entertainment (AIIDE)

2011 AAAI Workshop on Automated Action Planning for Autonomous Mobile Robots (PAMR)

2010 AAAI Bridging the Gap between Task and Motion Planning (BTAMP)

2010 AAAI Workshop on Abstraction, Reformulation and Approximation (WARA)

2010 Annual AAAI Conference on AI and Interactive Digital Entertainment (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 AAI 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 AAI 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 AAI 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 AAI Conference on Artificial Intelligence (AAAI)
 2002 International Conference on Machine Learning (ICML)
 2002 Joint AAI/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)

Conference Boards of Reviewers

2023 IEEE International Conference on Intelligent Robots and Systems (IROS)
 2014 IEEE International Conference on Intelligent Robots and Systems (IROS)
 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 (NeurIPS)
 2005 International Joint Conference on Artificial Intelligence (IJCAI) - SWAT Team
 2004 Neural Information Processing Systems (NeurIPS)
 2003 International Joint Conference on Artificial Intelligence (IJCAI)
 2003 Neural Information Processing Systems (NeurIPS)
 2002 Neural Information Processing Systems (NeurIPS)
 2001 Neural Information Processing Systems (NeurIPS)
 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

2023 Session “Journal Track 2: Explainable and Verifiable AI”
 at the AAAI Conference on Artificial Intelligence
 2022 Session “Path and Motion Planning”
 at the International Conference on Automated Planning and Scheduling (ICAPS)
 2022 Session 2A6-1
 at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
 2022 Introduction of Invited Speaker Vinod Nair
 at the International Conference on the Integration of Constraint Programming, Artificial Intelligence, and
 Operations Research (CPAIOR)
 2021 Introduction of Keynote Speaker Maxim Likhachev
 at the IEEE International Conference on Intelligent Robots and Systems (IROS)
 2021 Introduction of Invited Speaker Michael Thielscher
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2021 Session “Path Planning and Search”
 at the International Conference on Automated Planning and Scheduling (ICAPS)
 2021 Session “[Heuristic Search] Combinatorial Search and Optimization”
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2021 Session: “Common Sense in Ai Agents and Robots”
 at the USC AI Futures Symposium on AI with Common Sense
 2021 Session “Acting Responsibly and Ethically”
 at the USC AI Futures Symposium on Will AIs Ever Be One of Us?
 2021 Session “Methods 2: Fairness, Accountability, and Transparency”
 at the INFORMS/CCC/ACM SIGAI AI/OR Research Workshop
 2020 Session “Search”
 at the International Conference on Automated Planning and Scheduling (ICAPS)
 2020 Session “Robotics and Planning”

at the AAAI Conference on Artificial Intelligence
 2020 Session "Senior Member Track 3"
 at the AAAI Conference on Artificial Intelligence
 2020 Session "Senior Member Track 2"
 at the AAAI Conference on Artificial Intelligence
 2020 Session "Activities to Learn AI"
 at the AIED International Workshop on Education in Artificial Intelligence K-12 (EduAI-20)
 2020 Session "Teaching AI"
 at the AIED International Workshop on Education in Artificial Intelligence K-12 (EduAI-20)
 2019 Session "Multi-Agent Planning"
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2019 Introduction of the ACM SIGAI Industry Award Winner Microsoft Real-World Reinforcement Learning Team
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2019 Session "Planning, Routing, and Scheduling 1"
 at the AAAI Conference on Artificial Intelligence
 2019 Session "Planning, Routing, and Scheduling 4"
 at the AAAI Conference on Artificial Intelligence
 2019 Session "Multi-Robot Systems"
 at the the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
 2019 Introduction of the ACM SIGAI Autonomous Agents Research Award Winner Carles Sierra
 at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
 2019 Session "Path and Motion Planning"
 at the International Conference on Automated Planning and Scheduling (ICAPS)
 2019 Presentation of the Influential Paper and Best Dissertation Awards
 at the International Conference on Automated Planning and Scheduling (ICAPS)
 2019 Session
 at the IJCAI International Workshop on Education in Artificial Intelligence K-12 (EDUAI-19)
 2018 Session "Planning, Learning, and Search"
 at the AAAI Conference on Artificial Intelligence
 2018 Session "Multiagent Systems 1"
 at the AAAI Conference on Artificial Intelligence
 2018 Session "Planning and Scheduling 3"
 at the AAAI Conference on Artificial Intelligence
 2018 Session "FOND and Contingent Planning"
 at the International Conference on Automated Planning and Scheduling (ICAPS)
 2018 Introduction of Invited Speaker Richard Korf
 at the International Conference on Automated Planning and Scheduling (ICAPS)
 2018 Session "Search Applications"
 at the International Symposium on Combinatorial Search (SoCS)
 2018 Introduction of Invited Speaker Robert Holte
 at the International Symposium on Combinatorial Search (SoCS)
 2017 Session "MT-CG: Computer Games"
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2017 Session "MAS1: Coordination and Collaboration"
 at the AAAI Conference on Artificial Intelligence
 2017 Session "Senior Member Talks 1"
 at the AAAI Conference on Artificial Intelligence
 2016 Introduction of Invited Speaker Robert Holte
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2016 Session "Early Career Spotlight Talks - Sonia Chernova and Praddep Varakantham"
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2016 Session "Planning and Scheduling 3 :: Planning under Uncertainty 1"
 at the International Joint Conference on Artificial Intelligence (IJCAI)
 2016 Session "Combinatorial and Heuristic Search 4"
 at the International Joint Conference on Artificial Intelligence (IJCAI)

- 2016 Session “Senior Member 2: Blue Sky and Summary Talks”
at the AAAI Conference on Artificial Intelligence
- 2016 Session “Planning”
at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2016 Session “Distributed Multi-Agent Planning”
at the International Conference on Automated Planning and Scheduling (ICAPS)
- 2016 Session “Path Planning” (Robotics Session)
at the International Conference on Automated Planning and Scheduling (ICAPS)
- 2015 Session “Shakey Celebration: AAAI/ICRA Papers”
at the International Conference on Robotics and Automation (ICRA)
- 2015 Session “Multi-Agent Planning”
at the International Conference on Automated Planning and Scheduling (ICAPS)
- 2015 Session 2
at the International Symposium on Combinatorial Search (SoCS)
- 2014 Session “Heuristic Search and Optimization / Reinforcement Learning”
at the AAAI Conference on Artificial Intelligence
- 2014 Session “Heuristic Search and Optimization / Planning and Scheduling”
at the AAAI Conference on Artificial Intelligence
- 2014 2x Session “Planning and Scheduling”
at the AAAI Conference on Artificial Intelligence
- 2014 Session “Task and Motion Planning”
at the ICAPS Workshop on Planning and Robotics (PlanRob)
- 2014 Session “Search in Applications”
at the International Symposium on Combinatorial Search (SoCS)
- 2013 Session “Real-Time Search”
at the International Symposium on Combinatorial Search (SoCS)
- 2013 Session “Heuristics and Search II”
at the International Conference on Automated Planning and Scheduling (ICAPS)
- 2013 Session “Task and Motion Planning”
at the ICAPS Workshop on Planning and Robotics (PlanRob)
- 2012 Session “Multiagent Systems I”
at the AAAI Conference on Artificial Intelligence
- 2012 Session “Multiagent Systems V”
at the AAAI Conference on Artificial Intelligence
- 2012 Session “Spotlights Track: Games”
at the AAAI Conference on Artificial Intelligence
- 2012 Session “Robotics I”
at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 2012 Discussant of Paper “Probabilistically Reusing Plans in Deterministic Planning”
at the ICAPS-12 Workshop on Heuristics and Search for Domain-Independent Planning (HSDIP)
- 2011 Session “Path Planning”
at the International Symposium on Combinatorial Search (SoCS)
- 2011 Session “Planning: Search”
at the International Joint Conference on Artificial Intelligence (IJCAI)
- 2011 Session “Agents: Pathfinding”
at the International Joint Conference on Artificial Intelligence (IJCAI)
- 2011 Session “Planning”
at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
- 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 Annual AAAI Conference on AI and Interactive Digital Entertainment (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”

- 2004 at Robotics: Science and Systems (RSS)
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

- 2022 INFORMS/CCC/ACM SIGAI AI/OR Research Workshop 2
- 2021 INFORMS/CCC/ACM SIGAI AI/OR Research Workshop 1 (included closing remarks)
- 2016 IJCAI International Workshop on Multi-Agent Path Finding (included a 40-minute talk on our research)
- 2015 NSF-Sponsored Workshop at AAAI-15: Research Issues at the Boundary of AI and Robotics
- 2013 NSF/NRI-Sponsored Workshop on Robot Planning in the Real World: Research Challenges and Opportunities
- 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

Workshop Organizing Committees

- 2023 AAAI Workshop on Multi-Agent Path Finding – Advisory Board
- 2020 Second International AIED Workshop on Education in Artificial Intelligence K-12 (EduAI)
- 2019 IJCAI Workshop on Multi-Agent Path Finding
- 2019 International IJCAI Workshop on Education in Artificial Intelligence K-12 (EduAI)
- 2016 Second AAAI Workshop on Artificial Intelligence, Ethics and Society
- 2015 First AAAI Workshop on Artificial Intelligence and Ethics
- 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

Panel Membership

- 2022 INFORMS Panel “AI/OR: Research and Funding Opportunities”
- 2018 ICAPS Panel “AI Education”
- 2018 EAAI Panel “Non-Traditional Research Experiences for Undergraduates”
- 2018 Panel II: Challenges in Long-Term Autonomy at the NSF Smart and Autonomous Systems PI Meeting
- 2017 IJCAI Panel “AI in 2027”
- 2017 EAAI Panel “AI Ethics Education” (Moderator)
- 2016 Panel “We Come in Peace” by the North-East Ohio ACM Chapter
- 2015 Panel on Meta-Reasoning at the International Symposium on Combinatorial Search (SoCS)

2013 AAAI Session “Funding Panel: NSF Programs” (Session Co-Organizer and Panel Co-Moderator)
 2012 WIC Top10Qi Panel (Top 10 Fundamental Questions and Challenges in Intelligent Informatics/Computing)
 2011 IJCAI Session “Funding Opportunities for International Research Collaborations” (Session Organizer, Panel Moderator and Panel Speaker - as NSF representative)
 2011 AAMAS Workshop on Optimisation in Multi-Agent Systems (OPTMAS)
 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

2022 Commonroad Motion Planning Competition for Autonomous Vehicles at the Intelligent Vehicle Symposium (Chair)
 2022 AAAI Award Committee (for AAAI 2022)
 2022 AAAI/EAAI Outstanding Educator Award
 2021 AAAI/EAAI Outstanding Educator Award
 2021 AAAI Award Committee (for AAAI 2021)
 2021 ICAPS Influential Paper Award (Co-Chair)
 2020 AAMAS Victor Lesser Distinguished Dissertation Award
 2019 AAMAS-19 Demonstration Awards (one of two days)
 2019 ACM SIGAI Student Essay Contest on Artificial Intelligence Technologies
 2018-2020 3x IEEE Mary Kenneth Keller Computer Science & Engineering Undergraduate Teaching Award (2019: Vice-Chair)
 2018-2020 2x ICAPS Influential Paper Award and ICAPS Best Dissertation Award
 2018 SoCS Career Awards
 2017 ACM SIGAI Student Essay Contest on the Responsible Use of AI Technologies
 2017 AAAI/EAAI Outstanding Educator Award
 2016 Inaugural AAAI/EAAI Outstanding Educator Award - Chair
 2016 AAAI-16 Student Abstract and Poster Program Talks
 2015 SoCS Best Paper Awards
 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

2020 Global Station for Big Data and Cybersecurity, Hokkaido University (Japan)
 2016 Research School of Computer Science, Australian National University (Australia)
 2012, 2014 National ICT Australia Optimization Group (Australia)
 2005 JPL Research Program “Deep Space Mission Systems IT”

Conference Proposal Reviewer

2014 Robotics: Science and Systems Workshop Proposals (Workshop Committee)
 2001-2002 2x AAAI Workshop Proposal

Research (and other) Proposal Reviewer

ACM SIGAI Activities Fund 2019; CUNY Collaborative Incentive Research Grant Program 2002; 7th European Union Framework Programme for Research and Technology Development (FP7) 2008, 2009, 2010, 2013; European Union Framework Programme for Research and Innovation (Horizon 2020) 2014; Israel Science Foundation 2008, 2013, 2014, 2016, 2018; Leverhulme Trust (Great Britain) 2019; NASA 2001, 2016; 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, 2013, 2018, 2021; Qatar National Research Fund 2013; U.S. Army Research Office 2008,

2011 (2x), 2012, 2013, 2015, 2018 (2x), 2020.

Journal Reviewer

Adaptive Behavior Journal 1996, 1999; Algorithmica 2002; Annals of Mathematics and Artificial Intelligence 2000, 2007; Artificial Intelligence Communications 2013; Artificial Intelligence Journal 1999, 2000 (3x), 2003 (2x), 2007 (2x), 2008, 2010, 2015; 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 Robotics and Automation Letters 2022 (2x); 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, 2015, 2017; Journal of the Association for Computing Machinery 1997, 2004; Journal of Field Robotics 2007; Machine Learning Journal 1993, 1994, 1998, 1999 (2x), 2000; Kuenstliche Intelligenz 2020; Multiagent and Grid Systems 2008; Neural Computing and Applications 2009; Robotica 2014.

Conference Reviewer (of individual papers)

AAAI Conference on Artificial Intelligence (AAAI) 1993, 1996; 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, 2015; IEEE International Conference on Robotics and Automation (ICRA) 1996, 1997, 2019; International Conference on Tools for Artificial Intelligence (TAI) 1993; International Joint Conference on Artificial Intelligence (IJCAI) 2018 (Sister Conference Track); Pacific Rim International Conference on Artificial Intelligence (PRICAI) 2000.

Book Proposal Reviewer

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

Others

2022 Invited Participant in the Dagstuhl Seminar on Cognitive Robotics
2014 Invited Participant in the New York Artificial Intelligence Summit
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/aaaiposters.html (a webpage for the AAAI Student Abstract and Poster Program) 2002-2011, www.icaps-conference.org (the website of the ICAPS conference series) 2003-2020, www.search-conference.org (the website of the SoCS symposium series) 2008-2023, contest.usc.edu (the website of the USC Programming Contest) 2005-2023, mapf.info (a website with information on multi-agent path finding) since 2019
1996 Member of Carnegie Mellon University’s Team: AAAI Robot Competition