Shiqi Zhang

Assistant Professor
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Research Interests

Artificial Intelligence and **Robotics**.

In particular, I am interested in developing algorithms that integrate reasoning, planning, and learning formalisms for mobile service robots that work in human-inhabited, collaborative, everyday environments.

Research Experience

Assistant Professor, 09/2018 - present
Research Assistant Professor, 05/2018 - 08/2018
The State University of New York (SUNY) at Binghamton, Dept. of Computer Science (Binghamton, NY)

Assistant Professor, 08/2016 - 05/2018
Cleveland State University, Dept. of Electrical Engineering and Computer Science (Cleveland, OH)

Postdoctoral Fellow, with Professor Peter Stone, 02/2014 - 08/2016
The University of Texas at Austin, Dept. of Computer Science (Austin, TX, USA)

Postdoctoral Research Associate, with Professor Mohan Sridharan, 09/2013 - 02/2014
Research Assistant, 09/2009 - 08/2013
Texas Tech University, Dept. of Computer Science (Lubbock, TX, USA)

Intern, 06/2012 - 09/2012
Microsoft Research Asia, Mobile and Sensing Systems Group (Beijing, China)

Software Development Intern, 02/2009 - 05/2009
Shenzhen Wayto Technology (Shenzhen, China)

Research Assistant, 03/2007 - 12/2008
Tsinghua University, Tsinghua-CUHK Joint Research Center for Media Sciences and Systems (Shenzhen, China)

Education

- **Ph.D. in Computer Science** (GPA: 3.918/4.0), Texas Tech University, Lubbock TX, USA. 08/2013
  Dissertation topic: "Integrating Answer Set Programming and POMDPs for Knowledge Representation and Reasoning in Robotics".
  Dissertation Committee: Mohan Sridharan (Chair), Micheal Gelfond, Hamed Sari-Sarraf, and Jeremy Wyatt
- **M.S. in Microelectronics**, Harbin Institute of Technology, Harbin, China. 12/2008
  Outstanding Graduate Award, Higher Education Office of Heilongjiang Province (2% in HIT received)
- **B.S. in Microelectronics**, Harbin Institute of Technology, Harbin, China. 07/2006

Publications

Journal Papers

- Shiqi Zhang, and Peter Stone, **iCORPP: Interleaved Commonsense Reasoning and Probabilistic Planning on Robots**, *Artificial Intelligence*, 2018 (submitted, under review)
- Yuqian Jiang, Shiqi Zhang, Guni Sharon, Harel Yedidsion, and Peter Stone, **Multi-Robot Planning with Conflicts and Synergies**, *Autonomous Robots*, 2018 (reviewed, under revision)
- Mohan Sridharan, Michael Gelfond, Shiqi Zhang, and Jeremy Wyatt, **A Refinement-Based Architecture for Knowledge Representation and Reasoning in Robotics**, *Journal of Artificial Intelligence Research (JAIR)* in 2018 (resubmitted, under review)
- Yuqian Jiang, Shiqi Zhang, Piyush Khandelwal, and Peter Stone, **Task Planning in Robotics: an Empirical Comparison of PDDL-based and ASP-based Systems**, *Frontiers of Information Technology and Electronic Engineering - Springer*, Special Issue on Robotics, 2018 (submitted, under review)
- Piyush Khandelwal, Shiqi Zhang, Jivko Sinapov, Matteo Leonetti, Jesse Thomason, Fangkai Yang, Ilaria Gori, Maxwell Svetlik, Priyanka Khante, Vladimir Lifschitz, J.K. Aggarwal, Raymond Mooney, and Peter Stone, **BWIBots: A Platform for Bridging the Gap Between AI and Human-Robot Interaction Research**, *International Journal on Robotics Research (IJRR)*, Volume 36, Issue 5-7, pp 635-659, 2017
- Shiqi Zhang, Mohan Sridharan and Jeremy Wyatt, **Mixed Logical Inference and Probabilistic Planning for Robots in Unreliable Worlds**, *IEEE Transactions on Robotics (T-RO)*, Volume 31, Issue 3, pp 699-713, 2015
- Shiqi Zhang, Mohan Sridharan and Christian Washington, **Active Visual Planning for Mobile Robot Teams using Hierarchical POMDPs**, *IEEE Transactions on Robotics (T-RO)*, Volume 29, Issue 4, pp 975-985, 2013

Refereed Conference Papers

- Keting Lu, Shiqi Zhang, and Xiaoping Chen, **Goal-oriented Dialogue Policy Learning from Failures**, *The Thirty-Third AAAI Conference on Artificial Intelligence (AAAI)*, Honolulu, Hawaii, 2019
- Saeid Amiri, Suhua Wei, Shiqi Zhang, Jivko Sinapov, Jesse Thomason, and Peter Stone, **Multi-modal Predicate Identification using Dynamically Learned Robot Controllers**, *International Joint Conference on Artificial Intelligence (IJCAI)*, Stockholm, Sweden, 2018
- Shih-Yun Lo, Shiqi Zhang, and Peter Stone, **PETLON: Planning Efficiently for Task-Level-Optimal Navigation**, *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Stockholm, Sweden, 2018
  Best Robotics Paper Award
- Dongcai Lu, Shiqi Zhang, Peter Stone, and Xiaoping Chen, **Leveraging Commonsense Reasoning and Multimodal Perception for Robot Spoken Dialog Systems**, *International Conference on Intelligent Robots and Systems (IROS)*, Vancouver, Canada, 2017
- Shiqi Zhang, Yuqian Jiang, Guni Sharon and Peter Stone, **Multirobot Symbolic Planning under Temporal Uncertainty**, *International Conference on Autonomous Agents and Multiagent Sytems (AAMAS)*, Sao Paulo, Brazil, 2017
- Shiqi Zhang, Piyush Khandelwal and Peter Stone, **Dynamically Constructed (PO)MDPs for Adaptive Robot Planning**, *The Thirty-First AAAI Conference on Artificial Intelligence (AAAI)*, San Francisco, California, 2017

- Shiqi Zhang, Dongcai Lu, Xiaoping Chen and Peter Stone, **Robot Scavenger Hunt: A Standardized Framework for Evaluating Intelligent Mobile Robots**, *International Joint Conference on Artificial Intelligence (IJCAI)*, Demonstrations Track (two pages), New York City, 2016
  Full Day Demonstration of our robot running Scavenger Hunt tasks in Austin TX. The robot was remotely connected via a telepresence tool, VirTour, that was developed by Pato Lankenau.

- Shiqi Zhang and Peter Stone, **CORPP: Commonsense Reasoning and Probabilistic Planning, as Applied to Dialog with a Mobile Robot**, *The Twenty-Ninth AAAI Conference on Artificial Intelligence (AAAI)*, Austin, TX, 2015

- Jesse Thomason, Shiqi Zhang, Raymond Mooney and Peter Stone, **Learning to Interpret Natural Language Commands through Human-Robot Dialog**, *International Joint Conference on Artificial Intelligence (IJCAI)*, Buenos Aires, Argentina, 2015
  Highlighted in Press Conference (4/575); Covered by CXOToday, CIO and H+ in July 2015

- Shiqi Zhang, Fangkai Yang, Piyush Khandelwal and Peter Stone, **Mobile Robot Planning using Action Language BC with an Abstraction Hierarchy**, *International Conference on Logic Programming and Non-monotonic Reasoning (LPNMR)*, Lexington, KY, 2015

- Shiqi Zhang, Mohan Sridharan, Michael Gelfond and Jeremy Wyatt, **Towards an Architecture for Knowledge Representation and Reasoning in Robotics**, *International Conference on Social Robotics (ICSR)*, Sydney, Australia, 2014

- Shiqi Zhang, Mohan Sridharan and Forrest Bao, **ASP+POMDP: Integrating Non-monotonic Logic Programming and Probabilistic Planning on Robots**, *International Conference on Developmental Learning and Epigenetic Robotics (ICDL-EPIROB)*, San Diego, CA, 2012
  Paper of Excellence Award

- Shiqi Zhang and Mohan Sridharan, **Active Visual Sensing and Collaboration on Mobile Robots using Hierarchical POMDPs**, *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Valencia, Spain, 2012

- Shiqi Zhang, Forrest Bao and Mohan Sridharan, **Combining Probabilistic Planning and Logic Programming on Mobile Robots**, *The Twenty-Sixth AAAI Conference on Artificial Intelligence (AAAI)*, Student Abstract Track (two pages), Toronto, Canada, 2012

- Xiang Li, Mohan Sridharan and Shiqi Zhang, **Autonomous Learning of Vision-based Layered Object Models on Mobile Robots**, *International Conference on Robotics and Automation (ICRA)*, Shanghai, China, 2011

- Shiqi Zhang, Mohan Sridharan and Xiang Li, **To Look or Not to Look: A Hierarchical Representation for Visual Planning on Mobile Robots**, *International Conference on Robotics and Automation (ICRA)*, Shanghai, China, 2011

- Chun Yuan, Shiqi Zhang and Zhao Wang, **A Handwritten Character Recognition System Based on Acceleration**, *International Conference on Digital Content, Multimedia Technology and its Applications*, Busan, South Korea, 2011

- Shiqi Zhang, Chun Yuan and Yan Zhang, **Self-defined Gesture Recognition on Keyless Handheld Devices Using MEMS 3D Accelerometer**, *International Conference on Natural Computation*, Jinan, China, 2008

- Zhao Liu, Zhijie Yuan, Weichang Xu, Xiang Song, Shiqi Zhang and Qibo Huang, **Design of Gesture Recognition, using Freescale 3D Micro-accelerometers**, Freescale Design Competition (Proceedings published in *Global Electronics China*, Issue 4, 2008), Shanghai, China, 2008

Refereed Workshop Papers

- Shiqi Zhang, **Reasoning about Actions for Planning in Robotics**, *Workshop on Reasoning about Actions and Processes: Highlights of Recent Advances*, collocated with International Conference on Principles of Knowledge Representation and Reasoning (KR), Tempe, AZ, 2018 (one-page position paper)

- Saeid Amiri, Mohammad S. Shirazi, and Shiqi Zhang, **Leveraging Supervised Learning and Automated Reasoning for Robot Sequential Decision-Making**, *Workshop on Integrating learning of Representations and models with deductive Reasoning*, collocated with KR, Tempe, AZ, 2018

- Sujay Bajracharya, Saeid Amiri, Jesse Thomason, and Shiqi Zhang, **Simultaneous Intention Estimation and Knowledge Augmentation via Human-Robot Dialog**, *Workshop on Models and Representations for Natural Human-Robot Communication*, collocated with RSS, Pittsburgh, PA, 2018

- Saeid Amiri, Suhua Wei, Shiqi Zhang, Jivko Sinapov, Jesse Thomason, and Peter Stone, **Robot Behavioral Exploration and Multi-modal Perception using Dynamically Constructed Controllers**, *The 2018 AAAI Spring Symposium on Integrating Representation, Reasoning, Learning, and Execution for Goal Directed Autonomy*, Stanford University, CA, Mar. 26-28, 2018.

- Shiqi Zhang and Peter Stone, **Integrated Commonsense Reasoning and Probabilistic Planning**, *Workshop on Planning and Robotics (PlanRob)*, collocated with ICAPS, Pittsburgh, PA, 2017

- Shiqi Zhang, Jivko Sinapov, Suhua Wei and Peter Stone, **Robot Behavioral Exploration and Multimodal Perception using POMDPs**, *The AAAI Spring Symposium on Interactive Multi-Sensory Perception for Embodied Agents*, Stanford University, 2017

- Shiqi Zhang, Piyush Khandelwal and Peter Stone, **Dynamically Constructed (PO)MDPs for Adaptive Robot Planning**, *Workshop on Autonomous Mobile Service Robots*, collocated with IJCAI, New York City, USA, 2016

- Shiqi Zhang, Yuqian Jiang, Guni Sharon and Peter Stone, **Multirobot Symbolic Planning under Temporal Uncertainty**, *Workshop on Autonomous Mobile Service Robots*, collocated with IJCAI, New York City, USA, 2016

- Shih-Yun Lo, Shiqi Zhang and Peter Stone, **Integrated Task and Motion Planning for Mobile Service Robots**, *Workshop on Task and Motion Planning*, collocated with RSS, Ann Arbor, Michigan, 2016

- Mohan Sridharan, Michael Gelfond, Shiqi Zhang and Jeremy Wyatt, **Mixing Non-monotonic Logical Reasoning and Probabilistic Planning for Robots**, *Hybrid Reasoning Workshop*, collocated with IJCAI, Buenos Aires, Argentina, 2015

- Shiqi Zhang and Peter Stone, **CORPP: Commonsense Reasoning and Probabilistic Planning, as Applied to Dialog with a Mobile Robot**, *The AAAI Spring Symposium on Knowledge Representation and Reasoning*, Stanford, CA, 2015

- Shiqi Zhang, Mohan Sridharan, Michael Gelfond and Jeremy Wyatt, **Integrating Probabilistic Graphical Models and Declarative Programming for Knowledge Representation and Reasoning in Robotics**, *Planning and Robotics Workshop (PlanRob)*, collocated with ICAPS, Portsmouth, NH, 2014

- Shiqi Zhang, Fangkai Yang, Piyush Khandelwal and Peter Stone, **Mobile Robot Planning using Action Language $\mathcal{BC}$ with Hierarchical Domain Abstractions**, *The Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP)*, collocated with ICLP, Vienna, Austria, 2014

- Shiqi Zhang, Mohan Sridharan, Michael Gelfond and Jeremy Wyatt, **KR^3: An Architecture for Knowledge Representation and Reasoning in Robotics**, *The 15th International Workshop on Non-Monotonic Reasoning (NMR)*, collocated with ICLP, Vienna, Austria, 2014

- Shiqi Zhang and Mohan Sridharan, **Integrating Declarative Programming and Probabilistic Planning for Robots**, *AAAI Fall Symposium Series*, Arlington, VA, 2013

- Shiqi Zhang and Mohan Sridharan, **Combining Answer Set Programming and POMDPs for Knowledge Representation and Reasoning on Mobile Robots**, *Workshop on Knowledge Representation and Reasoning in Robotics (KRR)*, collocated with ICLP, Istanbul, Turkey, 2013
- Shiqi Zhang, Forrest Bao and Mohan Sridharan, **ASP-POMDP: Integrating Non-monotonic Logical Reasoning and Probabilistic Planning on Mobile Robots**, *Workshop on Autonomous Robots and Multirobot Systems (ARMS)*, collocated with AAMAS, Valencia, Spain, 2012
- Shiqi Zhang and Mohan Sridharan, **Visual Search and Multirobot Collaboration on Mobile Robots**, *Workshop on Automated Action Planning for Autonomous Mobile Robots (PAMR)*, collocated with AAAI, San Francisco, CA, 2011
- Shiqi Zhang and Mohan Sridharan, **Vision-based Scene Analysis On a Mobile Robot Using Layered POMDPs**, *Workshop on POMDP Practitioners*, collocated with ICAPS, Toronto, Canada, 2010
- Xiang Li, Shiqi Zhang and Mohan Sridharan, **Vision-based Safe Local Motion On a Humanoid Robot**, *Workshop on Humanoid Soccer Robots*, collocated with Humanoids, Paris, France, 2009
- Shiqi Zhang, Chun Yuan and Yan Zhang, **Handwritten Character Recognition Using Orientation Quantization Based on 3D Accelerometer**, *Workshop on Human Control of Ubiquitous Systems*, collocated with MobiQuitous, Dublin, Ireland, 2008

Workshop and Tutorial Proposals (Accepted)

- Shiqi Zhang, and Mohan Sridharan, **Knowledge-based Sequential Decision-Making under Uncertainty**, *AAAI 2019 Tutorial Program (0.25 day)*, Honolulu, Hawaii, USA, 2019
- Shiqi Zhang, Matteo Leonetti, Mohan Sridharan, and Jeremy Wyatt, **Integrated Representation, Reasoning, and Learning Formalisms for Extended Autonomy in Robotic Systems**, *AAAI 2018 Spring Symposium Series*, Stanford, CA, March 26–28 2018
- Shiqi Zhang and Fangkai Yang, **Knowledge Representation and Planning for Robotics and Autonomous Systems**, *In the 14th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, Espoo, Finland, July 3–6, 2017 (Workshop Canceled)

Student Mentoring

Ph.D. Students

- Yan Ding, starting in Spring 2019
- Kishan Chandan, starting in Spring 2019
- Saeid Amiri, started in Fall 2018
- Azin Shamshirgaran, co-supervised with Dan Simon (CSU), Spring 2018 - present

Master's Students

- Keting Lu (USTC), co-supervised with Xiaoping Chen, Summer 2017 - present
- Danye Luo (CSU), co-supervised with Mohammad Shirazi, Fall 2017 - Spring 2018
- Suhua Wei (CSU), Fall 2016 - Spring 2017, Amazon

Undergraduate Students

- Cihangir Goktolga (Fall 2018 -)
- Ezgi Durmazpinar (Fall 2018 -)

- James Doherty, CSU, Summer 2017 - Spring 2018
- Sujay Bajracharya, CSU, Summer 2017 - Summer 2018
- Patricia Andrews, REU Undergraduate Student in Colorado College, "*Integrating ASP-based Planning and Diagnosis with POMDPs for Knowledge Representation and Reasoning on Mobile Robots*", Summer 2013
- Olatide Omojaro, REU Undergraduate Student in Georgia Tech, *Integrating ASP-based Planning and Diagnosis with POMDPs for Knowledge Representation and Reasoning on Mobile Robots*, Summer 2013
- Christian Washington, REU Undergraduate Student in Louisiana State University, *Decision-Making on Robots using POMDPs and Answer Set Programming*, Summer 2012
- Sabyne Peeler, REU Undergraduate Student in Florida A&M University, *Creating a Stimulating 3D Programming Environment by Integrating Complex Robot Types*, Summer 2012
- David Kari, REU Undergraduate Student in California Baptist University, *Multi-Agent Collaboration on the Nao Platform*, Summer 2011
- Jesse Kawell, REU Undergraduate Student in Samford University,*Multi-Agent Collaboration on the Nao Platform*, Summer 2011
- David R. Seibert, REU Undergraduate Student in Emory University, *Designing Motion Patterns to Increase Effectiveness of the Goal Keeper in Robot Soccer*, Summer 2011

High School Students

- Gopal (Barry) Shukla, "Robot Estimating Human Intentions via Analyzing Motion Trajectories", Senior Project Student, Solon High School, Solon Ohio, May 2018

Doctoral thesis committee

- Xilin Li, "Topic to be decided", Ph.D. student in Mechanical Engineering, SUNY Binghamton (Committee Chair: Kaiyan Yu), Comprehensive Exam in Summer 2019
- Elliot Way, "Behavior Abstraction in Reinforcement Learning", Ph.D. student in Computer Science, SUNY Binghamton (Committee Chair: Lei Yu), RPE in December 2018
- Xuyang Shi, "An ultrasensitive bacterial detection platform for culture free diagnosis of infections", Ph.D. student in Electrical Engineering, CSU (Committee Chair: Siu-Tung Yau), Proposal in May 2018

Master's thesis committee

- Lei Wang, "Advanced Line-Follower Robot", Master's in Electrical Engineering, CSU, December 2017 (Committee Chair: Zhiqiang Gao)

Senior Design Project Students, Cleveland State University

- 2017-2018: UAV-UGV-Human Interaction and Collaboration
  Students: Austin Cassill (Leader), Sujay Bajracharya, William Heeter, and Lakiel Wade
  Nominated for the Best Project Award of CSU by the Department of EECS in 2018
- 2016-2017: Indoor Navigation using Turtlebots
  Students: James Doherty (Leader), Steven Eucker, Nickolas Kramer, Matthew Macias, and Adam Thoenness
  Nominated for the Best Project Award of CSU by the Department of EECS in 2017
- 2016-2017: Phone-based Campus Navigation
  Students: Dawid Lenard (Leader), Abdinajibi Abdi, Ledis Kodra, Tian Lu, and William Pierce

Teaching

Lecturer

- Spring 2019 (SUNY Binghamton): CS465, CS565: Introduction to Artificial Intelligence
- Fall 2018 (SUNY Binghamton): CS480, CS580: Intelligent Mobile Robotics
- Spring 2018 (CSU): CIS 693, EEC 693, EEC 793: Autonomous Intelligent Robotics
- Fall 2017 (CSU): CIS 490, CIS 590: Foundations of Computing
- Spring 2017 (CSU): CIS 493, EEC 492, EEC 592: Autonomous Intelligent Robotics
- Fall 2016 (CSU): CIS 490, CIS 590: Foundations of Computing

Guest Lecturer

- EEC 601: EECS Graduate Seminar, Cleveland State University, Fall 2017
  My topic: Robot Planning in Everyday Environments in 10/2017
- EEC 581: Computer Architecture, Cleveland State University, Spring 2017
  My topic: Robot Operating System (ROS) in 04/2017.
- CIS345: Operating System Principles, Cleveland State University, Fall 2016
  My topic: Robot Operating System (ROS) in 10/2016.
- UGS303: Foundations of Logical Thought, UT Austin, Fall 2015
  My topic: Building-Wide Intelligence (BWI) research introduction to 100 undergraduate students, 10/2015
- CS378: Autonomous Intelligent Robotics, UT Austin, Fall 2015
  My topic: Robot Scavenger Hunt Game, 10/2015
- CS378: Autonomous Intelligent Robotics, UT Austin, Spring 2014
  My topic: SLAM algorithms, 01/2014, and RGB-D sensing, 03/2014

Guest Course Project Supervisor

- CS378: Freshman Research Initiative (FRI) on Autonomous Intelligent Robotics, UT Austin, Spring 2014
  Supervised 10 undergraduate students for one semester on projects including robot patrolling in an office environment and human-robot interaction through RGB-D-based gesture recognition

Teaching Assistant

- CS3364: Design and Analysis of Algorithms, Texas Tech University, Spring 2013
- CS3383: Theory of Automatas, Texas Tech University, Spring 2013
- CS4395: Computer Graphics, Texas Tech University, Spring 2012

Robot Outreach

- 04/07/2018: "CSU Spring Open House", the largest visit day of Cleveland State University. My students offered demonstrations using the Segway-based robot.
- 02/17/2018: 80 students (and parents) in the great Cleveland area visited my lab in CSU, in the "Engineer for a Day" event. My students offered demonstrations using the Segway-based robot.
- 01/23/2018: 26 students from Horizon Science Academy Cleveland Middle School (Cleveland OH) visited my lab in CSU. My students demonstrated our Segway-based robot and Bebop 2 Quad-copter.
- 10/15/2017: 45 students from Berea-Midpark High School (Cleveland OH) visited my lab in CSU. My students and myself introduced our research and demonstrated our robots.
- 02/01/2016: 25 students from Martin Middle School (Austin TX) visited the Building Wide Intelligence (BWI) lab at UT Austin. I introduced research and robots in the lab.

Paper Awards

- **Best Robotics Paper Award**
  International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2018
- **Paper of Excellence Award**
  International Conference on Developmental Learning and Epigenetic Robotics (ICDL-EPIROB), 2012

Research Honors, Awards, and Fellowships

- **Undergraduate Summer Research Award (USRA)**
  Office of Research, Cleveland State Univ, co-PI (with Thijs Heus, PI, and Shawn Ryan, co-PI), 2018
- **Research Scholarship** ($4,000)
  President's Office, Texas Tech University, 2013
- **AAMAS'12 Travel Award**
  Foundation of Autonomous Agents and Multiagent Systems, 2012 (declined)
- **Dean's Fellowship** ($20,000)
  Edward E. Whitacre Jr. College of Engineering, Texas Tech University, 2009-2014
- **Outstanding Graduate Award** (Master's), (awarded to the top 2% in Harbin Institute of Technology)
  Education Department of Heilongjiang Province, China. 2008
- **Outstanding Graduate Award** (Master's), (7% in Harbin Institute of Technology received)
  Harbin Institute of Technology, 2008
- **Best Project Runner Up** (out of >200 teams)
  The Sixth Freescale Design Competition in China, 2007
- **Outstanding Graduate Award** (Undergraduate), (7% in Harbin Institute of Technology received)
  Harbin Institute of Technology, 2006

Professional Activities

Organizing Committee Member:

- The AAAI-19 Tutorial on Knowledge-based Sequential Decision-Making under Uncertainty, Honolulu, Hawaii, January 2019 (with Mohan Sridharan)
- The AAAI-18 Spring Symposium on Integrating Representation, Reasoning, Learning, and Execution for Goal Directed Autonomy, Stanford, CA, March 2018 (25 papers accepted, and 50+ attendees)

Senior Program Committee Member:

- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2019

Program Committee Member:

Conferences

- The AAAI Conference on Artificial Intelligence (AAAI), 2014, 2015, 2018, 2019
- International Joint Conference on Artificial Intelligence (IJCAI), 2015, 2016, 2017
- Annual Conference Neural Information Processing Systems (NIPS), 2017, 2018
- International Conference on Machine Learning (ICML), 2016, 2018
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2016
- International Conference of the Florida Artificial Intelligence Research Society (FLAIRS), 2019

Workshops

- AAAI Fall Symposium on Reasoning & Learning in Real-World Systems for Long-Term Autonomy, 2018
- AAAI Fall Symposium on Knowledge, Skill, and Behavior Transfer in Autonomous Robots, 2014
- AAAI Spring Symposium on Knowledge Representation and Reasoning in Robotics, 2014
- Workshop on Cognitive Robotics (CogRob), 2016, 2018
- Workshop on Machine Learning in Planning and Control of Robot Motion (MLPC), with ICRA, 2018
- Workshop on Computer Vision and Ontology Applied Cross-Disciplinary Technologies, 2014, 2016
- Workshop on Combining AI Reasoning and Cognitive Science with Robotics, with RSS, 2015
- Workshop on Knowledge, Skill, and Behavior Transfer in Autonomous Robots, with AAAI, 2015
- Workshop on Knowledge Representation and Reasoning in Robotics, 2013

Reviewer:

Conferences

- International Conference on Machine Learning (ICML), 2019
- International Conference on Robot Learning (CoRL), 2018
- International Conference on Robotics and Automation (ICRA), 2012, 2014, 2015, 2016, 2017, 2018, 2019
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2015, 2017
- International Conference on Intelligent Robots and Systems (IROS), 2011, 2016, 2018
- The AAAI Conference on Artificial Intelligence (AAAI), 2016
- International Conference on Developmental Learning and Epigenetic Robotics (ICDL-EPIROB), 2014
- European Conference on Artificial Intelligence (ECAI), 2014
- International Joint Conference on Artificial Intelligence (IJCAI), 2013

Workshops:

- The AAAI 2017 Fall Symposium on Human-Agent Groups: Studies, Algorithms and Challenges, 2017
- Workshop on Mathematical Models, Algorithms, and Human-Robot Interaction (with RSS), 2017
- Workshop on Autonomous Mobile Service Robots (with IJCAI), 2016

Journals:

- ACM Transactions on Intelligent Systems and Technology (TIST), 2018
- Elsevier Cognitive Systems Research, 2016, 2018
- Elsevier Engineering Applications of Artificial Intelligence, 2017
- Elsevier Robotics and Autonomous Systems (RAS), 2018
- Hindawi Mathematical Problems in Engineering, 2016
- IEEE Access, 2014
- IEEE Transactions on Automation Science and Engineering (T-ASE), 2017, 2018
- IEEE Transactions on Robotics (T-RO), 2013
- IEEE Transactions on Systems, Man and Cybernetics, Part A, 2014, 2015, 2016, 2017
- Taylor & Francis: Advanced Robotics, 2015
- Taylor & Francis: Journal of Experimental and Theoretical Artificial Intelligence, 2014

Proposal:

- National Science Foundation (NSF), USA
  - Panelist: 2017 (1 panel), 2018 (2 panels)
  - Ad-hoc reviewer: 2018
- Office of Naval Research (ONR), USA
  - Ad-hoc reviewer, 2017

Volunteer:

- Judge, Poster Competition of the College of Engineering, Cleveland State University, 10/2017
- Judge, Choose Ohio–Northeast Ohio Consortium Poster Conference, 04/2017
- Demonstration Volunteer, ExploreUT: "The Biggest Open House in Texas", 2014, 2015, 2016
- Demonstration Volunteer, AAAI-15 Robotics Exhibition, 2015
- Judge, Hub City Regional, FIRST Robotics Competition, 2013
- Student Volunteer, IEEE International Conference on Development and Learning (ICDL), 2012
- Student Judge, GEAR Robotics Competition, Lubbock TX, 2011

University Service:

SUNY Binghamton

- Lab and Infrastructure Committee, Department of Computer Science, 2018-2019
- Faculty Search Committee, Department of Computer Science, 2018-2019

Cleveland State University

- Assessment Peer Reviewer, CSU, Summer 2017
- Program Director, Chinese American Faculty and Staff Association (CAFSA) of CSU, 2017-2018
- NAE Grand Challenge Committee, Engineering College, CSU, 2016-2017
- Faculty Secretary, EECS Department, College of Engineering, CSU, 2017-2018
- Faculty Search Committee, EECS Department, College of Engineering, CSU, 2017-2018

Research Talks

Seminar Talks

- Arizona State University, "Knowledge-based Robot Sequential Decision-Making under Uncertainty", Computer Science and Engineering Department seminar, Tempe, AZ. October, 2018
- JD Group – Silicon Valley Research Center, "Intelligent Mobile Service Robotics: Interaction and Navigation", Mountain View, CA. September, 2018
- Staples Inc. Corporate Headquarters, "Intelligent Mobile Service Robotics: Interaction and Navigation", Framingham, MA. September, 2018
- URU Inc. (Acquired by Adobe in 2018), "Interaction and Collaboration in Mobile Service Robotics", New York City, NY. December, 2017
- Northeast Ohio Computer Science and Information Systems Colloquium Series, "Planning for Intelligent Mobile Robots in Everyday Environments", Kent State University, Kent, OH. March 2017
- Air Force Research Laboratory (AFRL), "Integrating Commonsense Reasoning and Probabilistic Planning in Robotics", Dayton, OH. October 2016
- Texas State University, "Integrating Commonsense Reasoning and Probabilistic Planning in Robotics", Department Seminar, San Marcos, TX. April 2016
- SUNY Albany, "Integrating Commonsense Reasoning and Probabilistic Planning in Robotics", Department Seminar, Albany, NY. April 2016
- Cleveland State University, "Integrating Commonsense Reasoning and Probabilistic Planning in Robotics", Department Seminar, Cleveland, OH. March 2016
- SUNY Binghamton, "Integrating Commonsense Reasoning and Probabilistic Planning in Robotics", Department Seminar, Binghamton, NY. March 2016

- University of Wyoming, “Integrating Commonsense Reasoning and Probabilistic Planning in Robotics", Department Seminar, Remote talk. February 2016
- Baidu Research, “Combining Answer Set Programming and POMDPs for Reasoning in Robotics", Research Seminar, Sunnyvale, CA. June 2015
- University of Texas at Austin, “Combining Answer Set Programming and POMDPs for Reasoning in Robotics", LARG Group Seminar, Austin, TX. November 2013
- Southeast University, “Automated Planning on Autonomous Robots", Artificial Intelligence Lab Seminar, Nanjing, China. August 2012
- Microsoft Research (Asia), “Automated Planning on Autonomous Robots", Mobile and Sensing Systems Group Seminar, Beijing, China. July 2012

Conference/Workshop Invited Talks

- AAAI 2017 Fall Symposium on Human-Agent Groups: Studies, Algorithms and Challenges, “Integrated Reasoning and Planning Algorithms for Human-Robot Groups”, Arlington, VA. November 10, 2017
- Science of Autonomy Workshop, Office of Naval Research, “CORPP: Commonsense Reasoning and Probabilistic Planning, as Applied to Dialog with a Mobile Robot" (1/2 talk), Arlington, VA. August 2015

Panelists (to the public) & Interviews

- Interviewed by Seth Adler for the show of “Duality - Discussing The Real-Time Origins of AI”, at Stanford University, March 27, 2018
- Panelist of Northeast Ohio (NEO) Chapter of ACM, “AI, We Come In Peace: a Practical Discussion on the Impact of Artificial Intelligence in our Communities”, Hosted by Nikola Danaylov, Youngstown State University, Youngstown OH. September 14, 2017

Internal Talks

- SUNY Binghamton, Department Seminar (CS), “Knowledge-based Robot Sequential Decision-Making under Uncertainty”, September 7, 2018
- Cleveland State University, Ignite Talk at College of Engineering Faculty Meeting, “Artificial Intelligence (AI) Planning for Real Robot Systems”, March 9, 2017
- Cleveland State University, Human Machine System Seminar, “Planning for Intelligent Mobile Robots in Everyday Environments”, October 12, 2016
- UT Austin Robotics Program Weekly Meeting, “CORPP: Commonsense Reasoning and Probabilistic Planning, as Applied to Dialog with a Mobile Robot”, November 4, 2015
- Texas Tech University, UREASON Seminar, “CLIPP: Combining Logical Inference and Probabilistic Planning”, October 23, 2012
- Texas Tech University, UREASON Seminar, “Combining Probabilistic Planning and Logic Programming on Mobile Robots”, April 20, 2012
- Texas Tech University, Knowledge Representation (KR) Lab Seminar, “Combining Probabilistic Planning and Logic Programming on Mobile Robots”, February 15, 2012

Personal

Married, Male, Two children (2015 and 2017)

References

Available on request