William Yeoh

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RESEARCH INTERESTS

Agent-based Systems: Multi-agent Systems; Planning under Uncertainty; Distributed Constraint Optimization; Heuristic Search; Resource and Task Allocation

Human-AI Collaboration: Goal Recognition and Design; Explainable Planning and Scheduling; User Modeling; Preference Learning and Elicitation

EDUCATION

Ph.D. in Computer Science — Aug 2004 – Aug 2010
University of Southern California, Los Angeles, CA

M.S. in Computer Science — Aug 2004 – May 2007
University of Southern California, Los Angeles, CA

M.S. in Mechanical Engineering and Applied Mechanics — Aug 2000 – Jul 2004
University of Pennsylvania, Philadelphia, PA

B.S.E. in Mechanical Engineering and Applied Mechanics — Aug 2000 – Jul 2004
University of Pennsylvania, Philadelphia, PA

PROFESSIONAL EXPERIENCE

Washington University in St. Louis, Saint Louis, MO
Director, Division of Computational and Data Sciences — Sep 2020 – Now
Associate Professor, Department of Computer Science and Engineering — Jul 2020 – Now
Assistant Professor, Department of Computer Science and Engineering — Sep 2017 – Jun 2020

New Mexico State University, Las Cruces, NM
Assistant Professor, Department of Computer Science — Aug 2012 – Aug 2017

Singapore Management University, Singapore
Research Scientist, School of Information Systems — May 2011 – Jul 2012

University of Massachusetts, Amherst, MA
Post-doctoral Research Associate, Department of Computer Science — Sep 2010 – Mar 2011

HONORS AND AWARDS

Research

- *Best Paper Award*, International Conference on Principles of Diagnosis and Resilient Systems (DX) — 2024
- *Senior Member*, Association for the Advancement of Artificial Intelligence (AAAI) — 2021
- *Best Paper Award*, International Conference on Distributed Artificial Intelligence (DAI) — 2021
- *Early Career Spotlight Talk*, International Joint Conference on Artificial Intelligence (IJCAI) — 2018

- *Visionary Paper Award*, International Conference on Autonomous Agents and Multiagent Systems (AAMAS) Workshop Series 2017
- *CAREER Award*, National Science Foundation 2016
- *AI's 10 to Watch*, IEEE Intelligent Systems 2015
- *Outstanding Research Assistant Award*, Computer Science, University of Southern California 2009
- *Best Student Paper Award Nomination*, International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2009

Teaching

- *Excellence in Teaching Award*, Emerson[1] 2022
- *Outstanding Graduate Faculty Award in Mentoring*, Computer Science Graduate Student Organization, New Mexico State University 2015, 2016
- *Outstanding Graduate Faculty Award in Teaching*, Computer Science Graduate Student Organization, New Mexico State University 2013
- *Teaching Assistant Fellow*, Center for Excellence in Teaching, University of Southern California 2009
- *Award for Excellence in Teaching*, Center for Excellence in Teaching, University of Southern California 2008
- *Outstanding Teaching Assistant Award*, Computer Science, University of Southern California 2004, 2007

FUNDING

Total: $36,798,647; as PI: $4,352,420.

External Sources

- Office of Naval Research. *Federated Learning of Generative Adversarial Networks with Resource Constraints and Unreliable Communication.* PI: Yevgeniy Vorobeychik; Co-PIs: Ning Zhang, William Yeoh. $1,499,305. 2024 – 2027.

- National Science Foundation. *NRT-AI: AI Advancements and Convergence in Computational, Environmental, and Social Sciences (AI-ACCESS).* PI: William Yeoh; Co-PIs: Patrick Fowler, Roman Garnett, Fangqiong Ling, Claire Masteller. $2,990,135. 2023 – 2028.

- National Science Foundation. *Collaborative Research: RI: Small: End-to-end Learning of Fair and Explainable Schedules for Court Systems.* PI: William Yeoh. $270,000. 2023 – 2026.

- US-Israel Binational Science Foundation. *Explainable Distributed Constraint Optimization.* PI: Roie Zivan; Co-PI: William Yeoh. $123,900. 2023 – 2026.

- J.P. Morgan Chase Bank. *Explainable and Privacy-Aware Decentralized Scheduling.* PI: William Yeoh. $70,000. 2023 – 2024.

- J.P. Morgan Chase Bank. *Improving Client Experience Through Goal Recognition and Explainable Assistance in Adaptive Systems.* PI: William Yeoh. $98,924. 2022 – 2023.

- US-Israel Binational Science Foundation. *Communication-Aware Distributed Constraint Optimization Problems: Foundations, Models, and Algorithms.* PI: Roie Zivan; Co-PI: William Yeoh. $121,590. 2019 – 2022.

- Defense Advanced Research Projects Agency. *Anytime Reasoning and Analysis for Kill-Web Negotiation and Instantiation Across Domains (ARAKNID).* PI: Brett Benyo; Co-PIs: Mitchell Colby, Paulo Costa, William Yeoh. $18,556,123. 2019 – 2022.

[1]The Excellence in Teaching Awards program, sponsored by Emerson, annually recognizes educators in the Saint Louis metropolitan area – from kindergarten teachers to college professors – who are examples of excellence in their field.

- Boeing. *Integrated Computational and Cognitive Workflows for Improved Security and Usability.* PI: Alvitta Ottley; Co-PI: William Yeoh. $165,860. 2019.
- National Science Foundation. *RI: Small: Collaborative Research: Preference Elicitation and Device Scheduling for Smart Homes.* PI: William Yeoh. $299,998. 2018 – 2021.
- Defense Advanced Research Projects Agency. *Mission-Oriented Adaptive Placement of Task and Data (MAP).* PI: Aaron Paulos; Co-PIs: Soura Dasgupta, Bryan Lyles, Ramesh Sitaraman, William Yeoh. $6,979,728. 2017 – 2021.
- National Science Foundation. *CAREER: Decentralized Constraint-based Optimization for Multi-Agent Planning and Coordination.* PI: William Yeoh. $500,000. 2016 – 2021.
- National Science Foundation. *BSF: 2014012: Robust Solutions for Distributed Constraint Optimization Problems.* PI: William Yeoh. $50,000. 2015 – 2019.
- National Science Foundation. *iCREDITS: Interdisciplinary Center of Research Excellence in Design of Intelligent Technologies for Smartgrids.* PI: Enrico Pontelli; Co-PIs: Sukumar Brahma, Satyajayant Misra, Satishkumar Ranade, William Yeoh. $4,999,721. 2014 – 2019.

Internal Sources

- Washington University in St. Louis – Geospatial Research Initative. *Privacy and Fairness in Mobility Applications.* PI: William Yeoh; Co-PI: Ning Zhang. $20,000. 2024 – 2025.
- Washington University in St. Louis – Transdisciplinary Institute in Applied Data Sciences. *Study of Polarization in Social Networks through Empirical Modeling and Simulations.* PI: William Yeoh; Co-PI: Dino Christenson. $28,363. 2023 – 2024.
- Washington University in St. Louis – McDonnell International Scholars Academy. *Understanding and Accounting for Human Behavior and Beliefs in Human-AI Collaboration.* PI: William Yeoh; Co-PI: Chien-Ju Ho. $25,000. 2022 – 2023.

PUBLICATIONS

Dissertation

1. William Yeoh. Speeding Up Distributed Constraint Optimization Search Algorithms. Ph.D. thesis, University of Southern California, Los Angeles, United States, 2010.
   *Also appears as a book published by Scholars' Press, ISBN: 3639707214.

Journal Articles

14. Roie Zivan, Ben Rachmut, Omer Perry, and William Yeoh. Effect of Asynchronous Execution and Imperfect Communication on Max-Sum Belief Propagation. *Autonomous Agents and Multi-Agent Systems*, 37(2), page 40, 2023.
13. Carlos Hernández, William Yeoh, Jorge A. Baier, Han Zhang, Luis Suazo, Sven Koenig, and Oren Salzman. Simple and Efficient Bi-Objective Search Algorithms via Fast Dominance Checks. *Artificial Intelligence*, 314, page 103807, 2023.
12. Moumita Choudhury, Amit Sarker, Samin Yaser, Md. Maruf Al Alif Khan, William Yeoh, and Md. Mosaddek Khan. A Particle Swarm Inspired Approach for Continuous Distributed Constraint Optimization Problems. *Engineering Applications of Artificial Intelligence*, 123:B, page 106280, 2023.
11. Ben Rachmut, Roie Zivan, and William Yeoh. Communication-Aware Local Search for Distributed Constraint Optimization. *Journal of Artificial Intelligence Research*, 75, pages 637–675, 2022.

10. Khoi D. Hoang, Ferdinando Fioretto, Ping Hou, William Yeoh, Makoto Yokoo, and Roie Zivan. Proactive Dynamic Distributed Constraint Optimization Problems. *Journal of Artificial Intelligence Research*, 74, pages 179–225, 2022.

9. Stylianos Loukas Vasileiou, William Yeoh, Tran Cao Son, Ashwin Kumar, Michael Cashmore, and Daniele Magazzeni. A Logic-Based Explanation Generation Framework for Classical and Hybrid Planning Problems. *Journal of Artificial Intelligence Research*, 73, pages 1473–1534, 2022.

8. Duc Thien Nguyen, William Yeoh, Hoong Chuin Lau, and Roie Zivan. Distributed Gibbs: A Linear-Space Sampling-Based DCOP Algorithm. *Journal of Artificial Intelligence Research*, 64, pages 705–748, 2019.

7. Ferdinando Fioretto, Enrico Pontelli, and William Yeoh. Distributed Constraint Optimization Problems and Applications: A Survey. *Journal of Artificial Intelligence Research*, 61, pages 723–759, 2018.

6. Pradeep Varakantham, Akshat Kumar, Hoong Chuin Lau, and William Yeoh. Risk-Sensitive Stochastic Orienteering Problems for Trip Optimization in Urban Environments. *ACM Transactions on Intelligent Systems and Technology*, 9(3), pages 24:1–24:25, 2018.

5. Ferdinando Fioretto, Enrico Pontelli, William Yeoh, and Rina Dechter. Accelerating Exact and Approximate Inference for (Distributed) Discrete Optimization with GPUs. *Constraints*, 23(1), pages 1–43, 2018.

4. Atena M. Tabakhi, William Yeoh, Reza Tourani, Francisco Natividad, and Satyajayant Misra. Communication-Sensitive Pseudo-Tree Heuristics for DCOP Algorithms. *International Journal on Artificial Intelligence Tools*, 27(7), pages 1860008:1–1860008:24, 2018.

3. Tiep Le, Tran Cao Son, Enrico Pontelli, and William Yeoh. Solving Distributed Constraint Optimization Problems with Logic Programming. *Theory and Practice of Logic Programming*, 17(4), pages 634–683, 2017.

2. Haris Aziz, Elias Bareinboim, Yejin Choi, Daniel Hsu, Shivaram Kalyanakrishnan, Reshef Meir, Suchi Saria, Gerardo I. Simari, Lirong Xia, and William Yeoh. AI's 10 to Watch. *IEEE Intelligent Systems*, 31(1), pages 56–66, 2016.

1. William Yeoh, Ariel Felner, and Sven Koenig. BnB-ADOPT: An Asynchronous Branch-and-Bound DCOP Algorithm. *Journal of Artificial Intelligence Research*, 38, pages 85–133, 2010.

Conference Papers (Full Papers)

80. Zihan Li, Han Liu, Ao Li, Ching-Hsiang Chan, Yevgeniy Vorobeychik, William Yeoh, Wenjing Lou, and Ning Zhang. Resilient Federated Learning on Embedded Devices with Constrained Network Connectivity. In *Proceedings of the Design Automation Conference (DAC)*, to appear, 2025. Acceptance Rate: 23%.

79. Yinxu Tang, Stylianos Loukas Vasileiou, and William Yeoh. Does Your AI Agent Get You? A Personalizable Framework for Approximating Human Models from Argumentation-based Dialogue Traces. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 14405–14413, 2025. Acceptance Rate: 3032/12957 = 23%.

78. Avraham Natan, Roni Stern, Meir Kalech, William Yeoh, and Tran Cao Son. Diagnosing Multi-Agent STRIPS Plans. In *Proceedings of the International Conference on Principles of Diagnosis and Resilient Systems (DX)*, pages 8:1–8:20, 2024. Acceptance Rate: Unknown.
    🏆 Received Best Paper Award.

77. Stylianos Loukas Vasileiou, Ashwin Kumar, William Yeoh, Tran Cao Son, and Francesca Toni. Dialectical Reconciliation via Structured Argumentative Dialogues. In *Proceedings of the International Conference on Principles of Knowledge Representation and Reasoning (KR)*, pages 777–787, 2024. Acceptance Rate (KR in the Wild Track): 8/32 = 25%

76. Shiraz Regev, Roie Zivan, and William Yeoh. Ex-Ante Constraint Elicitation in Incomplete DCOPs. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 33:1–33:16, 2024. Acceptance Rate: 38/95 = 40%.

75. Ben Rachmut, Roie Zivan, and William Yeoh. Latency-Aware 2-Opt Monotonic Local Search for Distributed Constraint Optimization. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 24:1–24:17, 2024. Acceptance Rate: 38/95 = 40%.

74. Shawn Skyler, Shahaf Shperberg, Dor Atzmon, Ariel Felner, Oren Salzman, Shao-Hung Chan, Han Zhang, Sven Koenig, William Yeoh, and Carlos Hernández Ulloa. Theoretical Study on Multi-objective Heuristic Search. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 7021–7028, 2024. Acceptance Rate: Unknown.

73. Jean Springsteen, William Yeoh, and Dino Christenson. Algorithmic Filtering, Out-Group Stereotype, and Polarization on Social Media. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1782–1790, 2024. Acceptance Rate: 229/883 = 26%.

72. Carlos Hernández Ulloa, William Yeoh, Jorge A. Baier, Ariel Felner, Oren Salzman, Han Zhang, Shao-Hung Chan, Shawn Skyler, and Sven Koenig. Multi-objective Search via Lazy and Efficient Dominance Checks. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 7223–7230, 2023. Acceptance Rate: 644/4566 = 15%.

71. Stylianos Loukas Vasileiou and William Yeoh. PLEASE: Generating Personalized Explanations in Human-Aware Planning. In *Proceedings of the European Conference on Artificial Intelligence (ECAI)*, pages 2411–2418, 2023. Acceptance Rate: ∼391/1631 = ∼24%.

70. Stylianos Loukas Vasileiou, Borong Xu, and William Yeoh. A Logic-based Framework for Explainable Agent Scheduling Problems. In *Proceedings of the European Conference on Artificial Intelligence (ECAI)*, pages 2402–2410, 2023. Acceptance Rate: ∼391/1631 = ∼24%.

69. Ashwin Kumar, Yevgeniy Vorobeychik, and William Yeoh. Using Simple Incentives to Improve Two-Sided Fairness in Ridesharing Systems. In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, pages 227–235, 2023. Acceptance Rate: 79/258 = 31%.

68. Tran Cao Son, William Yeoh, Roni Stern, and Meir Kalech. Multi-Agent Planning and Diagnosis with Commonsense Reasoning. In *Proceedings of the International Conference on Distributed Artificial Intelligence (DAI)*, pages 5:1–5:9, 2023. Acceptance Rate: 8/30 = 27%.

67. Ashwin Kumar, Stylianos Loukas Vasileiou, Melanie Bancilhon, Alvitta Ottley, and William Yeoh. VizXP: A Visualization Framework for Conveying Explanations to Users in Model Reconciliation Problems. In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, pages 701–709, 2022. Acceptance Rate: 85/277 = 31%.

66. Christabel Wayllace and William Yeoh. Stochastic Goal Recognition Design Problems with Suboptimal Agents. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 9953–9961, 2022. Acceptance Rate: 1349/9020 = 15%.

65. Han Liu, Zhiyuan Yu, Mingming Zha, XiaoFeng Wang, William Yeoh, Yevgeniy Vorobeychik, and Ning Zhang. When Evil Calls: Targeted Adversarial Voice over IP Network. In *Proceedings of the ACM Conference on Computer and Communications Security (CCS)*, pages 2009–2023, 2022. Acceptance Rate: 218/971 = 22%.

64. Khoi D. Hoang and William Yeoh. Dynamic Continuous Distributed Constraint Optimization Problems. In *Proceedings of the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*, pages 475–491, 2022. Acceptance Rate: ∼31/100 = ∼31%.

63. Roie Zivan, Omer Perry, Ben Rachmut, and William Yeoh. The Effect of Asynchronous Execution and Message Latency on Max-Sum. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 60:1–60:18, 2021. Acceptance Rate: 57/129 = 44%.

62. Ben Rachmut, Roie Zivan, and William Yeoh. Latency-Aware Local Search for Distributed Constraint Optimization. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1019–1027, 2021. Acceptance Rate: 152/612 = 25%.

61. Stylianos Loukas Vasileiou, Alessandro Previti, and William Yeoh. On Exploiting Hitting Sets for Model Reconciliation. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 6514–6521, 2021. Acceptance Rate: 1692/7911 = 21%.

60. Atena M. Tabakhi, William Yeoh, and Roie Zivan. Incomplete Distributed Constraint Optimization Problems: Model, Algorithms, and Heuristics. In *Proceedings of the International Conference on Distributed Artificial Intelligence (DAI)*, pages 64–78, 2021. Acceptance Rate: 10/31 = 32%.
    🏆 Received Best Paper Award.

59. Tran Cao Son, Van Nguyen, Stylianos Loukas Vasileiou, and William Yeoh. Model Reconciliation in Logic Programs. In *Proceedings of the European Conference on Logics in Artificial Intelligence (JELIA)*, pages 393–406, 2021. Acceptance Rate: Unknown.

58. Moinul Morshed Porag Chowdhury, Jose Perez, Christopher Kiekintveld, Son Cao Tran, William Yeoh, and Enrico Pontelli. Empirical Game-Theoretic Methods to Minimize Regret Against Specific Opponents. In *Proceedings of the SPIE Conference on Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications*, 2021. Acceptance Rate: Unknown.

57. Balint Gucsi, Danesh S. Tarapore, William Yeoh, Christopher Amato, and Long Tran-Thanh. To Ask or Not to Ask: A User Annoyance Aware Preference Elicitation Framework for Social Robots. In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pages 7935–7940, 2020. Acceptance Rate: ∼1408/2996 = ∼47%.

56. Carlos Hernández Ulloa, William Yeoh, Jorge A. Baier, Han Zhang, Luis Suazo, and Sven Koenig. A Simple and Fast Bi-Objective Search Algorithm. In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, pages 143–151, 2020. Acceptance Rate: 69/216 = 32%.

55. Srishti Dhamija, Alolika Gon, Pradeep Varakantham, and William Yeoh. Online Traffic Signal Control through Sample-Based Constrained Optimization. In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, pages 366–374, 2020. Acceptance Rate: 69/216 = 32%.

54. Khoi D. Hoang, William Yeoh, Makoto Yokoo, and Zinovi Rabinovich. New Algorithms for Continuous Distributed Constraint Optimization Problems. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 502–510, 2020. Acceptance Rate: 186/808 = 23%.

53. Christabel Wayllace, Sarah Keren, Avigdor Gal, Erez Karpas, William Yeoh, and Shlomo Zilberstein. Accounting for Observer's Partial Observability in Stochastic Goal Recognition Design: Messing with the Marauder's Map. In *Proceedings of the European Conference on Artificial Intelligence (ECAI)*, pages 2394–2401, 2020. Acceptance Rate: 365/1363 = 26%.

52. Atena M. Tabakhi, William Yeoh, and Ferdinando Fioretto. The Smart Appliance Scheduling Problem: A Bayesian Optimization Approach. In *Proceedings of the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*, pages 100–115, 2020. Acceptance Rate: 19/50 = 26%.

51. Atena M. Tabakhi, William Yeoh, and Makoto Yokoo. Parameterized Heuristics for Incomplete Weighted CSPs with Elicitation Costs. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 476–484, 2019. Acceptance Rate: 189/781 = 24%.

50. Khoi D. Hoang, Christabel Wayllace, William Yeoh, Jacob Beal, Soura Dasgupta, Yuanqiu Mo, Aaron Paulos, and Jon Schewe. New Distributed Constraint Reasoning Algorithms for Load Balancing in Edge Computing. In *Proceedings of the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*, pages 69–86, 2019. Acceptance Rate: 29/112 = 26%.

49. Van Nguyen, William Yeoh, Tran Cao Son, Vladik Kreinovich, and Tiep Le. A Scheduler for Smart Homes with Probabilistic User Preferences. In *Proceedings of the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*, pages 138–152, 2019. Acceptance Rate: 29/112 = 26%.

48. Poom Pianpak, Tran Cao Son, Phoebe O. Toups, and William Yeoh. A Distributed Solver for Multi-Agent Path Finding Problems. In *Proceedings of the International Conference on Distributed Artificial Intelligence (DAI)*, pages 2:1–2:7, 2019. Acceptance Rate: 13/37 = 35%.

47. Khoi D. Hoang, Ferdinando Fioretto, William Yeoh, Enrico Pontelli, and Roie Zivan. A Large Neighboring Search Schema for Multi-Agent Optimization. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 688–706, 2018. Acceptance Rate: 50/114 = 44%.

46. Pritee Agrawal, Pradeep Varakantham, and William Yeoh. Decentralized Planning for Non-dedicated Agent Teams with Submodular Rewards in Uncertain Environments. In *Proceedings of the Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 958–967, 2018. Acceptance Rate: 104/337 = 31%.

45. Moinul Morshed Porag Chowdhury, Christopher Kiekintveld, Tran Cao Son, and William Yeoh. Bidding in Periodic Double Auctions Using Heuristics and Dynamic MCTS. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 166–172, 2018. Acceptance Rate: 710/3470 = 20%.

44. Devon Sigurdson, Vadim Bulitko, William Yeoh, Carlos Hernández Ulloa, and Sven Koenig. Real-time Multi-agent Pathfinding. In *Proceedings of the IEEE Conference on Computational Intelligence and Games (CIG)*, pages 1–8, 2018. Acceptance Rate: Unknown.

43. Md. Mosaddek Khan, Long Tran-Thanh, William Yeoh, and Nicholas R. Jennings. A Near-Optimal Node-to-Agent Mapping Heuristic for GDL-based DCOP Algorithms in Multi-Agent Systems. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1613–1621, 2018. Acceptance Rate: 151/597 = 25%.

42. Tiep Le, Atena M. Tabakhi, Long Tran-Thanh, William Yeoh, and Tran Cao Son. Preference Elicitation with Interdependency and User Bother Cost. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1459–1467, 2018. Acceptance Rate: 151/597 = 25%.

41. Samuel Ang, Hau Chan, Albert Jiang, and William Yeoh. Game-theoretic Goal Recognition Models with Applications to Security Domains. In *Proceedings of the Conference on Decision and Game Theory for Security (GameSec)*, pages 256–272, 2017. Acceptance Rate: Unknown.

40. Atena M. Tabakhi, Reza Tourani, Francisco Natividad, William Yeoh, and Satyajayant Misra. Pseudo-tree Construction Heuristics for DCOPs and Evaluations on the ns-2 Network Simulator. In *Proceedings of the IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, pages 1105–1112, 2017. Acceptance Rate: Unknown.

39. Atena M. Tabakhi, Tiep Le, Ferdinando Fioretto, and William Yeoh. Preference Elicitation for DCOPs. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 278–296, 2017. Acceptance Rate: 45/104 = 43%.

38. Christabel Wayllace, Ping Hou, and William Yeoh. New Metrics and Algorithms for Stochastic Goal Recognition Design Problems. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 4455–4462, 2017. Acceptance Rate: 660/2540 = 25%.

37. Van Nguyen, Philipp Obermeier, Tran Cao Son, Torsten Schaub, and William Yeoh. Generalized Target Assignment and Path Finding for Teams of Agents. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 1216–1223, 2017. Acceptance Rate: 660/2540 = 25%.

36. Khoi D. Hoang, Ping Hou, Ferdinando Fioretto, William Yeoh, Roie Zivan, and Makoto Yokoo. Infinite-Horizon Proactive Dynamic DCOPs. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 212–220, 2017. Acceptance Rate: 155/595 = 26%.

35. Ferdinando Fioretto, William Yeoh, and Enrico Pontelli. A Multiagent System Approach to Scheduling Devices in Smart Homes. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 981–989, 2017. Acceptance Rate: 155/595 = 26%.

34. Ferdinando Fioretto, William Yeoh, Enrico Pontelli, Ye Ma, and Satishkumar Ranade. A Distributed Constraint Optimization (DCOP) Approach to the Economic Dispatch with Demand Response. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 999–1007, 2017. Acceptance Rate: 155/595 = 26%.

33. Ferdinando Fioretto, William Yeoh, and Enrico Pontelli. A Dynamic Programming-based MCMC Framework for Solving DCOPs with GPUs. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 813–831, 2016. Acceptance Rate: 54/137 = 40%.

32. Christabel Wayllace, Ping Hou, William Yeoh, and Tran Cao Son. Goal Recognition Design with Stochastic Agent Action Outcomes. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 3279–3285, 2016. Acceptance Rate: ∼573/2294 = ∼25%.

31. Pritee Agrawal, Pradeep Varakantham, and William Yeoh. Scalable Greedy Algorithms for Task/Resource Constrained Multi-Agent Stochastic Planning. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 10–16, 2016. Acceptance Rate: ∼573/2294 = ∼25%.

30. Khoi D. Hoang, Ferdinando Fioretto, Ping Hou, Makoto Yokoo, William Yeoh, and Roie Zivan. Proactive Dynamic Distributed Constraint Optimization. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 597–605, 2016. Acceptance Rate: 137/550 = 24%.

29. Tiep Le, Ferdinando Fioretto, William Yeoh, Tran Cao Son, and Enrico Pontelli. ER-DCOPs: A Framework for Distributed Constraint Optimization with Uncertainty in Constraint Utilities. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 606–614, 2016. Acceptance Rate: 137/550 = 24%.

28. Ping Hou, William Yeoh, and Pradeep Varakantham. Solving Risk-Sensitive POMDPs with and without Cost Observations. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 3138-3144, 2016. Acceptance Rate: 549/2132 = 26%.

27. Ferdinando Fioretto, William Yeoh, and Enrico Pontelli. Multi-Variable Agent Decomposition for DCOPs. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 2480–2486, 2016. Acceptance Rate: 549/2132 = 26%.

26. Tran Cao Son, Orkunt Sabuncu, Christian Schulz-Hanke, Torsten Schaub, and William Yeoh. Solving Goal Recognition Design using ASP. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 3181–3187, 2016. Acceptance Rate: 549/2132 = 26%.

25. William Yeoh, Pradeep Varakantham, Xiaoxun Sun, and Sven Koenig. Incremental DCOP Search Algorithms for Solving Dynamic DCOP Problems. In *Proceedings of the International Conference on Intelligent Agent Technology (IAT)*, pages 257–263, 2015. Acceptance Rate: 25/96 = 26%.

24. Ferdinando Fioretto, Tiep Le, Enrico Pontelli, William Yeoh, and Tran Cao Son. Exploiting GPUs in Solving (Distributed) Constraint Optimization Problems with Dynamic Programming. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 121–136, 2015. Acceptance Rate: 39/80 = 49%.

23. Tiep Le, Tran Cao Son, Enrico Pontelli, and William Yeoh. Solving Distributed Constraint Optimization Problems with Logic Programming. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 1174–1181, 2015. Acceptance Rate: 531/1991 = 27%.

22. Ferdinando Fioretto, Tiep Le, William Yeoh, Enrico Pontelli, and Tran Cao Son. Improving DPOP with Branch Consistency for Solving Distributed Constraint Optimization Problems. In *Proceedings of the International Conference on Principles and Practice of Constraint Programming (CP)*, pages 307–323, 2014. Acceptance Rate: Unknown.

21. Ping Hou, William Yeoh, and Tran Cao Son. Solving Uncertain MDPs by Reusing State Information and Plans. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 2285-2292, 2014. Acceptance Rate: 398/1406 = 28%.

20. Duc Thien Nguyen, William Yeoh, Hoong Chuin Lau, Shlomo Zilberstein, and Chongjie Zhang. Decentralized Multi-Agent Reinforcement Learning in Average-Reward Dynamic DCOPs. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 1447-1455, 2014. Acceptance Rate: 398/1406 = 28%.

19. T. K. Satish Kumar, Duc Thien Nguyen, William Yeoh, and Sven Koenig. A Simple Polynomial-Time Randomized Distributed Algorithm for Connected Row Convex Constraints. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 2308-2314, 2014. Acceptance Rate: 398/1406 = 28%.

18. Ping Hou, William Yeoh, and Pradeep Varakantham. Revisiting Risk-Sensitive MDPs: New Algorithms and Results. In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, pages 136–144, 2014. Acceptance Rate: 62/164 = 38%.

17. Pradeep Varakantham, Na Fu, William Yeoh, Shih-Fen Cheng, and Hoong Chuin Lau. Budgeted Personalized Incentive Approaches for Smoothing Congestion in Resource Networks. In *Proceedings of the International Conference on Algorithmic Decision Theory (ADT)*, pages 375–386, 2013. Acceptance Rate: Unknown.

16. William Yeoh, Akshat Kumar, and Shlomo Zilberstein. Automated Generation of Interaction Graphs for Value-Factored Dec-POMDPs. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 411–417, 2013. Acceptance Rate: 413/1473 = 28%.

15. Duc Thien Nguyen, William Yeoh, and Hoong Chuin Lau. Distributed Gibbs: A Memory-Bounded Sampling-Based DCOP Algorithm. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 167–174, 2013. Acceptance Rate: 140/612 = 23%.

14. Geoffrey J. Gordon, Pradeep Varakantham, William Yeoh, Hoong Chuin Lau, Ajay S. Aravamudhan, and Shih-Fen Cheng. Lagrangian Relaxation for Large-Scale Multi-Agent Planning. In *Proceedings of the International Conference on Intelligent Agent Technology (IAT)*, pages 494–501, 2012. Acceptance Rate: Invited.

13. Hoong Chuin Lau, William Yeoh, Pradeep Varakantham, Duc Thien Nguyen, and Huaxing Chen. Dynamic Stochastic Orienteering Problems for Risk-Aware Applications. In *Proceedings of the Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 448–458, 2012. Acceptance Rate: 96/304 = 32%.

12. Xiaoxun Sun, Tansel Uras, Sven Koenig, and William Yeoh. Incremental ARA*: An Incremental Anytime Search Algorithm for Moving-Target Search. In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, pages 243–251, 2012. Acceptance Rate: 45/132 = 34%.

11. Duc Thien Nguyen, William Yeoh, and Hoong Chuin Lau. Stochastic Dominance in Stochastic DCOPs for Risk-Sensitive Applications. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 257–264, 2012. Acceptance Rate: 137/671 = 20%.

10. Patricia Gutierrez, Pedro Meseguer, and William Yeoh. Generalizing ADOPT and BnB-ADOPT. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 554–559, 2011. Acceptance Rate: 227/1325 = 17%.

9. Xiaoxun Sun, William Yeoh, and Sven Koenig. Generalized Fringe-Retrieving A*: Faster Moving Target Search on State Lattices. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1081–1087, 2010. Acceptance Rate: 163/685 = 24%.

8. Xiaoxun Sun, William Yeoh, and Sven Koenig. Moving Target D* Lite. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 67–74, 2010. Acceptance Rate: 163/685 = 24%.

7. William Yeoh, Xiaoxun Sun, and Sven Koenig. Trading Off Solution Quality for Faster Computation in DCOP Search Algorithms. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 354–360, 2009. Acceptance Rate: 331/1290 = 26%.

6. Xiaoxun Sun, William Yeoh, and Sven Koenig. Efficient Incremental Search for Moving Target Search. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 615–620, 2009. Acceptance Rate: 331/1290 = 26%.

5. William Yeoh, Pradeep Varakantham, and Sven Koenig. Caching Schemes for DCOP Search Algorithms. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 609–616, 2009. Acceptance Rate: 132/591 = 22%.
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4. Xiaoxun Sun, William Yeoh, and Sven Koenig. Dynamic Fringe-Saving A*. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 891–898, 2009. Acceptance Rate: 132/591 = 22%.

3. Xiaoxun Sun, William Yeoh, Po-An Chen, and Sven Koenig. Simple Optimization Techniques for A*–Based Search. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 931–936, 2009. Acceptance Rate: 132/591 = 22%.

2. William Yeoh, Ariel Felner, and Sven Koenig. BnB-ADOPT: An Asynchronous Branch-and-Bound DCOP Algorithm. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 591–598, 2008. Acceptance Rate: 142/640 = 22%.

1. Xiaoxun Sun, Sven Koenig, and William Yeoh. Generalized Adaptive A*. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 469–476, 2008. Acceptance Rate: 142/640 = 22%.

Book Chapters and Magazine Articles

6. Ferdinando Fioretto and William Yeoh. AI Buzzwords Explained: Distributed Constraint Optimization Problems. *AI Matters*, 3(4), pages 8–13, 2018.

5. William Kluegel, Muhammad Aamir Iqbal, Ferdinando Fioretto, William Yeoh, and Enrico Pontelli. A Realistic Dataset for the Smart Home Device Scheduling Problem for DCOPs. In *AAMAS 2017 Workshops (Visionary Papers)*, Gita Sukthankar and Juan Antonio Rodriguez-Aguilar (editors), Volume 10643 of *Lecture Notes in Artificial Intelligence*, pages 125–142, Springer, 2017.

4. Moinul Morshed Porag Chowdhury, Russell Y. Folk, Ferdinando Fioretto, Christopher Kiekintveld, and William Yeoh. Investigation of Learning Strategies for the SPOT Broker in Power TAC. In *Agent-Mediated Electronic Commerce: Designing Trading Strategies and Mechanisms for Electronic Markets*, Sofia Ceppi, Esther David, Chen Hajaj, Valentin Robu, and Ioannis A. Vetsikas (editors), Volume 271 of *Lecture Notes in Business Information Processing*, pages 96–111, Springer, 2017.

3. Francisco Natividad, Russell Y. Folk, William Yeoh, and Huiping Cao. On the Use of Off-the-Shelf Machine Learning Techniques to Predict Energy Demands of Power TAC Consumers. In *Agent-Mediated Electronic Commerce: Designing Trading Strategies and Mechanisms for Electronic Markets*, Sofia Ceppi, Esther David, Chen Hajaj, Valentin Robu, and Ioannis A. Vetsikas (editors), Volume 271 of *Lecture Notes in Business Information Processing*, pages 112–126, Springer, 2017.

2. William Yeoh and Makoto Yokoo. Distributed Problem Solving. *AI Magazine*, 33(3), pages 53–65, 2012.

1. William Yeoh, Ariel Felner, and Sven Koenig. IDB-ADOPT: A Depth-First Search DCOP Algorithm. In *Recent Advances in Constraints*, Angelo Oddi, François Fages and Francesca Rossi (editors), Volume 5655 of *Lecture Notes in Artificial Intelligence*, pages 132–146. Springer, 2009.

Conference Papers (Short Papers, Ext. Abstracts, and Tech. Communications)

22. Ashwin Kumar and William Yeoh. DECAF: Learning to be Fair in Multi-agent Resource Allocation (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, to appear, 2025. Acceptance Rate: 250 (full) + 158 (ext. abstract) /1021 = 40%.

21. Stylianos Loukas Vasileiou and William Yeoh. TRACE-CS: A Synergistic Approach to Explainable Course Scheduling Using LLMs and Logic (Demonstration Track). In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 29706–29708, 2025. Acceptance Rate: 42/116 = 36%.

20. Shuwei Wang, Vadim Bulitko, and William Yeoh. Explaining Synthesized Pathfinding Heuristics via Iterative Visualization and Modification. In *Proceedings of the IEEE Conference on Games (CoG)*, pages 1–4, 2024. Acceptance Rate: Unknown.

19. Stylianos Loukas Vasileiou, William Yeoh, Tran Cao Son, Ashwin Kumar, Michael Cashmore, and Daniele Magazzeni. A Logic-Based Explanation Generation Framework for Classical and Hybrid Planning Problems (Extended Abstract). In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 6985–6989, 2023. Acceptance Rate: Unknown.

18. Ashwin Kumar, Sanket Shah, Meghna Lowalekar, Pradeep Varakantham, Alvitta Ottley, and William Yeoh. FairVizARD: A Visualization System for Assessing Fairness of Ride-Sharing Matching Algorithms (Demonstration Track). In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, 2021. Acceptance Rate: Unknown.

17. Atena M. Tabakhi, Yuanming Xiao, William Yeoh, and Roie Zivan. Branch-and-Bound Heuristics for Incomplete DCOPs (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1677–1679, 2021. Acceptance Rate: 152 (full) + 94 (ext. abstract) / 612 = 40%.

16. Van Nguyen, Stylianos Loukas Vasileiou, Tran Cao Son, and William Yeoh. Explainable Planning Using Answer Set Programming. In *Proceedings of the International Conference on Principles of Knowledge Reasoning and Representation (KR)*, pages 662–666, 2020. Acceptance Rate: 83 (full) + 12 (short) / 241 = 40%.

15. Van Nguyen, Stylianos Loukas Vasileiou, Tran Cao Son, and William Yeoh. Conditional Updates of Answer Set Programming and Its Application in Explainable Planning (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1954–1956, 2020. Acceptance Rate: 186 (full) + 138 (ext. abstract) / 808 = 40%.

14. Yuanming Xiao, Atena M. Tabakhi, and William Yeoh. Embedding Preference Elicitation Within the Search for DCOP Solutions (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 2044–2046, 2020. Acceptance Rate: 186 (full) + 138 (ext. abstract) / 808 = 40%.

13. Christabel Wayllace, Sunwoo Ha, Yuchen Han, Jiaming Hu, Shayan Monadjemi, William Yeoh, and Alvitta Ottley. DRAGON-V: Detection and Recognition of Airplane Goals with Navigational Visualization (Demonstration Track). In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 13642–13643, 2020. Acceptance Rate: Unknown

12. William Yeoh. Towards Improving the Expressivity and Scalability of Distributed Constraint Optimization Problems. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 5734–5738, 2018. Acceptance Rate: Invited.
    🏆 Paper accompanying early career spotlight presentation.

11. Moinul Morshed Porag Chowdhury, Christopher Kiekintveld, Tran Cao Son, and William Yeoh. Bidding Strategy for Periodic Double Auctions Using Monte Carlo Tree Search (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1897–1899, 2018. Acceptance Rate: 151 (full) + 132 (ext. abstract) / 597 = 47%.

10. Ferdinando Fioretto, William Yeoh, and Enrico Pontelli. Multi-Variable Agent Decomposition for DCOPs to Exploit Multi-Level Parallelism (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1823–1824, 2015. Acceptance Rate: 167 (full) + 147 (ext. abstract) / 670 = 47%.

9. Ferdinando Fioretto, Federico Campeotto, Agostina Dovier, Enrico Pontelli, and William Yeoh. Large Neighborhood Search with Quality Guarantees for Distributed Constraint Optimization Problems (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1835–1836, 2015. Acceptance Rate: 167 (full) + 147 (ext. abstract) / 670 = 47%.

8. Tiep Le, Tran Cao Son, Enrico Pontelli, and William Yeoh. Logic and Constraint Logic Programming for Distributed Constraint Optimization (Technical Communication). In *Proceedings of the International Conference on Logic Programming (ICLP)*, to appear, 2014. Acceptance Rate: Unknown.

7. Tiep Le, Tran Cao Son, Enrico Pontelli, and William Yeoh. ASP-DPOP: Solving Distributed Constraint Optimization Problems with Logic Programming (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1337–1338, 2014. Acceptance Rate: 169 (full) + 159 (ext. abstract) / 709 = 46%.

6. Duc Thien Nguyen, William Yeoh, Hoong Chuin Lau, Shlomo Zilberstein, and Chongjie Zhang. Decentralized Multi-Agent Reinforcement Learning in Average-Reward Dynamic DCOPs (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1341–1342, 2014. Acceptance Rate: 169 (full) + 159 (ext. abstract) / 709 = 46%.

5. Ferdinando Fioretto, Federico Campeotto, Luca Da Rin Fioretto, William Yeoh, and Enrico Pontelli. GD-Gibbs: A GPU-based Sampling Algorithm for Solving Distributed Constraint Optimization Problems (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1339–1340, 2014. Acceptance Rate: 169 (full) + 159 (ext. abstract) / 709 = 46%.

4. Geoffrey J. Gordon, Pradeep Varakantham, William Yeoh, Hoong Chuin Lau, Ajay S. Aravamudhan, and Shih-Fen Cheng. Lagrangian Relaxation for Large-Scale Multi-Agent Planning (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1227–1228, 2012. Acceptance Rate: 137 (full) + 154 (ext. abstract) / 671 = 43%.

3. Pradeep Varakantham, William Yeoh, Prasanna Velagapudi, Katia Sycara, and Paul Scerri. Prioritized Shaping of Models for Solving DEC-POMDPs (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1269–1270, 2012. Acceptance Rate: 137 (full) + 154 (ext. abstract) / 671 = 43%.

2. William Yeoh, Pradeep Varakantham, Xiaoxun Sun, and Sven Koenig. Incremental DCOP Search Algorithms for Solving Dynamic DCOPs (Extended Abstract). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1069–1070, 2011. Acceptance Rate: 127 (full) + 131 (ext. abstract) / 575 = 45%.

1. William Yeoh, Sven Koenig, and Xiaoxun Sun. Trading Off Solution Cost for Smaller Runtime in DCOP Search Algorithms (Short Paper). In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pages 1445–1448, 2008. Acceptance Rate: 142 (full) + 119 (short) / 640 = 41%.

Symposium and Workshop Papers

51. Kirin Godhwani, Adam S. R. Parker, Matthew E. Taylor, William Yeoh, and Reuth Mirsky. Towards Spontaneous Cooperation in Multi-Agent Reinforcement Learning using Explicit Goal Recognition. In *Proceedings of the International Workshop on Coordination and Cooperation in Multi-Agent Reinforcement Learning (CoCoMARL)*, 2025.

50. Reuth Mirsky, Matthew E. Taylor, and William Yeoh. I Know What You Did Last Summer (and I Can Predict What You're Trying to do Now): Incorporating Theory of Mind into Multi-agent Reinforcement Learning. In *Proceedings of the International Workshop on Advancing AI Through Theory of Mind (ToM4AI)*, 2025.

49. Ashwin Kumar and William Yeoh. Remember, but also, Forget: Bridging Myopic and Perfect Recall Fairness with Past-Discounting. In *Proceedings of the International Workshop on Autonomous Agents for Social Good (AASG)*, 2025.

48. Ashwin Kumar and William Yeoh. DECAF: Learning to be Fair in Multi-agent Resource Allocation. In *Proceedings of the Reinforcement Learning Safety Workshop (RLSW)*, 2024.

47. Yinxu Tang, Stylianos Loukas Vasileiou, and William Yeoh. Approximating Human Models During Argumentation-based Dialogues. In *Proceedings of the Workshop on Human-Aware and Explicable Planning (HAXP)*, 2024.

46. Shawn Skyler, Shahaf Shperberg, Dor Atzmon, Ariel Felner, Oren Salzman, Han Zhang, Shao-Hung Chan, Sven Koenig, William Yeoh, and Carlos Hernandez Ulloa. Must-Expand Nodes in Multi-Objective Search [Extended Abstract]. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, pages 183–184, 2023.

45. Stylianos Loukas Vasileiou, Ashwin Kumar, and William Yeoh. DR-HAI: Argumentation-based Dialectical Reconciliation in Human-AI Interactions. In *Proceedings of the Workshop on Human-Aware and Explicable Planning (HAXP)*, 2023.

44. Andrew Estornell, Stylianos Loukas Vasileiou, William Yeoh, Daniel Borrajo, and Rui Silva. Predicting Customer Goals in Financial Institution Services: A Data-Driven LSTM Approach. In *Proceedings of the International Workshop on Planning and Scheduling for Financial Services (FinPlan)*, 2023.

43. Jean Springsteen and William Yeoh. Effects of Affective Polarization on Ideological Polarization due to Algorithmic Filtering. In *Proceedings of the International Workshop on Multi-Agent-Based Simulation (MABS)*, 2023.

42. Ashwin Kumar and William Yeoh. Fairness in Scarce Societal Resource Allocation: A Case Study in Homelessness Applications. In *Proceedings of the International Workshop on Autonomous Agents for Social Good (AASG)*, 2023.

41. Shawn Skyler, Dor Atzmon, Ariel Felner, Oren Salzman, Han Zhang, Sven Koenig, William Yeoh, and Carlos Hernandez Ulloa. Bounded Cost Bi-Objective Heuristic Search. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, pages 239–243, 2022.

40. Stylianos Loukas Vasileiou, Ashwin Kumar, and William Yeoh. On Generating Personalized Explanations via Knowledge Forgetting. In *Proceedings of the Workshop on Explainable AI (XAI)*, 2022.

39. Ashwin Kumar, Yevgeniy Vorobeychik, and William Yeoh. Improving Zonal Fairness While Maintaining Efficiency in Rideshare Matching. In *Proceedings of the International Workshop on Agents in Traffic and Transportation (ATT)*, pages 77-90, 2022.

38. Stylianos Loukas Vasileiou and William Yeoh. On Generating Abstract Explanations via Knowledge Forgetting. In *Proceedings of the Workshop on Explainable Planning (XAIP)*, 2022.

37. Jean Springsteen, William Yeoh, and Yevgeniy Vorobeychik. Impact of Simple Algorithmic Filtering Strategies on Polarization in Social Networks due to Filter Bubbles: Preliminary Results. In *Proceedings of the International Workshop on Optimization and Learning in Multi-Agent Systems (OptLearnMAS)*, 2022.

36. Stylianos Loukas Vasileiou, William Yeoh, Tran Cao Son, and Alessandro Previti. Explanations as Model Reconciliation via Probabilistic Logical Reasoning. In *Proceedings of the Workshop on Explainable Logic-Based Knowledge Representation (XLoKR)*, 2021.

35. Ashwin Kumar, Stylianos Loukas Vasileiou, Melanie Bancilhon, Alvitta Ottley, and William Yeoh. VizXP: A Visualization Framework for Conveying Explanations to Users in Model Reconciliation Problems. In *Proceedings of the Workshop on Explainable Planning (XAIP)*, 2021.

34. Van Nguyen, Tran Cao Son, and William Yeoh. Explainable Problem in clingo-dl Programs. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, pages 231–232, 2021.

33. Stylianos Loukas Vasileiou, William Yeoh, and Tran Cao Son. On the Relationship Between KR Approaches for Explainable Planning. In *Proceedings of the Workshop on Explainable Planning (XAIP)*, 2020.

32. Carlos Hernández Ulloa, William Yeoh, Jorge A. Baier, Han Zhang, Luis Suazo, and Sven Koenig. A Simple and Fast Bi-Objective Search Algorithm. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, pages 125–126, 2020.

31. Carlos Hernández Ulloa, Jorge A. Baier, William Yeoh, Vadim Bulitko, and Sven Koenig. A Learning-Based Framework for Memory-Bounded Heuristic Search: First Results. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, pages 178–179, 2019.

30. Van Nguyen, Philipp Obermeier, Tran Cao Son, Torsten Schaub, and William Yeoh. Generalized Target Assignment and Path Finding Using Answer Set Programming. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, pages 194–195, 2019.

29. Stylianos Loukas Vasileiou, William Yeoh, and Tran Cao Son. A Preliminary Logic-based Approach for Explanation Generation. In *Proceedings of the Workshop on Explainable Planning (XAIP)*, 2019.

28. Khoi Hoang, Christabel Wayllace, William Yeoh, Jacob Beal, Soura Dasgupta, Yuanqiu Mo, Aaron Paulos, and Jon Schewe. New Distributed Constraint Satisfaction Algorithms for Load Balancing in Edge Computing: A Feasibility Study. In *Proceedings of the International Workshop on Optimization in Multi-Agent Systems (OptMAS)*, 2019.

27. Khoi Hoang, Ferdinando Fioretto, William Yeoh, Enrico Pontelli, and Roie Zivan. An Iterative Local Search Scheme with Quality Guarantees for Multi-Agent Optimization. In *Proceedings of the International Workshop on Optimization in Multi-Agent Systems (OptMAS)*, 2019.

26. Christabel Wayllace, Sarah Keren, William Yeoh, Avigdor Gal, and Erez Karpas. Accounting for Partial Observability in Stochastic Goal Recognition Design: Messing with the Marauder's Map. In *Proceedings of the Workshop on Heuristics and Search for Domain-Independent Planning (HSDIP)*, 2018.

25. Yunxiu Zeng, Kai Xu, Quanjun Yin, Long Qin, Yabing Zha, and William Yeoh. Inverse Reinforcement Learning based Human Behavior Modeling for Goal Recognition in Dynamic Local Network Interdiction. In *Proceedings of the Workshop on Plan, Activity, and Intent Recognition (PAIR)*, 2018.

24. William Kluegel, Muhammad Aamir Iqbal, Ferdinando Fioretto, William Yeoh, and Enrico Pontelli. A Realistic Dataset for the Smart Home Device Scheduling Problem for DCOPs. In *Proceedings of the International Workshop on Optimization in Multi-Agent Systems (OptMAS)*, 2017.
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23. Yarden Naveh, Roie Zivan, and William Yeoh. Resilient Distributed Constraint Optimization Problems. In *Proceedings of the International Workshop on Optimization in Multi-Agent Systems (OptMAS)*, 2017.

22. Ferdinando Fioretto, William Yeoh, and Enrico Pontelli. A Multiagent System Approach to Scheduling Devices in Smart Homes. In *Proceedings of the International Workshop on Artificial Intelligence for Smart Grids and Smart Buildings (AISGSB)*, 2017.

21. Moinul Morshed Porag Chowdhury, Russell Y. Folk, Ferdinando Fioretto, Christopher Kiekintveld, and William Yeoh. Investigation of Learning Strategies for the SPOT Broker in Power TAC. In *Proceedings of the International Workshop on Agent-Mediated Electronic Commerce and Trading Agents Design and Analysis (AMEC/TADA)*, 2016.

20. Francisco Natividad, Russell Y. Folk, William Yeoh, and Huiping Cao. On the Use of Off-the-Shelf Machine Learning Techniques to Predict Energy Demands of Power TAC Consumers. In *Proceedings of the International Workshop on Agent-Mediated Electronic Commerce and Trading Agents Design and Analysis (AMEC/TADA)*, 2016.

19. Atena M. Tabakhi, Ferdinando Fioretto, and William Yeoh. A Preliminary Study on Preference Elicitation in DCOPs for Scheduling Devices in Smart Buildings. In *Proceedings of the International Workshop on Advances in Preference Handling (MPREF)*, 2016.

18. Tiep Le, Tran Cao Son, Enrico Pontelli, and William Yeoh. Solving Distributed Constraint Optimization Problems Using Logic Programming. In *Proceedings of the International Workshop on Optimization in Multi-Agent Systems (OptMAS)*, 2016.

17. Khoi Hoang, Ferdinando Fioretto, Ping Hou, Makoto Yokoo, William Yeoh, and Roie Zivan. Proactive Dynamic DCOPs. In *Proceedings of the International Workshop on Artificial Intelligence for Smart Grids and Smart Buildings (AISGSB)*, 2016.

16. Ferdinando Fioretto, Tiep Le, William Yeoh, Enrico Pontelli, and Tran Cao Son. Improving DPOP with Branch Consistency for Solving Distributed Constraint Optimization Problems. In *Proceedings of the International Workshop on Optimization in Multi-Agent Systems (OptMAS)*, 2015.

15. Ferdinando Fioretto, Federico Campeotto, Agostino Dovier, Enrico Pontelli and William Yeoh. Large Neighborhood Search with Quality Guarantees for Distributed Constraint Optimization Problems. In *Proceedings of the International Workshop on Optimization in Multi-Agent Systems (OptMAS)*, 2015.

14. T. K. Satish Kumar, Duc Thien Nguyen, William Yeoh, and Sven Koenig. A Simple Polynomial-Time Randomized Distributed Algorithm for Connected Row Convex Constraints. In *Proceedings of the International Joint Workshop on Optimization in Multi-Agent Systems and Distributed Constraint Reasoning (OptMAS-DCR)*, 2014.

13. Duc Thien Nguyen, William Yeoh, Hoong Chuin Lau, Shlomo Zilberstein, and Chongjie Zhang. Decentralized Multi-Agent Reinforcement Learning in Average-Reward Dynamic DCOPs. In *Proceedings of the International Joint Workshop on Optimization in Multi-Agent Systems and Distributed Constraint Reasoning (OptMAS-DCR)*, 2014.

12. Saurabh Gupta, William Yeoh, Enrico Pontelli, Palak Jain, Satish Ranade. Modeling Microgrid Islanding Problems as DCOPs. In *Proceedings of the North American Power Symposium (NAPS)*, 2013.

11. Duc Thien Nguyen, William Yeoh, and Hoong Chuin Lau. Distributed Gibbs: A Memory-Bounded Sampling-Based DCOP Algorithm. In *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, pages 30–44, 2013.

10. Saurabh Gupta, Palak Jain, William Yeoh, Satish Ranade, and Enrico Pontelli. Solving Customer-Driven Microgrid Optimization Problems as DCOPs. In *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, pages 45–59, 2013.

9. William Yeoh, Akshat Kumar, and Shlomo Zilberstein. Automated Generation of Interaction Graphs for Value-Factored Decentralized POMDPs. In *Proceedings of the International Workshop on Multiagent Sequential Decision Making under Uncertainty (MSDM)*, pages 40–46, 2013.

8. Akshat Kumar, William Yeoh, and Shlomo Zilberstein. On Message-Passing, MAP Estimation in Graphical Models and DCOPs. In *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, pages 57–70, 2011.

7. Todd Neller, John DeNero, Dan Klein, Sven Koenig, William Yeoh, Xiaoming Zheng, Kenny Daniel, Alex Nash, Zachary Dodds, Giuseppe Carenini, David Poole, and Chris Brooks. Model AI Assignments. In *Proceedings of the Symposium on Educational Advances in Artificial Intelligence (EAAI)*, 2010.

6. William Yeoh, Roie Zivan, and Sven Koenig. Discrepancy-Based Approach for Solving Distributed Constraint Optimization Problems. In *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, pages 132–144, 2009.

5. William Yeoh, Xiaoxun Sun, and Sven Koenig. Trading Off Solution Quality for Faster Computation in DCOP Search Algorithms. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, 2009.

4. Xiaoxun Sun, William Yeoh, and Sven Koenig. Dynamic Fringe-Saving A*. In *Proceedings of the International Symposium on Combinatorial Search (SoCS)*, 2009.

3. William Yeoh, Sven Koenig, and Xiaoxun Sun. Trading Off Solution Cost for Smaller Runtime in DCOP Search Algorithms [Extended Version]. In *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, pages 25–35, 2008.

2. William Yeoh, Ariel Felner, and Sven Koenig. BnB-ADOPT: An Asynchronous Branch-and-Bound DCOP Algorithm. In *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, 2007.

1. William Yeoh, Sven Koenig, and Ariel Felner. IDB-ADOPT: A Depth-First Search DCOP Algorithm. In *Proceedings of the International Workshop on Distributed Constraint Reasoning (DCR)*, pages 56–70, 2007.

Conference Reports

1. Robert Morris, Blai Bonet, Marc Cavazza, Marie desJardins, Ariel Felner, Nick Hawes, Brad Knox, Sven Koenig, George Konidaris, Jérôme Lang, Carlos Linares López, Daniele Magazzeni, Amy McGovern, Sriraam Natarajan, Nathan R. Sturtevant, Michael Thielscher, William Yeoh, Sebastian Sardiña, Kiri Wagstaff. A Summary of the Twenty-Ninth AAAI Conference on Artificial Intelligence. *AI Magazine*, 36(3), pages 99–106, 2015.

Edited Proceedings

3. Noa Agmon, Bo An, Alessandro Ricci, and William Yeoh (editors). Proceedings of the Twenty-Second International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2023.

2. Akshat Kumar, Sylvie Thiébaux, Pradeep Varakantham, and William Yeoh (editors). Proceedings of the Thirty-Second International Conference on Automated Planning and Scheduling (ICAPS), 2022.

1. Pavel Surynek and William Yeoh (editors). Proceedings of the Twelfth International Symposium on Combinatorial Search (SoCS), 2019.

Technical Reports

1. Sven Koenig and William Yeoh. A Project on Fast Trajectory Replanning for Computer Games for "Introduction to Artificial Intelligence" Classes. Technical Report, Department of Computer Science, University of Southern California, 2008.

ADVISING

Post-Doctoral Researchers

- Ben Rachmut F'24 – Now

Ph.D. Students

- Samuel Liu (co-advised with Joshua Jackson) Su'25 – Now
- Yinxu Tang S'24 – Now
- Jean Springsteen (co-advised with Dino Christenson) S'21 – Now
- Ashwin Kumar S'20 – Now
- Stylianos L. Vasileiou S'19 – S'25
  Thesis: *Explainable Decision-Making: From Formal Logic to AI Systems with Explainable Behavior*
  Next and Current Position: *Assistant Professor* at *New Mexico State University*
- Khoi D. Hoang S'14 – Su'22
  Thesis: *Dynamic Continuous Distributed Constraint Optimization Problems*
  Next and Current Position: *Software Engineer* at *Google*
- Atena M. Tabakhi F'14 – Su'21
  Thesis: *Preference Elicitation in Constraint-Based Models: Models, Algorithms and Applications*
  Next and Current Position: *Lecturer* at *Washington University in St. Louis*
- Christabel Wayllace S'16 – S'21
  Thesis: *Stochastic Goal Recognition Design*
  Next Position: *Post-doctoral Researcher* at *University of Alberta* with *Matthew E. Taylor*
  Current Position: *Assistant Professor* at *New Mexico State University*
- Ping Hou S'13 – S'17
  Thesis: *Probabilistic Planning with Risk-Sensitive Criterion*
  Next Position: *Software Engineer* at *Uber Advanced Technologies Group*
  Current Position: *Senior Software Engineer* at *Aurora*

M.S. Students

- Yuchuan Wang (co-advised with Chien-Ju Ho) Su'23 – S'24
  Project: *A Comparative Study of LLMs and UCB Algorithms on Multi-Arm Bandit Problems*
- Zijie Liu (co-advised with Chien-Ju Ho) Su'23 – F'23
  Project: *Comparison between LLMs and Crowdsourcing Workers for Data Annotation Tasks*
- Ruoyao Yang S'20 – F'20
  Project: *Visualizations in Explainable Planning*
- Tiancheng He (co-advised with Chien-Ju Ho) F'19 – S'20
  Project: *Empirical Research on Multi-Armed Bandit Problems with Free Pulls*
- Yuanming Xiao F'18 – S'20
  Thesis: *Embedding Preference Elicitation Within the Search for DCOP Solutions*

- Xipeng Wang Su'18 – S'19
  Project: *Smart Home Audio Assistant*
- Peter Kim S'18 – Su'18
  Project: *Optimal Scheduling of Smart Home Devices Using Integer Linear Programming with a Visual Interface*
- Russell Folk S'15 – S'17
  Project: *Using Reinforcement Learning to Generate Tariffs for Profitable Consumption in Power TAC*
- Mounika Challa F'16 – S'17
  Project: *NMSU CS Graduate Course Planner*
- Francisco Natividad F'15 – Su'16
  Project: *On the Use of Off-the-Shelf Machine Learning Techniques to Predict Energy Demands of Power TAC Consumers*
- Christabel Wayllace F'14 – F'15
  Thesis: *Goal Recognition Design with Stochastic Agent Action Outcomes*
- Amirsaber Sharifi F'13 – F'14
  Project: *DeepDepth: A Framework to Visualize Social Network Data*
- Atena M. Tabakhi S'13 – Su'14
  Thesis: *Pseudo-tree Generation for Weighted and Unweighted Distributed Constraint Optimization Problems*

TEACHING

Washington University in St. Louis

- CSE 3101: Intro. to Intelligent Agents Using Science Fiction F'18, S'20, F'22, F'23, F'24, S'25, F'25
- CSE 4102: Intro. to Artificial Intelligence S'18, S'19, F'19, F'20, S'21, F'21, S'22
- DCDS 5990: Intro. to Graduate Research in Computational and Data Sciences F'21, F'25
- DCDS 5000: Computational and Data Sciences Research Exploration S'21, S'22, S'23, S'25

New Mexico State University

- CS 475/505: Artificial Intelligence I S'14, S'15
- CS 479: Introduction to Intelligent Agents Using Science Fiction F'14, F'15
- CS 479/579: Distributed Constraint Reasoning F'13
- CS 479/579: Heuristic Search and Its Applications S'13
- CS 479/579: Introduction to Smart Grids F'16
- CS 483/503: Introduction to Robotics S'14, S'15, F'16
- CS 575: Artificial Intelligence II F'12, F'14
- CS 579: Advanced Topics in Agents Research S'16

SERVICE

Service to the Research Community

Editorial Board

- Artificial Intelligence 2021 – 2027
- Journal of Artificial Intelligence Research 2014 – 2016, 2024 – 2027

Conference Executive Board

- International Conference on Automated Planning and Scheduling (ICAPS) Council 2022 – 2028
- International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS) Board 2018 – 2024

Conference Program Co-Chair

- International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2023
- International Conference on Automated Planning and Scheduling (ICAPS) 2022

Conference Organizing Committee

- AAAI Conference on Artificial Intelligence (AAAI)
  - *Sister Track Co-Chair* 2026
  - *Student Activities Co-Chair* 2015, 2016, 2019, 2020
  - *Tutorial Co-Chair* 2018, 2019
  - *Job Market Co-Chair* 2017
- Conference on Principles and Practice of Multi-Agent Systems (PRIMA)
  - *Tutorial Co-Chair* 2016
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS)
  - *Publications Chair* 2020
  - *Doctoral Consortium Co-Chair* 2019
  - *Scholarship Co-Chair* 2018
- International Conference on Automated Planning and Scheduling (ICAPS)
  - *Sponsorship Co-Chair* 2018, 2021
- International Conference on Principles and Practice of Constraint Programming (CP)
  - *Multiagent and Parallel CP Track Co-Chair* 2018, 2019
- International Joint Conference on Artificial Intelligence (IJCAI)
  - *Doctoral Consortium Co-Chair* 2020

Conference Area Chair

- AAAI Conference on Artificial Intelligence (AAAI) 2021, 2022, 2024, 2025
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2025
- International Joint Conference on Artificial Intelligence (IJCAI) 2021, 2024, 2025

Conference Senior Program Committee

- AAAI Conference on Artificial Intelligence (AAAI) 2019, 2020
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2017, 2019, 2021
- International Conference on Principles and Practice of Constraint Programming (CP) 2019
- International Joint Conference on Artificial Intelligence (IJCAI) 2013, 2015, 2017, 2018, 2020, 2023

Conference Program Committee

- AAAI Conference on Artificial Intelligence (AAAI) 2011 – 2018
- AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2014 – 2016
- Conference on Principles and Practice of Multi-Agent Systems (PRIMA) 2016 – 2020
- European Conference on Artificial Intelligence (ECAI) 2016
- International Conference on Agents (ICA) 2016 – 2017
- International Conference on Automated Planning and Scheduling (ICAPS) 2013 – 2021, 2023 – 2025
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2011 – 2016, 2020, 2024
- International Conference on Intelligent Agent Technology (IAT) 2015
- International Conference on Principles and Practice of Constraint Programming (CP) 2012, 2017, 2018
- International Joint Conference on Artificial Intelligence (IJCAI) 2011, 2016, 2019

Symposium/Workshop Executive Board

- International Symposium on Combinatorial Search (SoCS) Council 2019 – 2024
- Workshop on Human-Aware and Explicable Planning (HAXP) Steering Committee 2023 – Now
- Workshop on Search & Planning with Complex Objectives (WoSePCO) Advisory Board 2023 – Now

Symposium/Workshop Co-Chair

- International Symposium on Combinatorial Search (SoCS) 2019
- AAAI Fall Symposium on Multi-Agent Coordination under Uncertainty 2011
- International Joint Workshop on Optimization in Multi-Agent Systems and Distributed Constraint Reasoning (OptMAS-DCR) 2014
- International Workshop on Distributed Constraint Reasoning (DCR) 2009, 2013
- International Workshop on Optimization in Multi-Agent Systems (OptMAS) 2015 – 2017
- International Workshop on Planning and Scheduling for Financial Services (FinPlan) 2023

Symposium/Workshop Program Committee

- International Symposium on Combinatorial Search (SoCS) 2012 – 2018, 2020 – 2025
- International Workshop on AI in Smart Grids and Smart Buildings (AISGSB) 2016 – 2017
- International Workshop on Distributed Constraint Reasoning (DCR) 2010 – 2011
- International Workshop on Massive Multi-Agent Systems (MassiveMAS) 2015
- International Workshop on Optimization in Multi-Agent Systems (OptMAS) 2011 – 2013, 2018 – 2019
- International Workshop on Optimization & Learning in Multi-Agent Systems (OptLearnMAS) 2021 – 2023
- Symposium on Educational Advances in Artificial Intelligence (EAAI) 2016 – 2019
- Workshop on Interactions with Mixed Agent Types (Agent-Mix) 2016
- Workshop on Plan, Activity, and Intent Recognition (PAIR) 2019 – 2021
- Workshop on Search and Planning with Complex Objectives (WoSePCO) 2023

Research Proposal Reviewer

- German-Israeli Foundation for Scientific Research and Development (GIF) 2012
- Israeli Science Foundation (ISF) 2015 – 2018, 2025
- National Science Foundation (NSF) 2013, 2015, 2021 – 2024
- Natural Sciences and Engineering Research Council of Canada (NSERC) 2020

Journal Reviewer

- ACM Transactions on Intelligent Systems and Technology 2016 – 2018
- AI Communications 2012
- Annals of Mathematics and Artificial Intelligence 2014
- Artificial Intelligence 2009, 2011 – 2013, 2015 – 2017, 2019, 2022 – 2024
- Artificial Intelligence Review 2016
- Autonomous Agents and Multi-Agent Systems 2010 – 2016, 2018 – 2019
- Computer Communications 2012
- Constraints 2010, 2012, 2014, 2018
- Entropy 2013
- IEEE Transactions on Cybernatics 2016
- Journal of Artificial Intelligence Research 2011 – 2025
- Web Intelligence and Agent Systems: An International Journal 2009

Conference/Symposium/Workshop External Reviewer

- AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2010
- Robotics: Science and Systems (RSS) 2005
- International Conference on Automated Planning and Scheduling (ICAPS) 2010
- International Conference on Intelligent Robots and Systems (IROS) 2013, 2015
- International Conference on Principles and Practice of Constraint Programming (CP) 2009
- International Conference on Principles and Practice of Multi-Agent Systems (PRIMA) 2010
- International Conference on Robotics and Automation (ICRA) 2004
- International Conference on Social Informatics (SocInfo) 2011
- International Symposium on Combinatorial Search (SoCS) 2011
- International Workshop on Constraint Solving and Constraint Logic Programming (CSCLP) 2008

- International Workshop on Distributed Constraint Reasoning (DCR) 2007

Service to the University

Washington University in St. Louis

- WashU Doctoral Council 2022 – 2025
- WashU Strategic Planning Working Group on the Research Enterprise 2021
- McKelvey Strategic Planning Steering Committee 2022 – 2023
- A&S Transdisciplinary Institute in Applied Data Sciences Advisory Committee 2022 – Now
- A&S Faculty Search Committee 2020
- Brown Doctoral Administrative Committee 2024 – Now
- Brown Faculty Search Committee 2020
- Sam Fox Faculty Search Committee 2023 – 2025
- DCDS Steering Committee 2020 – Now
- CSE Doctoral Studies Committee 2020 – Now
- CSE Faculty Search Committee 2017, 2020
- CSE Turner Dissertation Award Committee 2018, 2019

New Mexico State University

- CS Awards Committee 2012 – 2017
- CS Faculty Search Committee 2013 – 2015
- CS Graduate Committee 2012 – 2017
- CS Publicity Committee 2013 – 2017
- CS Ph.D. Qualifying Exam Coordinator S'14, F'14, S'16

Last Updated: July 3, 2025