

Michael Katz

Principal Research Scientist, IBM Research - T.J. Watson Center, NY, USA

Email: ctpelok@gmail.com Web: <https://ctpelok77.github.io> [IBM Profile](#) [Scholar Profile](#)

Executive Summary

Principal Research Scientist at IBM Research and a field-defining leader in automated planning and planning with large language models. Over 20 years of contributions spanning foundational planning theory, heuristic search, neuro-symbolic systems, and enterprise-scale AI solutions. Founder of the Planning in the Era of LLMs initiative and a key agenda-setter through NeurIPS and AAI tutorials and invited talks. Serves on the AAI and ICAPS Executive Councils, combining deep technical authority with strategic leadership to advance reliable, explainable AI-driven autonomy.

Research Interests

Strategic leadership and technical innovation in:

- Intelligent agents and autonomous decision making
- Reliable and efficient planning with large language models
- Planning and reinforcement learning – neuro-symbolic approaches for applied reasoning

Education

Ph.D., Industrial Engineering and Management, Technion, 2010 [award-winning dissertation]

B.A., Mathematics and Computer Science, Technion, 2002

Selected Awards and Honors

- ICAPS Influential Paper (test-of-time) Award (2023) for the 2008 paper Optimal Additive Composition of Abstraction-based Admissible Heuristics
- ICAPS Best Dissertation Award (2011)
- Multiple awards and medals in the Independent Set Reconfiguration Core Challenge (2022-2023)
- Best Demo Awards at ICAPS and IJCAI (multiple years)
- Winner, Deterministic Sequential Optimal Track, IPC 2018 (*Delfi*)
- Runner-up, Deterministic Sequential Satisficing Track, IPC 2014 (*Mercury*)

Leadership, Governance, and Community Building

Leadership roles focused on shaping research agendas, community standards, and strategic directions in AI planning and reasoning.

- Executive Council Member, ICAPS (2021-2027)
- Executive Council Member, AAI (2026-2029)
- Tutorial and Lab Forum Co-Chair, AAI 2026
- Program Co-Chair, ICAPS 2021
- Tutorial presenter: NeurIPS 2025; IJCAI 2021; AAI 2022; ICAPS 2024
- Co-founder, Workshop series on Planning in the Era of LLMs (LM4Plan) and Co-Chair editions AAI 2025, ICAPS 2025
- Co-founder, Workshop series on Planning and Reinforcement Learning (PRL) and Co-Chair editions ICAPS (2020, 2022-2023), IJCAI (2022-2023)
- Area Chair: AAI, ICAPS

Professional Experience

IBM Research - T.J. Watson, Yorktown Heights, NY

Principal Research Scientist (2022-present); Research Staff Member (2017-2022)

- Lead research on reliable and efficient planning, including pioneering reliable and efficient methods of planning with LLMs.
- Delivered theoretical advances and applied neuro-symbolic solutions adopted across multiple IBM initiatives.
- Inventor on 25+ patents in AI planning, decision optimization, and explainability.

Haifa University, Israel (Lecturer, 2017)

IBM Research - Haifa Lab (Research Scientist, 2013-2016, Watson Health Scientist, 2016-2017)

Saarland University (Postdoctoral Fellow, 2012-2013)

INRIA (Postdoctoral Fellow, 2011-2012)

Technion AI Research Group (Postdoc & PhD Researcher, 2005-2011)

Professional Memberships

- Senior Member, AAAI

Patents

- 25+ issued or published patents in AI planning, reasoning, scheduling, diverse plan generation, and neuro-symbolic systems.

Executive Summary of Research Contributions

Publications are organized by topical areas reflecting fundamental contributions to both the theory and practice of AI planning.

- **LLMs for Planning and Neuro-Symbolic Reasoning:** Fundamental contributions to formalizing planning with large language models through principled frameworks, benchmarks, and methods that ensure efficiency, soundness, and completeness, helping establish this area as a rigorous research discipline.
- **Multiple Solutions for Classical Planning:** Pioneering work on top-k, top-quality, and diverse planning, introducing novel algorithms and certification techniques that shifted planning from single-solution generation to systematic reasoning over high-quality solution sets.
- **Theory and Practice of Classical Planning:** Foundational advances in planning as heuristic search, in both automated heuristic function generation and search pruning techniques, including test-of-time award-winning contributions with lasting impact on optimal planning theory and practice.
- **Planning and Reinforcement Learning:** Key contributions to neuro-symbolic planning-learning integration, enabling more interpretable, sample-efficient, and generalizable decision-making by combining symbolic structure with learning-based methods.
- **Applications, Data, and AI Planning based solutions:** Leadership in translating planning research into enterprise-scale AI systems, benchmarks, and deployed neuro-symbolic solutions, demonstrating real-world impact across a variety of business domains.

Publications By Topics

LLMs for Planning and Neuro-Symbolic Reasoning

- Position
 - **M. Katz**, H. Kokel, C. Muise, S. Sohrabi, S. Sreedharan, *Make Planning Research Rigorous Again!*, The 43rd International Conference on Machine Learning (ICML), 2026, Seoul, South Korea.
 - **M. Katz**, H. Kokel, K. Srinivas, S. Sohrabi, *Planning in the LLM Era: Building for Reliability and Efficiency*, The 36th International Conference on Automated Planning and Scheduling (ICAPS), 2026, Dublin, Ireland.
- Thought of Search
 - D. Cao, **M. Katz**, H. Kokel, K. Srinivas, S. Sohrabi, *Automating Thought of Search: A Journey Towards Soundness and Completeness*, The 36th International Conference on Automated Planning and Scheduling (ICAPS), 2026, Dublin, Ireland (and NeurIPS 2024 Workshop on Open-World Agents, Vancouver, Canada).
 - **M. Katz**, H. Kokel, K. Srinivas, S. Sohrabi, *Thought of Search: Planning with Language Models Through The Lens of Efficiency*, The Thirty-Eighth Conference on Neural Information Processing Systems (NeurIPS), 2024, Vancouver, Canada.
 - E. Shlomi, G. Azran, E. Shapira, O. Nahum, R. Reichart, G. Uziel, **M. Katz**, A. Anaby Tavor, S. Keren, *Transition Function Prediction in AI Planning Using LLMs*, AAAI 2025 Workshop on Planning in the Era of LLMs (LM4Plan), Philadelphia, PA, USA.
- NL2PDDL
 - J. Oswald, D. Obolensky, V. Varha, V. Dragovic, K. Srinivas, H. Kokel, **M. Katz**, S. Sohrabi, *Model Space Reasoning as Search in Feedback Space for Planning Domain Generation*, ICLR 2026 Workshop World Models, Rio de Janeiro, Brazil.
 - J. Oswald, K. Srinivas, H. Kokel, J. Lee, **M. Katz**, S. Sohrabi, *Large Language Models as Planning Domain Generators*, The 34th International Conference on Automated Planning and Scheduling (ICAPS), 2024, Banff, Canada.
 - T. Caglar, S. Belhaj, T. Chakraborty, **M. Katz**, S. Sreedharan, *Can LLMs Fix Issues with Reasoning Models? Towards More Likely Models for AI Planning*, The 38th AAAI Conference on Artificial Intelligence (AAAI), 2024, Vancouver, Canada.
- NL2Policy
 - K. Stein, N. Hodel, D. Fiser, J. Hoffmann, **M. Katz**, A. Koller, *Improved Generalized Planning with LLMs through Strategy Refinement and Reflection*, The 36th International Conference on Automated Planning and Scheduling (ICAPS), 2026, Dublin, Ireland.
 - T. Silver, S. Dan, K. Srinivas, J. Tenenbaum, L. Kaelbling, **M. Katz**, *Generalized Planning in PDDL Domains with Pretrained Large Language Models*, The 38th AAAI Conference on Artificial Intelligence (AAAI), 2024, Vancouver, Canada.
- Benchmarking and fine-tuning
 - H. Kokel, **M. Katz**, K. Srinivas, S. Sohrabi, *ACPbench: Reasoning about Action, Change, and Planning*, The Thirty-Ninth Annual AAAI Conference on Artificial Intelligence (AAAI), 2025, Philadelphia, PA, USA.
 - H. Kokel, **M. Katz**, K. Srinivas, S. Sohrabi, *ACPbench Hard: Unrestrained Reasoning about Action, Change, and Planning*, The Fourteenth International Conference on Learning Representations (ICLR) 2026, Rio de Janeiro, Brazil.
 - **M. Katz**, H. Kokel, S. Sreedharan, *Seemingly Simple Planning Problems are Computationally Challenging: The Countdown Game*, ICLR 2026 Workshop World Models, Rio de Janeiro, Brazil.
 - S. Shirai, K. Srinivas, J. Dolby, **M. Katz**, H. Samulowitz, S. Sohrabi, *Less is More: Learning Graph Tasks with Just LLMs*, Arxiv 2025.

Multiple Solutions for Classical Planning

- Top-k/Top-quality Planning
 - **M. Katz**, J. Lee, J. Kang, S. Sohrabi, *Some Orders Are Important: Partially Preserving Orders in Top-Quality Planning*, The 17th International Symposium on Combinatorial Search (SoCS), 2024, Kananaskis, Canada.
 - **M. Katz**, J. Lee, S. Sohrabi, *Unifying and Certifying Top-Quality Planning*, The 34th International Conference on Automated Planning and Scheduling (ICAPS), 2024, Banff, Canada.
 - **M. Katz**, J. Lee, *K* Search Over Orbit Space for Top-k Planning*, The 32nd International Joint Conference on Artificial Intelligence (IJCAI), 2023, Macao, SAR.
 - J. Lee, **M. Katz**, *On K* Search for Top-K Planning*, The 16th Annual Symposium on Combinatorial Search (SoCS), 2023, Prague, Czechia.
 - **M. Katz**, J. Lee, *K* and Partial Order Reduction for Top-Quality Planning*, The 16th Annual Symposium on Combinatorial Search (SoCS), 2023, Prague, Czechia.
 - **M. Katz**, S. Sohrabi, *Who Needs These Operators Anyway: Top Quality Planning with Operator Subset Criteria*, The 32nd International Conference on Automated Planning and Scheduling (ICAPS), 2022, Virtual.
 - **M. Katz**, S. Sohrabi, O. Udrea, *Top-Quality Planning: Finding Practically Useful Sets of Best Plans*, The 34th AAAI Conference on Artificial Intelligence (AAAI), 2020, New York, NY, USA.
 - **M. Katz**, S. Sohrabi, O. Udrea, D. Winterer, *A Novel Iterative Approach to Top-k Planning*, The 28th International Conference on Automated Planning and Scheduling (ICAPS), 2018, Delft, Netherlands.
- Diverse Planning
 - J. O. de Haro, E. Karpas, M. Toussaint, **M. Katz**, *Conflict-Directed Diverse Planning for Logic-Geometric Programming*, The 32nd International Conference on Automated Planning and Scheduling (ICAPS), 2022, Virtual.
 - **M. Katz**, S. Sohrabi, O. Udrea, *Bounding Quality in Diverse Planning*, The 36th AAAI Conference on Artificial Intelligence (AAAI), 2022.
 - **M. Katz**, S. Sohrabi, *Reshaping Diverse Planning*, The 34th AAAI Conference on Artificial Intelligence (AAAI), 2020, New York, NY, USA.

Theory and Practice of Classical Planning

- Abstractions
 - C. Domshlak, **M. Katz**, S. Lefler, *Landmark-Enhanced Abstraction Heuristics*, Artificial Intelligence Journal (AIJ), 2012, Volume 189, pages 48-68.
 - **M. Katz**, *Implicit Abstraction Heuristics for Cost-Optimal Planning*, AI Communications Journal, 2011, Volume 24, Number 4, pages 343-345.
 - **M. Katz**, C. Domshlak, *Implicit Abstraction Heuristics*, Journal of Artificial Intelligence Research (JAIR), 2010, Volume 39, pages 51-126.
 - **M. Katz**, C. Domshlak, *New Islands of Tractability of Cost-Optimal Planning*, Journal of Artificial Intelligence Research (JAIR), 2008, Volume 32, pages 203-288.
 - **M. Katz**, E. Keyder, *Structural Patterns Beyond Forks: Extending the Complexity Boundaries of Classical Planning*, 26th AAAI Conference on Artificial Intelligence (AAAI), 2012, Toronto, Canada.
 - **M. Katz**, J. Hoffmann, M. Helmert, *How to Relax a Bisimulation?*, The International Conference on Automated Planning and Scheduling (ICAPS), 2012, Sao Paulo, Brazil.
 - C. Domshlak, **M. Katz**, S. Lefler, *When Abstractions Met Landmarks*, The International Conference on Automated Planning and Scheduling (ICAPS), 2010, Toronto, Canada.

- **M. Katz**, C. Domshlak, *Structural-Pattern Databases*, The International Conference on Automated Planning and Scheduling (ICAPS), 2009, Thessaloniki, Greece.
- **M. Katz**, C. Domshlak, *Structural Patterns Heuristics via Fork Decomposition*, The International Conference on Automated Planning and Scheduling (ICAPS), 2008, Sydney, Australia.
- **M. Katz**, C. Domshlak, *Structural patterns of tractable sequentially-optimal planning*, The International Conference on Automated Planning and Scheduling (ICAPS), 2007, Providence, RI, USA.
- M. Steinmetz, J. Hoffmann, **M. Katz**, *Catching Label Subsets for Relaxed Bisimulation: An Abstraction Refinement Approach*, ICAPS Workshop on Heuristics and Search for Domain-independent Planning (HSDIP), 2013, Rome, Italy.
- R. Bahumi, C. Domshlak, **M. Katz**, *On Satisficing Planning with Admissible Heuristics*, ICAPS Workshop on Heuristics for Domain-independent Planning (HDIP), 2011, Frieberg, Germany.
- Cost Partitioning
 - **M. Katz**, C. Domshlak, *Optimal Admissible Composition of Abstraction Heuristics*, Artificial Intelligence Journal (AIJ), 2010, Volume 174, pages 767-798.
 - E. Karpas, **M. Katz**, S. Markovitch, *When Optimal is Just Not Good Enough: Learning Fast Informative Action Cost Partitionings*, The International Conference on Automated Planning and Scheduling (ICAPS), 2011, Frieberg, Germany.
 - **M. Katz**, C. Domshlak, *Optimal Additive Composition of Abstraction-based Admissible Heuristics*, The International Conference on Automated Planning and Scheduling (ICAPS), 2008, Sydney, Australia. **ICAPS Influential Paper (test-of-time) Award (2023)**
- Partially Satisfaction Planning
 - G. Behnke, D. Speck, **M. Katz**, S. Sohrabi, *On Partial Satisfaction Planning with Total-Order HTNs*, The 33rd International Conference on Automated Planning and Scheduling (ICAPS), 2023, Prague, Czechia.
 - **M. Katz**, G. Roeger, M. Helmert, *On Producing Shortest Cost-Optimal Plans*, The Fifteenth Annual Symposium on Combinatorial Search (SoCS), 2022, Vienna, Austria.
 - **M. Katz**, E. Keyder, *A* Search and Bound-Sensitive Heuristics for Oversubscription Planning*, The 36th AAAI Conference on Artificial Intelligence (AAAI), 2022.
 - D. Speck, **M. Katz** *Symbolic Search for Oversubscription Planning*, The 35th AAAI Conference on Artificial Intelligence (AAAI), 2021.
 - **M. Katz**, E. Keyder, D. Winterer, F. Pommerening, *Oversubscription Planning as Classical Planning with Multiple Cost Functions*, The 29th International Conference on Automated Planning and Scheduling (ICAPS), 2019, Berkeley, CA, USA.
 - **M. Katz**, V. Mirkis, *In Search of Tractability for Partial Satisfaction Planning*, 25th International Joint Conference on Artificial Intelligence (IJCAI), 2016, New York, NY, USA.
- Red-Black Planning
 - C. Domshlak, J. Hoffmann, **M. Katz**, *Red-black planning: a new systematic approach to partial delete relaxation*, Artificial Intelligence Journal (AIJ), 2015, Volume 221.
 - D. Fiser, D. Gnad, **M. Katz**, J. Hoffmann, *Custom-Design of FDR Encodings: The Case of Red-Black Planning*, The 30th International Joint Conference on Artificial Intelligence (IJCAI), 2021, Montreal, Canada.
 - **M. Katz**, *Red-Black Heuristics for Planning Tasks with Conditional Effects*, The 33rd AAAI Conference on Artificial Intelligence (AAAI), 2019, Honolulu, HI.
 - **M. Katz**, J. Hoffmann, *Red-Black Relaxed Plan Heuristics Reloaded*, The Sixth Annual Symposium on Combinatorial Search (SoCS), 2013, Leavenworth, WA, USA.
 - **M. Katz**, J. Hoffmann, C. Domshlak, *Red-Black Relaxed Plan Heuristics*, 27th AAAI Conference on Artificial Intelligence (AAAI), 2013, Bellevue, WA, USA.

- **M. Katz**, J. Hoffmann, C. Domshlak, *Who Said We Need to Relax All Variables?*, The International Conference on Automated Planning and Scheduling (ICAPS), 2013, Rome, Italy.
- **M. Katz**, J. Hoffmann, *Pushing the Limits of Partial Delete Relaxation: Red-Black DAG Heuristics*, ICAPS Workshop on Heuristics and Search for Domain-independent Planning (HS-DIP), 2014, Portsmouth, NH, USA.
- Planner Selection
 - J. Vatter, R. Mayer, H. Jacobsen, H. Samulowitz, **M. Katz**, *Beyond Message Passing: Modern GNN Architectures for Online Planner Selection*, The 36th International Conference on Automated Planning and Scheduling (ICAPS), 2026, Dublin, Ireland.
 - T. Ma, P. Ferber, S. Huo, J. Chen, **M. Katz**, *Online Planner Selection with Graph Neural Networks and Adaptive Scheduling*, The 34th AAAI Conference on Artificial Intelligence (AAAI), 2020, New York, NY, USA.
 - S. Sievers, **M. Katz**, S. Sohrabi, H. Samulowitz, P. Ferber, *Deep learning for cost-optimal planning: Task-dependent planner selection*, The 33rd AAAI Conference on Artificial Intelligence (AAAI), 2019, Honolulu, HI, USA.
- State Pruning Techniques (Symmetry & Partial Order Reduction) & Relevance Analysis
 - C. Allen, A. de Mello Koch, H. Kokel, G. Konidaris, **M. Katz**, *Simplifying Planning Tasks with Fact-Level Relevance Analysis*, The 36th International Conference on Automated Planning and Scheduling (ICAPS), 2026, Dublin, Ireland.
 - S. Sievers, G. Roeger, M. Wehrle, **M. Katz**, *Theoretical foundations for structural symmetries of lifted pddl tasks*, The 29th International Conference on Automated Planning and Scheduling (ICAPS), 2019, Berkeley, CA, USA.
 - G. Roeger, S. Sievers, **M. Katz**, *Symmetry-based Task Reduction for Relaxed Reachability Analysis*, The 28th International Conference on Automated Planning and Scheduling (ICAPS), 2018, Delft, Netherlands.
 - S. Sievers, M. Wehrle, M. Helmert, **M. Katz**, *Strengthening Canonical Pattern Databases with Structural Symmetries*, The 10th Annual Symposium on Combinatorial Search (SoCS), 2017, Pittsburgh, PA, USA.
 - D. Winterer, Y. Alkhezraji, **M. Katz**, M. Wehrle, *Stubborn Sets for Fully Observable Nondeterministic Planning*, The International Conference on Automated Planning and Scheduling (ICAPS), 2017, Pittsburgh, PA, USA.
 - D. Winterer, M. Wehrle, **M. Katz**, *Structural Symmetries for Fully Observable Nondeterministic Planning*, 25th International Joint Conference on Artificial Intelligence (IJCAI), 2016, New York, NY, USA.
 - A. Shleyfman, **M. Katz**, M. Helmert, S. Sievers, M. Wehrle, *Heuristics and Symmetries in Classical Planning*, 29th AAAI Conference on Artificial Intelligence (AAAI), 2015, Austin, TX, USA.
 - S. Sievers, M. Wehrle, M. Helmert, A. Shleyfman, **M. Katz**, *Factored symmetries for merge-and-shrink abstractions*, 29th AAAI Conference on Artificial Intelligence (AAAI), 2015, Austin, TX, USA.
 - S. Sievers, M. Wehrle, M. Helmert, **M. Katz**, *An Empirical Case Study on Symmetry Handling in Cost-Optimal Planning as Heuristic Search*, 38th German Conference on Artificial Intelligence (KI), 2015, Dresden, Germany.
 - M. Wehrle, M. Helmert, A. Shleyfman, **M. Katz**, *Integrating Partial Order Reduction and Symmetry Elimination for Cost-Optimal Classical Planning*, 24th International Joint Conference on Artificial Intelligence (IJCAI), 2015, Buenos Aires, Argentina.
 - C. Domshlak, **M. Katz**, A. Shleyfman, *Symmetry Breaking: Satisficing Planning and Landmark Heuristics*, The International Conference on Automated Planning and Scheduling (ICAPS),

2013, Rome, Italy.

- C. Domshlak, **M. Katz**, A. Shleyfman, *Enhanced Symmetry Breaking in Cost-Optimal Planning as Forward Search*, The International Conference on Automated Planning and Scheduling (ICAPS), 2012, Sao Paulo, Brazil.
- Novelty
 - A. Tuisov, **M. Katz**, *The Fewer the Merrier: Pruning Preferred Operators with Novelty*, The 30th International Joint Conference on Artificial Intelligence (IJCAI), 2021, Montreal, Canada.
 - **M. Katz**, N. Lipovetzky, D. Moshkovich, A. Tuisov, *Adapting Novelty to Classical Planning as Heuristic Search*, The International Conference on Automated Planning and Scheduling (ICAPS), 2017, Pittsburgh, PA, USA.

Planning and Reinforcement Learning

- Planning annotated RL (PaRL)
 - H. Kokel, J. Lee, **M. Katz**, S. Sohrabi, *Learning Parameterized Policies for Planning Annotated RL*, Sixth Workshop on Bridging the Gap Between AI Planning and Reinforcement Learning (PRL@IJCAI2023), 2023, Macao, S.A.R
 - J. Lee, **M. Katz**, D. J. Agravante, M. Liu, T. Klinger, M. Campbell, S. Sohrabi and G. Tesauro, *AI Planning Annotation in Reinforcement Learning: Options and Beyond*, ICAPS Workshop on Bridging the Gap Between AI Planning and Reinforcement Learning (PRL), 2021, Virtual.
 - B. Rozek, J. Lee, H. Kokel, **M. Katz**, S. Sohrabi, *Guiding Hierarchical Reinforcement Learning in Partially Observable Environments with AI Planning*, Seventh Workshop on Bridging the Gap Between AI Planning and Reinforcement Learning (PRL@ICAPS), 2024, Banff, Canada.
- Action Models & Rewards
 - S. Sreedharan, **M. Katz**, *Optimistic Exploration in Reinforcement Learning Using Symbolic Model Estimates*, The Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS), 2023, New Orleans, LA, USA.
 - C. Allen, **M. Katz**, T. Klinger, G. Konidaris, M. Riemer, G. Tesauro, *Efficient Black-Box Planning Using Macro-Actions with Focused Effects*, The 30th International Joint Conference on Artificial Intelligence (IJCAI), 2021, Montreal, Canada.
 - H. Kokel, J. Lee, **M. Katz**, K. Srinivas, S. Sohrabi, *Action Space Reduction for Planning Domains*, The 32nd International Joint Conference on Artificial Intelligence (IJCAI), 2023, Macao, SAR.
 - C. Gehring, M. Asai, R. Chitnis, T. Silver, L. Kaelbling, S. Sohrabi, **M. Katz**, *Reinforcement Learning for Classical Planning: Viewing Heuristics as Dense Reward Generators*, The 32nd International Conference on Automated Planning and Scheduling (ICAPS), 2022, Virtual.

Applications, Data, and AI Planning based solutions

- IBM Scenario Planning Advisor
 - S. Sohrabi, **M. Katz**, O. Hassanzadeh, O. Udrea, M. Feblowitz, A. Riabov, *IBM Scenario Planning Advisor: Plan recognition as AI planning in practice*, AI Communications Journal, 2019, Volume 32, pages 1-13.
 - S. Sohrabi, A. Riabov, **M. Katz**, O. Udrea, *An AI Planning Solution to Scenario Generation for Enterprise Risk Management*, The 32nd AAAI Conference on Artificial Intelligence (AAAI), 2018, New Orleans, LA, USA.
 - **M. Katz**, K. Srinivas, S. Sohrabi, M. Feblowitz, O. Udrea and O. Hassanzadeh, *Scenario Planning In The Wild: A Neuro-Symbolic Approach*, ICAPS Workshop on Planning for Financial Services (FinPlan), 2021, Virtual.

- M. Feblowitz, O. Hassanzadeh, **M. Katz**, S. Sohrabi, K. Srinivas, O. Udrea, *IBM Scenario Planning Advisor: A Neuro-Symbolic ERM solution*, AAAI Demo, 2021, Virtual.
- M. Feblowitz, O. Hassanzadeh, **M. Katz**, S. Sohrabi, K. Srinivas, O. Udrea, *IBM Scenario Planning Advisor: A Neuro-Symbolic ERM solution*, ICAPS Demo, 2020, Virtual.
- S. Sohrabi, **M. Katz**, O. Hassanzadeh, O. Udrea, M. Feblowitz: *IBM Scenario Planning Advisor: Plan Recognition as AI Planning in Practice*, IJCAI Demos, 2018, Stockholm, Sweden.
- O. Hassanzadeh, D. Bhattacharjya, M. Feblowitz, K. Srinivas, M. Perrone, S. Sohrabi, **M. Katz**, *Answering binary causal questions through large-scale text mining: An evaluation using cause-effect pairs from human experts*, 28th International Joint Conference on Artificial Intelligence (IJCAI), 2019, Macao, China.
- Data
 - **M. Katz**, J. Lee, S. Sohrabi, *Generating SAS+ Planning Tasks of Specified Causal Structure*, The 16th Annual Symposium on Combinatorial Search (SoCS), 2023, Prague, Czechia.
 - P. Ferber, T. Ma, S. Huo, J. Chen, **M. Katz**, *IPC: A Benchmark Data Set for Learning with Graph-Structured Data*, ICML Workshop on Learning and Reasoning with Graph-Structured Data, 2019, Long Beach, CA, USA.
 - **M. Katz**, S. Sievers, *Democratizing Usage of Planning Systems by Facilitating Research in Algorithm Selection for Planning*, ICAPS Workshop on The International Planning Competition (WIPC), 2019, Berkeley, CA, USA.
 - **M. Katz**, S. Sievers, *The Role of IPC in Setting Standards for Experimental Evaluation in Planning Research*, ICAPS Workshop on The International Planning Competition (WIPC), 2019, Berkeley, CA, USA.
- Other Applications
 - H. Ananthakrishanan, H. Kokel, K. Sikes, D. Bhattacharjya, **M. Katz**, S. Sohrabi, K. Srinivas, *QueryGym: Step-by-Step Interaction with Relational Databases*, AAAI 2026 Demonstrations
 - R. Christen, S. Eriksson, **M. Katz**, C. Muise, A. Petrov, F. Pommerening, J. Seipp, S. Sievers, D. Speck, *PARIS: Planning Algorithms for Reconfiguring Independent Sets*, The 26th European Conference on Artificial Intelligence (ECAI), 2023, Krakow, Poland.
 - **M. Katz**, P. Ram, S. Sohrabi, O. Udrea, *Exploring Context-Free Languages via Planning: The Case for Automating Machine Learning*, The 30th International Conference on Automated Planning and Scheduling (ICAPS), 2020, Virtual.
 - J. O. de Haro, E. Karpas, **M. Katz**, M. Toussaint, *A Conflict-driven Interface between Symbolic Planning and Nonlinear Constraint Solving*, in IEEE Robotics and Automation Letters and (IROS), 2022, Kyoto, Japan.
 - M. Vukovic, S. Gerard, R. Hull, **M. Katz**, L. Shwartz, S. Sohrabi, C. Muise, J. Rofrano, A. Kalia, J. Hwang, D. Yabin, M. Jie, J. Zhuoxuan, *Towards Automated Planning for Enterprise Services: Opportunities and Challenges*, International Conference on Service-Oriented Computing (ICSOC), 2019, Toulouse, France.
 - **M. Katz**, D. Moshkovich, E. Karpas, *Semi-Black Box: Rapid Development of Planning Based Solutions*, The 32nd AAAI Conference on Artificial Intelligence (AAAI), 2018, New Orleans, LA, USA.