

Hang Ma

Curriculum Vitæ

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EDUCATION

- 2020 **Ph.D. Computer Science**, *University of Southern California*, Los Angeles, CA, United States
Topic: “Target Assignment and Path Planning for Navigation Tasks with Teams of Agents”
Advisor: Sven Koenig
Committee: S. Koenig, T. K. S. Kumar, S. K. Gupta (Outside Member), P. Stone (UT Austin, External Member)
- 2014 **M.Sc. Computer Science**, *McGill University*, Montreal, QC, Canada
Topic: “Information Gathering and Reward Exploitation of Subgoals for POMDPs”
Advisor: Joelle Pineau
- 2012 **B.Sc. Computing Science (First Class with Distinction)**, *Simon Fraser University*, Burnaby, BC, Canada
- 2012 **B.Eng. Computer Science and Technology**, *Zhejiang University*, Hangzhou, Zhejiang, China

ACADEMIC POSITIONS

- 2019–now **Assistant Professor**, *School of Computing Science, Simon Fraser University*, Burnaby, BC, Canada
- 2014–2019 **Research Assistant**, *Department of Computer Science, University of Southern California*, Los Angeles, CA, United States

SELECTED HONORS AND AWARDS

- 2021 John R. Evans Leaders Fund (JELF), *Canada Foundation for Innovation (CFI)*
- 2021 ICAPS-21 Best Dissertation Award, *International Conference on Automated Planning and Scheduling*
- 2021 ICAPS-21 People’s Choice Best System Demonstration Award, *International Conference on Automated Planning and Scheduling*
- 2021 2020 Victor Lesser Distinguished Dissertation Award Runner-Up, *International Foundation for Autonomous Agents and Multiagent Systems* (There were one winner and two runners-up.)
- 2021 AAAI New Faculty Highlights, *AAAI Conference on Artificial Intelligence* (There were 18 early-career AI researchers selected.)
- 2020 Winning Team (Advisor) of the NeurIPS-20 Flatland Challenge on Multi-Agent Reinforcement Learning on Trains
- 2019 Technology Commercialization Award, *Stevens Center for Innovation, University of Southern California*
- 2016 Outstanding Paper Award, *International Conference on Automated Planning and Scheduling - Robotics Track*
- 2014 Annenberg Graduate Fellowship, *University of Southern California*
- 2013, 2014 2× Graduate Scholarship, *McGill University*
- 2013 Differential Fee Waiver, *McGill University*
- 2012 President’s and 2× Dean’s Honour Rolls, Ranked 1st in the Faculty of Applied Sciences, *Simon Fraser University*
- 2012 2× Open Scholarship, *Simon Fraser University*
- 2011, 2012 3× Alumni Scholarship, *Simon Fraser University*
- 2010 Entrance Scholarship, *Simon Fraser University*
- 2009, 2010 2× Scholarship for Outstanding Merits, *Zhejiang University*
- 2009, 2010 2× Scholarship for Outstanding Students, *Zhejiang University*

- 2009, 2010 2× Excellent Student Award, *Zhejiang University*
2009 Outstanding Student Leader Award, *Zhejiang University*

PUBLICATIONS

Conferences

- [C28] Z. Ma, Y. Luo, and **H. Ma**. **Distributed Heuristic Multi-Agent Path Finding with Communication**. *IEEE International Conference on Robotics and Automation (ICRA)*, 2021, (in press).
- [C27] **H. Ma**. **A Competitive Analysis of Online Multi-Agent Path Finding**. *International Conference on Automated Planning and Scheduling (ICAPS)*, 2021, pp. 234–242.
- [C26] J. Li, Z. Chen, Y. Zheng, S.-H. Chan, D. Harabor, P. J. Stuckey, **H. Ma**, and S. Koenig. **Scalable Rail Planning and Replanning: Winning the 2020 Flatland Challenge**. *International Conference on Automated Planning and Scheduling (ICAPS)*, 2021, pp. 477–485.
- [C25] N. M. Kou, C. Peng, **H. Ma**, T. K. S. Kumar, and S. Koenig. **Idle Time Optimization for Target Assignment and Path Finding in Sortation Centers**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2020, pp. 9925–9932. Acceptance Rate: $1591/7737 = 20.56\%$.
- [C24] J. Li, K. Sun, **H. Ma**, A. Felner, T. K. S. Kumar, and S. Koenig. **Moving Agents in Formation in Congested Environments**. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2020, pp. 726–734. Acceptance Rate: $186/808 = 23.02\%$.
- [C23] J. Li, G. Gange, D. Harabor, P. J. Stuckey, **H. Ma**, and S. Koenig. **New Techniques for Pairwise Symmetry Breaking in Multi-Agent Path Finding**. *International Conference on Automated Planning and Scheduling (ICAPS)*, 2020, pp. 193–201. Acceptance Rate: $69/216 = 31.94\%$.
- [C22] **H. Ma**, D. Harabor, P. J. Stuckey, J. Li, and S. Koenig. **Searching with Consistent Prioritization for Multi-Agent Path Finding**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2019, pp. 7643–7650. Acceptance Rate: $1150/7095 = 16.21\%$. A short version appeared also in: *International Symposium on Combinatorial Search (SoCS)*, 2019, pp. 188–189.
- [C21] **H. Ma**, W. Höning, T. K. S. Kumar, N. Ayanian, and S. Koenig. **Lifelong Path Planning with Kinematic Constraints for Multi-Agent Pickup and Delivery**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2019, pp. 7651–7658. Acceptance Rate: $1150/7095 = 16.21\%$. A short version appeared also in: *International Symposium on Combinatorial Search (SoCS)*, 2019, pp. 190–191.
- [C20] J. Li, P. Surynek, A. Felner, **H. Ma**, T. K. S. Kumar, and S. Koenig. **Multi-Agent Path Finding for Large Agents**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2019, pp. 7627–7634. Acceptance Rate: $1150/7095 = 16.21\%$. A short version appeared also in: *International Symposium on Combinatorial Search (SoCS)*, 2019, pp. 186–187.
- [C19] J. Li, D. Harabor, P. J. Stuckey, **H. Ma**, and S. Koenig. **Symmetry-Breaking Constraints for Grid-Based Multi-Agent Path Finding**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2019, pp. 6087–6095. Acceptance Rate: $1150/7095 = 16.21\%$. A short version appeared also in: *International Symposium on Combinatorial Search (SoCS)*, 2019, pp. 184–185.
- [C18] J. Li, E. Boyarski, A. Felner, **H. Ma**, and S. Koenig. **Improved Heuristics for Multi-Agent Path Finding with Conflict-Based Search**. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2019, pp. 442–449. Acceptance Rate: $850/4752 = 17.89\%$.
- [C17] M. Liu, **H. Ma**, J. Li, and S. Koenig. **Task and Path Planning for Multi-Agent Pickup and Delivery**. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2019, pp. 2253–2255. Acceptance Rate: $189/781 = 24.20\%$.
- [C16] J. Wang, J. Li, **H. Ma**, S. Koenig, and T. K. S. Kumar. **A New Constraint Satisfaction Perspective on Multi-Agent Path Finding**. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2019, pp. 417–423. Extended Abstract.
- [C15] J. Li, D. Harabor, P. J. Stuckey, A. Felner, **H. Ma**, and S. Koenig. **Disjoint Splitting for Conflict-Based Search for Multi-Agent Path Finding**. *International Conference on Automated Planning and Scheduling (ICAPS)*, 2019, pp. 279–283. Short Paper. Acceptance Rate: $69/209 = 33.01\%$.

- [C14] R. Stern, N. Sturtevant, A. Felner, S. Koenig, **H. Ma**, T. Walker, J. Li, D. Atzmon, L. Cohen, T. K. S. Kumar, E. Boyarski, and R. Bartak. **Multi-Agent Pathfinding: Definitions, Variants, and Benchmarks**. *International Symposium on Combinatorial Search (SoCS)*, 2019, pp. 151–159. Position Paper.
- [C13] **H. Ma**, G. Wagner, A. Felner, J. Li, T. K. S. Kumar, and S. Koenig. **Multi-Agent Path Finding with Deadlines**. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2018, pp. 417–423. Acceptance Rate: $710/3470 = 20.64\%$.
- [C12] L. Cohen, M. Greco, **H. Ma**, C. Hernandez, A. Felner, T. K. S. Kumar, and S. Koenig. **Anytime Focal Search with Applications**. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2018, pp. 1434–1441. Acceptance Rate: $710/3470 = 20.64\%$.
- [C11] **H. Ma**, G. Wagner, A. Felner, J. Li, T. K. S. Kumar, and S. Koenig. **Multi-Agent Path Finding with Deadlines: Preliminary Results**. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2018, pp. 2004–2006. Extended Abstract.
- [C10] A. Felner, J. Li, E. Boyarski, **H. Ma**, L. Cohen, T. K. S. Kumar, and S. Koenig. **Adding Heuristics to Conflict-Based Search for Multi-Agent Pathfinding**. *International Conference on Automated Planning and Scheduling (ICAPS)*, 2018, pp. 83–87. Short Paper. Acceptance Rate: $69/209 = 33.01\%$.
- [C9] **H. Ma**, T. K. S. Kumar, and S. Koenig. **Multi-Agent Path Finding with Delay Probabilities**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2017, pp. 3605–3612. Acceptance Rate: $638/2590 = 24.63\%$.
- [C8] **H. Ma**, J. Li, T. K. S. Kumar, and S. Koenig. **Lifelong Multi-Agent Path Finding for Online Pickup and Delivery Tasks**. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2017, pp. 837–845. Acceptance Rate: $155/595 = 26.05\%$.
- [C7] **H. Ma**, J. Yang, L. Cohen, T. K. S. Kumar, and S. Koenig. **Feasibility Study: Moving Non-Homogeneous Teams in Congested Video Game Environments**. *AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE)*, 2017, pp. 270–272. Demo Track.
- [C6] W. Hönl, T. K. S. Kumar, L. Cohen, **H. Ma**, H. Xu, N. Ayanian, and S. Koenig. **Summary: Multi-Agent Path Finding with Kinematic Constraints**. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2017, pp. 4869–4873. Sister Conference Best Paper Track (Invited).
- [C5] **H. Ma**, C. Tovey, G. Sharon, T. K. S. Kumar, and S. Koenig. **Multi-Agent Path Finding with Payload Transfers and the Package-Exchange Robot-Routing Problem**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2016, pp. 3166–3173. Acceptance Rate: $549/2132 = 25.75\%$.
- [C4] **H. Ma** and S. Koenig. **Optimal Target Assignment and Path Finding for Teams of Agents**. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2016, pp. 1144–1152. Acceptance Rate: $137/550 = 24.91\%$. [Invited for journal publication](#).
- [C3] W. Hönl, T. K. 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, pp. 477–485. Acceptance Rate: $65/184 = 35.33\%$. This paper won the [Outstanding Paper Award in the Robotics Track](#) of ICAPS 2016.
- [C2] W. Hönl, T. K. S. Kumar, **H. Ma**, N. Ayanian, and S. Koenig. **Formation Change for Robot Groups in Occluded Environments**. *IEEE/RSJ International Conference on Intelligent Robots and System (IROS)*, 2016, pp. 4836–4842. Acceptance Rate: $832/1719 = 48.40\%$.
- [C1] **H. Ma** and J. Pineau. **Information Gathering and Reward Exploitation of Subgoals for POMDPs**. *AAAI Conference on Artificial Intelligence (AAAI)*, 2015, pp. 3320–3326. Acceptance Rate: $531/1991 = 26.67\%$.
- Journals and Magazines**
- [J5] J. Li, D. Harabor, P. J. Stuckey, **H. Ma**, G. Gange, and S. Koenig. **Pairwise Symmetry Reasoning for Multi-Agent Path Finding Search**. *Artificial Intelligence* 301, 2021, p. 103574.

- [J4] S. Koenig, S. Das, R. D. Paradis, J. P. Dickerson, Y. Gil, K. Guo, B. Kuipers, I. Leite, **H. Ma**, N. Mattei, A. McGovern, L. Medsker, T. W. Neller, M. Neumann, P. Petrov, M. Rovatsos, and D. G. Stork. **ACM SIGAI Activity Report**. *AI Matters* 5(3), 2019, pp. 6–11.
- [J3] S. Koenig, S. Das, R. D. Paradis, J. P. Dickerson, Y. Gil, K. Guo, B. Kuipers, **H. Ma**, N. Mattei, A. McGovern, L. Medsker, T. W. Neller, P. Petrov, M. Rovatsos, and D. G. Stork. **ACM SIGAI Activity Report**. *AI Matters* 4(3), 2018, pp. 7–11.
- [J2] **H. Ma**, W. Hönl, L. Cohen, T. Uras, H. Xu, T. K. S. Kumar, N. Ayanian, and S. Koenig. **Overview: A Hierarchical Framework for Plan Generation and Execution in Multi-Robot Systems**. *IEEE Intelligent Systems* 32(6), 2017, pp. 6–12.
- [J1] **H. Ma** and S. Koenig. **AI Buzzwords Explained: Multi-Agent Path Finding (MAPF)**. *AI Matters* 3(3), 2017, pp. 15–19.
- Workshops**
- [W3] **H. Ma**, S. Koenig, N. Ayanian, L. Cohen, W. Hönl, T. K. S. Kumar, T. Uras, H. Xu, C. Tovey, and G. Sharon. **Overview: Generalizations of Multi-Agent Path Finding to Real-World Scenarios**. *IJCAI-16 Workshop on Multi-Agent Path Finding (WoMAPF)*, 2016.
- [W2] R. Morris, C. Pasareanu, K. Luckow, W. Malik, **H. Ma**, T. K. S. Kumar, and S. Koenig. **Planning, Scheduling and Monitoring for Airport Surface Operations**. *AAAI-16 Workshop on Planning for Hybrid Systems (PlanHS)*, 2016, pp. 608–614.
- [W1] W. Hönl, T. K. S. Kumar, L. Cohen, **H. Ma**, S. Koenig, and N. Ayanian. **Path Planning with Kinematic Constraints for Robot Groups**. *Southern California Robotics Symposium (SCR)*, 2016.

TALKS

Invited Talks and Presentations

- Aug 12, 2021 **Target Assignment and Path Planning for Navigation Tasks with Teams of Agents**, *ICAPS-21 Best Dissertation Talk, International Conference on Automated Planning and Scheduling (ICAPS)*.
- Feb 2, 2021 **Intelligent Planning for Large-Scale Multi-Agent Systems**, *AAAI-20 New Faculty Highlights Talk, AAAI Conference on Artificial Intelligence (AAAI)*.
- Apr 12, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Computer and Information Sciences, Temple University*.
- Apr 10, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Computer Science, Rensselaer Polytechnic Institute*.
- Apr 8, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Electrical Engineering and Computer Science, Syracuse University*.
- Apr 1, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *School of Computing, University of Utah*.
- Mar 28, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Computer Science, University of Victoria*.
- Mar 26, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *School of Computing Science, Simon Fraser University*.
- Mar 21, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Electrical and Computer Engineering, McGill University*.
- Mar 11, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Computer Science, New Mexico State University*.
- Mar 4, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *School of Computing and Information Sciences, Florida International University*.
- Mar 1, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Computer Science and Engineering, University of North Texas*.

- Feb 26, 2019 **Intelligent Task and Path Planning for Teams of Agents**, *Department of Computer Science, University of Texas at Dallas.*
- Jan 8, 2018 **Progress on Multi-Agent Path Finding in Real-World Scenarios**, *School of Data and Computer Science, Sun Yat-Sen University.*
- Dec 20, 2017 **Progress on Multi-Agent Path Finding in Real-World Scenarios**, *Cainiao Network Technology Co., Alibaba Group.*
- Jun 8, 2016 **Generalizations of Multi-Agent Path Finding to Real-World Scenarios**, *School of Data and Computer Science, Sun Yat-Sen University.*
- Apr 13, 2016 **Optimal Target Assignment and Path Finding for Teams of Agents**, *U.S. Army Research Lab West Open House.*
- Oct 30, 2015 **POMDP Planning and Its Applications for Optimizing Building Energy**, *Civil Engineering Department, University of Southern California.*
- Feb 13, 2014 **Information Gathering and Reward Exploitation of Subgoals for POMDPs**, *Graduate Seminar Series, School of Computer Science, McGill University.*

Conference Presentations

- Aug 10, 2021 **A Competitive Analysis of Online Multi-Agent Path Finding**, *International Conference on Automated Planning and Scheduling (ICAPS).*
- Jul 28, 2021 **A Competitive Analysis of Online Multi-Agent Path Finding**, *International Symposium on Combinatorial Search (SoCS).*
- Jul 16, 2019 **Lifelong Path Planning with Kinematic Constraints for Multi-Agent Pickup and Delivery**, *International Symposium on Combinatorial Search (SoCS).*
- July 16, 2019 **Searching with Consistent Prioritization for Multi-Agent Path Finding**, *International Symposium on Combinatorial Search (SoCS).*
- Jan 30, 2019 **Lifelong Path Planning with Kinematic Constraints for Multi-Agent Pickup and Delivery**, *AAAI Conference on Artificial Intelligence (AAAI).*
- Jan 30, 2019 **Searching with Consistent Prioritization for Multi-Agent Path Finding**, *AAAI Conference on Artificial Intelligence (AAAI).*
- Jul 18, 2018 **Multi-Agent Path Finding with Deadlines**, *International Joint Conference on Artificial Intelligence (IJCAI).*
- May 11, 2017 **Lifelong Multi-Agent Path Finding for Online Pickup and Delivery Tasks**, *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS).*
- Feb 6, 2017 **Multi-Agent Path Finding with Delay Probabilities**, *AAAI Conference on Artificial Intelligence (AAAI).*
- May 12, 2016 **Optimal Target Assignment and Path Finding for Teams of Agents**, *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS).*
- Feb 14, 2016 **Multi-Agent Path Finding with Payload Transfers and the Package-Exchange Robot-Routing Problem**, *AAAI Conference on Artificial Intelligence (AAAI).*
- Feb 27, 2015 **Information Gathering and Reward Exploitation of Subgoals for POMDPs**, *AAAI Conference on Artificial Intelligence (AAAI).*

TEACHING

Courses Taught at SFU

- Spring 2021 Intelligent Systems (CMPT-417/827, 93 students)
- Spring 2020 Intelligent Systems (CMPT-417/827, 63 students)

Teaching Assistant at McGill University

- Winter 2014 Information Structures (COMP-610, 17 students)
- Winter 2014 Algorithms and Data Structures (COMP-252, 43 students)
- Fall 2013 Theory of Computation (COMP-330A, 77 students)

Fall 2013 Foundations of Computing (COMP-202, 668 students)

Fall 2012 Theory of Computation (COMP-330A, 97 students)

STUDENT SUPERVISION AND ADVISING

Competitive awards/fellowships/scholarships are listed.

Ph.D. Students at SFU

2020–now Dingcheng Hu
2020: Special Graduate Entrance Scholarship

2020–now Dingyi Sun
2020: Special Graduate Entrance Scholarship

M.Sc. Students at SFU

2021–now Qiushi Lin

2020–now Danoosh Chamani

2020–now Qinghong Xu
2021: Faculty of Applied Sciences Graduate Fellowship

2020–now Xinyi Zhong

Undergraduate Research Students at SFU

2020 Jialiang Chen (SFU-ZJU DDP Student)
2020: VPR Sciences USRA

2020–2021 Ziyuan Ma
2020: VPR Sciences USRA

2020 Xiaoye Zheng (SFU-ZJU DDP Student)
2020: VPR Sciences USRA

Visitors at SFU

2020–2021 Yudong Luo, M.Sc. Student at SFU and then Ph.D. Student at University of Waterloo (12 months)

Ph.D. Supervisory Committees in Computing Science at SFU

2021 Sima Jamali, CDCL SAT Solver Heuristics: Clause Management, Instance Structure, and Decisions, Mitchell - Depth Exam, Proposal, Defense

2020 Geoff Nagy, Flock Heterogeneity and Its Applications, Vaughan - Depth Exam, Proposal, Defense

M.Sc. Supervisory Committees in Computing Science at SFU

2021 Pedram Agand, From Estimation to Control for Robotic Navigation: Probabilistic and Optimal Approaches, Chen - Defense (Examiner)

2021 Minh Bui, Hardware and Software Acceleration for Hamilton-Jacobi Reachability Analysis, Chen - Defense (Examiner)

2021 Mahsa Maleki Abyaneh, High Resolution Instance Segmentation for Building Blueprint Vectorization, Furukawa - Defense (Examination Chair)

2021 Xiang Xu, Articulated Object Reconstruction from Interaction Videos, Furukawa - Defense (Examination Chair)

2021 Zhiqi Yin, Motor Control and Strategy Discovery for Physically Simulated Characters, Yin - Defense

2020 Yudong Luo, Inverse Reinforcement Learning for Team Sports: Valuing Actions and Players, Schulte - Defense

External Member of M.Sc. Supervisory Committees

2021 Omri Kaduri, Algorithm Selection for Optimal Multi-Agent Path Finding, Ben-Gurion University (Israel), Stern - Defense

Research Project Supervision at USC Resulting in Publications

2018 Jiangxing Wang (Master's Student in Computer Science at USC, Best Research Award in Computer Science), Directed Research Project

- 2018 Minghua Liu (Undergraduate Student in Computer Science at Tsinghua University, joined UCSD as a Ph.D. student in Fall 2019), USC-Tsinghua Summer Experience Program
- 2017 Jingxing Yang (Undergraduate Student in Computer Science at USC), Directed Research Project
- 2016 Jiaoyang Li (Undergraduate Student in Automation at Tsinghua University, joined USC as a Ph.D. student in Fall 2017), USC-Tsinghua Summer Experience Program

SERVICE

Guest Editor of Journal Topical Collections

- 2019–now Springer Nature Applied Sciences - Topical Collection on Distributed Mobile Robotic Systems

Executive Committees

- 2017–2019 ACM Special Interest Group on Artificial Intelligence (SIGAI) - Information Officer (Appointed)

Conference and Workshop Chair or Co-Chair

- 2021 International Symposium on Combinatorial Search (SoCS) - served also as program chair - DC Chairs: 2, PC: 66 (Innovations: first Doctoral Consortium; first Meet with a Senior event; virtual interaction platform; extensive fundraising; rebuttal phase in paper review; a record number of 210 registered participants)

- 2019 IJCAI International Workshop on Multi-Agent Path Finding (WoMAPF) - served also as program chair - PC: 13

Conference Organizing Committees

- 2021 International Conference on Automated Planning and Scheduling (ICAPS) - Systems Demo Co-Chair - PC: 65

Conference Area Chair

- 2021 International Symposium on Multi-Robot and Multi-Agent Systems (MRS)

Senior Conference Program Committee Member

- 2021 International Joint Conference on Artificial Intelligence (IJCAI)

Conference and Workshop Program Committee Member

- 2020, 2021 AAAI Conference on Artificial Intelligence (AAAI)

- 2021 ACM/SIGGRAPH Conference on Motion, Interaction and Games (MIG)

- 2019–2021 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)

- 2021 International Conference on Automated Planning and Scheduling (ICAPS)

- 2021 International Conference of the Florida Artificial Intelligence Research Society (FLAIR)

- 2019, 2020 International Joint Conference on Artificial Intelligence (IJCAI)

- 2020 International Symposium on Combinatorial Search (SoCS)

- 2020 International Workshop on Multi-Agent Path Finding (WoMAPF)

Conference Session Chair

- 2021 Session 1 “Search”, International Conference on Automated Planning and Scheduling (ICAPS)

- 2021 Session TuCT3 “Multiple and Distributed Systems IV”, IEEE International Conference on Robotics and Automation (ICRA)

Journal Reviewer

- 2021 Journal of Guidance, Control, and Dynamics (JGCD)

- 2020 Autonomous Agents and Multi-Agent Systems (JAAMAS)

- 2018–2020 Autonomous Robots (AURO)

- 2019, 2020 IEEE Robotics and Automation Letters (RA-L)

- 2020 IEEE Transactions on Robotics (T-RO)

- 2018, 2020 Journal of Artificial Intelligence Research (JAIR)

- 2019 ACM Transactions on Intelligent Systems and Technology (ACM TIST)

- 2018, 2019 Discrete Event Dynamic Systems (DEDS)

2018 Science China Information Sciences

2017 Artificial Intelligence Journal (AIJ)

Conference and Workshop Reviewer

2018, 2021 IEEE International Conference on Robotics and Automation (ICRA)

2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

2019 ACM/SIGGRAPH Conference on Motion, Interaction and Games (MIG)

2016, 2017, 2019 AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE)

2018, 2019 AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)

2018 AAAI Spring Symposium on Integrating Representation, Reasoning, Learning, and Execution for Goal Directed Autonomy (SIRLE)

2018 International Conference of the Florida Artificial Intelligence Research Society (FAIRS)

2016, 2018 International Symposium on Combinatorial Search (SoCS)

2016, 2018 International Workshop on the Algorithmic Foundations of Robotics (WAFR)

2018 ICAPS Workshop on Planning and Robotics (PlanRob)

2017 IEEE Conference on Computational Intelligence and Games (CIG)

2017 AAAI Workshop on Knowledge-Based Techniques for Problem Solving and Reasoning (KnowProS)

2016, 2017 International Conference on Automated Planning and Scheduling (ICAPS)

2017 International Workshop on Optimisation in Multi-Agent Systems (OptMAS)

Grant Proposal Reviewer

2021 Israel Science Foundation - Personal Research Grants Program

2020 Mitacs Accelerate

Service to the University

2020–2021 Undergraduate Program Committee Member, *School of Computing Science, Simon Fraser University*

2017–2019 Graduate Student Advisor, *USC Student Chapter of AAAI, University of Southern California*

Mentoring at Conferences

2017 ACM-W Scholarship Program, AAAI Conference on Artificial Intelligence (AAAI)