



Mykel Kochenderfer

Associate Professor of Aeronautics and Astronautics, Senior Fellow at the Stanford Institute for Human-Centered AI and Associate Professor, by courtesy, of Computer Science

CONTACT INFORMATION

- **Administrator**

Corinna Haussecker - Administrative Associate

Email chaussec@stanford.edu

Tel (650) 723-2107

Bio

BIO

Mykel Kochenderfer is Associate Professor of Aeronautics and Astronautics at Stanford University. Prior to joining the faculty, he was at MIT Lincoln Laboratory where he worked on airspace modeling and aircraft collision avoidance, with his early work leading to the establishment of the ACAS X program. He received a Ph.D. from the University of Edinburgh and B.S. and M.S. degrees in computer science from Stanford University. Prof. Kochenderfer is the director of the Stanford Intelligent Systems Laboratory (SISL), conducting research on advanced algorithms and analytical methods for the design of robust decision making systems. Of particular interest are systems for air traffic control, unmanned aircraft, and other aerospace applications where decisions must be made in uncertain, dynamic environments while maintaining safety and efficiency. Research at SISL focuses on efficient computational methods for deriving optimal decision strategies from high-dimensional, probabilistic problem representations. He is an author of "Decision Making under Uncertainty: Theory and Application" (2015), "Algorithms for Optimization" (2019), and "Algorithms for Decision Making" (2022), all from MIT Press. He is a third generation pilot.

ACADEMIC APPOINTMENTS

- Associate Professor, Aeronautics and Astronautics
- Senior Fellow, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Co-Director, Center for AI Safety, (2018- present)
- Director, SAIL-Toyota Center for AI Research, (2018- present)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance
- Symbolic Systems Program

PROFESSIONAL EDUCATION

- Ph.D., University of Edinburgh , Informatics (2006)
- M.S., Stanford University , Computer Science (2003)
- B.S., Stanford University , Computer Science (2003)

LINKS

- Personal site: <https://mykel.kochenderfer.com>
- Lab site: <https://sisl.stanford.edu>
- Research Video: <https://youtu.be/WHdLmVmzZdw>

Teaching

COURSES

2025-26

- Decision Making under Uncertainty: AA 228, CS 238 (Aut)
- Engineering Design Optimization: AA 222, CME 222, CS 361 (Spr)

2024-25

- Building Trust in Autonomy: AA 120Q (Win)
- Decision Making under Uncertainty: AA 228, CS 238 (Aut)
- Engineering Design Optimization: AA 222, CME 222, CS 361 (Spr)
- Technology and Society in Argentina: OSPGEN 65 (Sum)
- Validation of Safety Critical Systems: AA 228V, CS 238V (Win)

2023-24

- Advanced Topics in Sequential Decision Making: AA 229, CS 239 (Win)
- Decision Making under Uncertainty: AA 228, CS 238 (Aut)
- Engineering Design Optimization: AA 222, CS 361 (Spr)
- Engineering and Technology in India: OSPGEN 20 (Sum)

2022-23

- Artificial Intelligence and Society: MLA 373 (Spr)
- Artificial Intelligence and Society: OSPOXFRD 29 (Aut)
- Decision Making under Uncertainty: AA 228, CS 238 (Win)
- Engineering Design Optimization: AA 222, CS 361 (Spr)
- Engineering and Technology in India: OSPGEN 20 (Sum)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Maximilian Adang, Toby Bell, Polo Contreras, Aaron Feldman, Janelle Kaneda, Brian Munguía, Lavinia Pedrollo, Lou Sacchettini, Yiren Shen, Rohan Sinha, Garrett Thomas

Postdoctoral Faculty Sponsor

Duncan Eddy, Kiana Jafari, Marc Schlichting, Aolin Xu, Linfeng Zhao

Doctoral Dissertation Advisor (AC)

Mahdi Al-Husseini, Michelle Ho, Grace Kim, Bill Kuhl, Alexandros Tzikas, Romeo Valentin, Isaac Ward, Hailey Warner

Orals Evaluator

Yiren Shen, Rohan Sinha

Master's Program Advisor

Funmilayo Adeeye, Rishi Alluri, Yasmine Alonso, Kate Baker, Emma Beharry, Agam Bhatia, Julian Brown, Alexander Chon, Benjamin Felter, Filip Henriksson, Tyler Ho, Noah Islam, Justin Jasper, Shreya Joshi, Manav Kant, Natalia Kokoromyti, Ian Lasic-Ellis, Houjun Liu, Zijian Luo, Dhruv Naik, Riya Narain, Cooper Newsom, Sukrut Oak, Kwame Ocran, Amaru Ordóñez-Jacobson, Vikas Patel, Joey Petrocelli, Helen Pruitt-Kennett, Vale Rasmussen, Natalie Shell, Daniel Simpson, Rohan Sinha, Christy Thompson, Emily Tianshi, Hristo Todorov, Renaldo Venegas, Ashley Vincent, Ashok Viswanathan, Márta Vucetic, Jun Wang, Eric Xia

Doctoral Dissertation Co-Advisor (AC)

Samuel Akinwande, Lauren Simitz, Aliyah Smith, David Wu

Doctoral (Program)

Francois Chabard, Anka Reuel

Publications

PUBLICATIONS

- **Probabilistic parameter estimators and calibration metrics for pose estimation from image features** *Digital Avionics Systems Conference (DASC)*
Valentin, R., Katz, S., Lee, J., Arief, M., Sorgenfrei, M., Walker, D., Kochenderfer, M. J.
2024
- **Hierarchical Framework for Optimizing Wildfire Surveillance and Suppression Using Human-Autonomous Teaming** *Journal of Aerospace Information Systems*
Al-Husseini, M., Wray, K., Kochenderfer, M.
2024
- **BetterBench: Assessing AI benchmarks, uncovering issues, and establishing best practices** *Advances in Neural Information Processing Systems (NeurIPS)*
Reuel, A., Hardy, A., Smith, C., Lamparth, M., Hardy, M., Kochenderfer, M. J.
2024
- **Learning-based methods for adaptive informative path planning** *Robotics and Autonomous Systems*
Popović, M., Ott, J., Rückin, J., Kochenderfer, M. J.
2024; 179
- **Ambulance routing for optimizing stroke patient outcomes** *AI for Health Equity and Fairness*
Molins, E., Alonso, Y., Kochenderfer, M. J., Heit, J. J., Pulli, B.
Springer.2024: 19-30
- **Semantic belief behavior graph: Enabling autonomous robot inspection in unknown environments** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
Ginting, M. F., Fan, D. D., Kim, S., Kochenderfer, M. J., Agha-mohammadi, A.
2024
- **PyroRL: A reinforcement learning environment for wildfire evacuation** *Journal of Open Source Software*
Guman, J., O'Brien, J. C., Pondoc, C., Kochenderfer, M. J.
2024; 9 (101)

- **Efficient line-of-sight viewpoint sampling in complex environments for autonomous surface inspection** *IEEE International Symposium on Safety Security Rescue Robotics (SSRR)*
Moon, S., Kim, S., Peltzer, O., Kochenderfer, M. J., Khattak, S.
2024
- **An addendum to NeBula: Toward extending team CoSTAR's solution to larger scale environments** *IEEE Transactions on Field Robotics*
Morrell, B., et al
2024; 1: 476-526
- **Hierarchical framework for optimizing wildfire surveillance and suppression using human-autonomous teaming** *Journal of Aerospace Information Systems*
Al-Husseini, M., Wray, K., Kochenderfer, M. J.
2024; 21 (10): 790-811
- **Sequentially optimized data acquisition for a geothermal reservoir** *Geothermics*
Corso, A., Chiotoroiu, M., Clemens, T., Zechner, M., Kochenderfer, M. J.
2024; 120
- **Artificial intelligence-centric low-enthalpy geothermal field development planning** *Energies*
Clemens, T., Chiotoroiu, M., Corso, A., Zechner, M., Kochenderfer, M. J.
2024; 17 (8)
- **Distributed online planning for min-max problems in networked Markov games** *IEEE Robotics and Automation Letters*
Tzikas, A. E., Park, J., Kochenderfer, M. J., Allen, R. E.
2024; 9 (7): 6656-6663
- **Risk-aware meta-level decision making for exploration under uncertainty** *International Conference on Control, Decision and Information Technologies (CoDIT)*
Ott, J., Kim, S., Bouman, A., Peltzer, O., Sobue, M., Delecki, H., Kochenderfer, M. J., Burdick, J., Agha-mohammadi, A.
2024
- **Trajectory optimization for adaptive informative path planning with multimodal sensing** *International Conference on Control, Decision and Information Technologies (CoDIT)*
Ott, J., Balaban, E., Kochenderfer, M. J.
2024
- **ConstrainedZero: Chance-constrained POMDP planning using learned probabilistic failure surrogates and adaptive safety constraints** *International Joint Conference on Artificial Intelligence (IJCAI)*
Moss, R. J., Jamgochian, A., Fischer, J., Corso, A., Kochenderfer, M. J.
2024
- **BetaZero: Belief-state planning for long-horizon POMDPs using learned approximations** *Reinforcement Learning Conference*
Moss, R. J., Corso, A., Caers, J., Kochenderfer, M. J.
2024
- **Interactive autonomous navigation with internal state inference and interactivity estimation** *IEEE Transactions on Robotics*
Li, J., Isele, D., Lee, K., Park, J., Fujimura, K., Kochenderfer, M. J.
2024; 40: 2932-2949
- **SEEK: Semantic reasoning for object goal navigation in real world inspection tasks** *Robotics: Science and Systems*
Ginting, M. F., Kim, S., Fan, D. D., Palieri, M., Kochenderfer, M. J., Agha-mohammadi, A.
2024
- **Satisfiability.jl: Satisfiability modulo theories in Julia** *Journal of Open Source Software*
Soroka, E., Kochenderfer, M. J., Lall, S.
2024; 9 (100)
- **Predicting future spatiotemporal occupancy grids with semantics for autonomous driving** *IEEE Intelligent Vehicles Symposium (IV)*
Toyungyernsub, M., Yel, E., Li, J., Kochenderfer, M. J.
2024

- **Rank2Tell: A multimodal driving dataset for joint importance ranking and reasoning** *Winter Conference on Applications of Computer Vision*
Sachdeva, E., Agarwal, N., Chundi, S., Roelofs, S., Li, J., Kochenderfer, M. J., Choi, C., Dariush, B.
2024
- **Disentangled neural relational inference for interpretable motion prediction** *IEEE Robotics and Automation Letters*
Dax, V. M., Li, J., Sachdeva, E., Agarwal, N., Kochenderfer, M. J.
2024; 9 (2): 1452-1459
- **Scene informer: anchor-based occlusion inference and trajectory prediction in partially observable environments** *IEEE International Conference on Robotics and Automation (ICRA)*
Lange, B., Li, J., Kochenderfer, M. J.
2024
- **Constrained hierarchical Monte Carlo belief-state planning** *IEEE International Conference on Robotics and Automation (ICRA)*
Jamgochian, A., Buurmeijer, H., Wray, K., Corso, A., Kochenderfer, M. J.
2024
- **Addressing myopic constrained POMDP planning with recursive dual ascent** *International Conference on Automated Planning and Scheduling (ICAPS)*
Stocco, P., Chundi, S., Jamgochian, A., Kochenderfer, M. J.
2024
- **Bayesian safety validation for failure probability estimation of black-box systems** *Journal of Aerospace Information Systems*
Moss, R. J., Kochenderfer, M. J., Gariel, M., Dubois, A.
2024; 21 (7)
- **Approximate sequential optimization for informative path planning** *Robotics and Autonomous Systems*
Ott, J., Kochenderfer, M. J., Boyd, S.
2024; 182
- **A month in review: longitudinal dynamics between daily PTSD symptom networks, affect, and drinking behaviors in female college students** *Frontiers in Psychology*
Balters, S., Schlichting, M., Walton, T. O., Kochenderfer, M. J., Kaysen, D.
2024; 15
- **Optimal control of mechanical ventilators with learned respiratory dynamics** *IEEE International Symposium on Computer-Based Medical Systems (CBMS)*
Wald, I. R., Asmar, D. M., Arief, M., Mike, J. K., Kochenderfer, M. J.
2024
- **Global optimization of objective functions represented by ReLU networks** *Machine Learning*
Strong, C. A., Wu, H., Zeljić, A., Julian, K. D., Katz, G., Barrett, C., Kochenderfer, M. J.
2023; 112: 3685-3712
- **Towards sequential sensor placements on a wind farm to maximize lifetime energy and profit** *Renewable Energy*
Yildiz, A., Mern, J., Kochenderfer, M. J., Howland, M. F.
2023; 216
- **Robust driving policy learning with guided meta reinforcement learning** *IEEE International Conference on Intelligent Transportation Systems (ITSC)*
Lee, K., Li, J., Isele, D., Park, J., Fujimura, K., Kochenderfer, M. J.
2023
- **SAVME: Efficient safety validation for autonomous systems using meta-learning** *IEEE International Conference on Intelligent Transportation Systems (ITSC)*
Schlichting, M. R., Boord, N. V., Corso, A., Kochenderfer, M. J.
2023
- **Experience filter: Using past experiences on unseen tasks or environments** *IEEE Intelligent Vehicles Symposium (IV)*
Yildiz, A., Yel, E., Corso, A. L., Wray, K. H., Witwicki, S. J., Kochenderfer, M. J.

2023

- **Deep normalizing flows for state estimation** *IEEE International Conference on Information Fusion (FUSION)*
Delecki, H., Kruse, L., Schlichting, M., Kochenderfer, M. J.
2023
- **Backward reachability analysis of neural feedback loops: {T}echniques for linear and nonlinear systems** *IEEE Open Journal of Control Systems*
Rober, N., Katz, S. M., Sidrane, C., Yel, E., Everett, M., Kochenderfer, M. J., How, J. P.
2023; 2: 108-124
- **Model-based validation as probabilistic inference** *Conference on Learning for Dynamics and Control (L4DC)*
Delecki, H., Corso, A., Kochenderfer, M. J.
2023
- **Multirobot navigation using partially observable {M}arkov decision processes with belief-based rewards** *Journal of Aerospace Information Systems*
Tzikas, A. E., Knowles, D., Gao, G. X., Kochenderfer, M. J.
2023; 20 (8): 437-525
- **Bayesian safety validation for black-box systems** *AIAA AVIATION*
Moss, R. J., Kochenderfer, M. J., Gariel, M., Dubois, A.
2023
- **Modeling human driving behavior through generative adversarial imitation learning** *IEEE Transactions on Intelligent Transportation Systems*
Bhattacharyya, R., Wulfe, B., Phillips, D. J., Kuefler, A., Morton, J., Senanayake, R., Kochenderfer, M. J.
2023; 24 (3): 2874-2887
- **Fast and scalable signal inference for active robotic source seeking** *IEEE International Conference on Robotics and Automation (ICRA)*
Denniston, C. E., Peltzer, O., Ott, J., Moon, S., Kim, S., Sukhatme, G., Kochenderfer, M. J., Agha-mohammadi, A.
2023
- **Safe and efficient navigation in extreme environments using semantic belief graphs** *IEEE International Conference on Robotics and Automation (ICRA)*
Ginting, M. F., Kim, S., Peltzer, O., Ott, J., Jung, S., Kochenderfer, M. J., Agha-mohammadi, A.
2023
- **Model predictive optimized path integral strategies** *IEEE International Conference on Robotics and Automation (ICRA)*
Asmar, D., Senanayake, R., Manuel, S., Kochenderfer, M. J.
2023
- **Sequential Bayesian optimization for adaptive informative path planning with multimodal sensing** *IEEE International Conference on Robotics and Automation (ICRA)*
Ott, J., Balaban, E., Kochenderfer, M. J.
2023
- **SHAIL: Safety-aware hierarchical adversarial imitation learning for autonomous driving in urban environments** *IEEE International Conference on Robotics and Automation (ICRA)*
Jamgochian, A., Buehrle, E., Fischer, J., Kochenderfer, M. J.
2023
- **Online planning for constrained POMDPs with continuous spaces through dual ascent** *International Conference on Automated Planning and Scheduling (ICAPS)*
Jamgochian, A., Corso, A., Kochenderfer, M. J.
2023
- **Portfolio construction as linearly constrained separable optimization** *Optimization and Engineering*
Moehle, N., Gindi, J., Boyd, S., Kochenderfer, M. J.
2023; 24: 1667-1687
- **Conformal prediction for uncertainty-aware planning with diffusion dynamics model** *Advances in Neural Information Processing Systems (NeurIPS)*

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- Sun, J., Jiang, Y., Qiu, J., Nobel, P. T., Kochenderfer, M. J., Schwager, M.
2023
- **Generating probabilistic safety guarantees for neural network controllers** *Machine Learning*
Katz, S. M., Julian, K. D., Strong, C. A., Kochenderfer, M. J.
2023; 112: 2903-2931
 - **SHAIL: Safety-aware hierarchical adversarial imitation learning for autonomous driving in urban environments** *IEEE International Conference on Robotics and Automation (ICRA)*
Jamgochian, A., Buehrle, E., Fischer, J., Kochenderfer, M. J.
2023
 - **Online planning for constrained POMDPs with continuous spaces through dual ascent** *International Conference on Automated Planning and Scheduling (ICAPS)*
Jamgochian, A., Corso, A., Kochenderfer, M. J.
2023
 - **Portfolio construction as linearly constrained separable optimization** *Optimization and Engineering*
Moehle, N., Gindi, J., Boyd, S., Kochenderfer, M. J.
2023; 24: 1667-1687
 - **Conformal prediction for uncertainty-aware planning with diffusion dynamics model** *Advances in Neural Information Processing Systems (NeurIPS)*
Sun, J., Jiang, Y., Qiu, J., Nobel, P. T., Kochenderfer, M. J., Schwager, M.
2023
 - **Generating probabilistic safety guarantees for neural network controllers** *Machine Learning*
Katz, S. M., Julian, K. D., Strong, C. A., Kochenderfer, M. J.
2023; 112: 2903-2931
 - **Algorithms for Decision Making**
Kochenderfer, M. J., Wheeler, T. A., Wray, K. H.
MIT Press.2022
 - **Modeling human driving behavior through generative adversarial imitation learning** *IEEE Transactions on Intelligent Transportation Systems*
Bhattacharyya, R., Wulfe, B., Phillips, D. J., Kuefler, A., Morton, J., Senanayake, R., Kochenderfer, M. J.
2022
 - **Personalizing exoskeleton assistance while walking in the real world** *Nature*
Slade, P., Kochenderfer, M. J., Delp, S. L., Collins, S. H.
2022; 610 (7931): 277-282
 - **Interpretable self-aware neural networks for robust trajectory prediction** *Conference on Robot Learning (CoRL)*
Itkina, M., Kochenderfer, M. J.
2022
 - **Interaction modeling with multiplex attention** *Advances in Neural Information Processing Systems (NeurIPS)*
Sun, F., Kauvar, I., Zhang, R., Li, J., Kochenderfer, M. J., Wu, J., Haber, N.
2022
 - **Collaborative decision making using action suggestions** *Advances in Neural Information Processing Systems (NeurIPS)*
Asmar, D., Kochenderfer, M. J.
2022
 - **Risk-driven design of perception systems** *Advances in Neural Information Processing Systems (NeurIPS)*
Corso, A., Katz, S. M., Innes, C. A., Du, X., Ramamoorthy, S., Kochenderfer, M. J.
2022
 - **Collision risk and operational impact of speed change advisories as aircraft collision avoidance maneuvers** *AIAA AVIATION Forum*
Katz, S. M., Alvarez, L. E., Owen, M., Wu, S., Brittain, M. W., Das, A., Kochenderfer, M. J.
2022

- **Prioritizing emergency evacuations under compounding levels of uncertainty** *IEEE Global Humanitarian Technology Conference (GHTC)*
Einstein, L. J., Moss, R. J., Kochenderfer, M. J.
2022
- **Uncertainty-aware online merge planning with learned driver behavior** *IEEE International Conference on Intelligent Transportation Systems (ITSC)*
Kruse, L., Yel, E., Senanayake, R., Kochenderfer, M. J.
2022
- **Verification of image-based neural network controllers using generative models** *Journal of Aerospace Information Systems*
Katz, S. M., Corso, A. L., Strong, C. A., Kochenderfer, M. J.
2022; 19 (9): 574-584
- **Multi-objective policy gradients with topological constraints** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
Wray, K., Tiomkin, S., Kochenderfer, M. J., Abbeel, P.
2022
- **FIG-OP: Exploring large-scale unknown environments on a fixed time budget** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
Peltzer, O., Bouman, A., Kim, S., Senanayake, R., Ott, J., Delecki, H., Sobue, M., Kochenderfer, M. J., Schwager, M., Burdick, J., Agha-mohammadi, A.
2022
- **Dynamics-aware spatiotemporal occupancy prediction in urban environments** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
Toyungyernsub, M., Yel, E., Li, J., Kochenderfer, M. J.
2022
- **How do we fail? Stress testing perception in autonomous vehicles,** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
Delecki, H., Itkina, M., Lange, B., Senanayake, R., Kochenderfer, M. J.
2022
- **Adaptive coverage path planning for efficient exploration of unknown environments** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
Bouman, A., Ott, J., Kim, S., Chen, K., Kochenderfer, M. J., Lopez, B., Agha-mohammadi, A., Burdick, J.
2022
- **A sequential decision-making framework with uncertainty quantification for groundwater management** *Advances in Water Resources*
Wang, Y., Zechner, M., Mern, J. M., Kochenderfer, M. J., Caers, J. K.
2022; 166
- **Hierarchical planning for dynamic resource allocation in smart and connected communities** *ACM Transactions on Cyber-Physical Systems*
Pettet, G., Mukhopadhyay, A., Kochenderfer, M. J., Dubey, A.
2022
- **Optimal pointing sequences in spacecraft formation flying using online planning with resource constraints** *Conference on Learning for Dynamics and Control (L4DC)*
Low, S. Y., Kochenderfer, M. J.
2022
- **Scalable online planning for multi-agent MDPs,** *Journal of Artificial Intelligence Research*
Choudhury, S., Gupta, J. K., Morales, P., Kochenderfer, M. J.
2022; 73: 821-846
- **Learning emergent discrete message communication for cooperative reinforcement learning** *IEEE International Conference on Robotics and Automation (ICRA)*
Li, S., Zhou, Y., Allen, R., Kochenderfer, M. J.
2022

- **Infrastructure-enabled autonomy: An attention mechanism for occlusion handling** *IEEE International Conference on Robotics and Automation (ICRA)*
Dax, V. M., Kochenderfer, M. J., Senanayake, R., Ibrahim, U.
2022
- **Multi-agent variational occlusion inference using people as sensors** *IEEE International Conference on Robotics and Automation (ICRA)*
Itkina, M., Mun, Y., Driggs-Campbell, K., Kochenderfer, M. J.
2022
- **A review of incident prediction, resource allocation, and dispatch models for emergency management** *Accident Analysis and Prevention*
Mukhopadhyay, A., Pettet, G., Vazirizade, S. M., Lu, D., Jaimes, A., El Said, S., Baroud, H., Vorobeychik, Y., Kochenderfer, M. J., Dubey, A.
2022; 165
- **Coordinated multi-agent path finding for drones and trucks over road networks** *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*
Choudhury, S., Solovey, K., Kochenderfer, M. J., Pavone, M.
2022
- **Agent-time attention for sparse rewards multi-agent reinforcement learning** *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*
She, J., Gupta, J. K., Kochenderfer, M. J.
2022
- **Recursive reasoning graph for multi-agent reinforcement learning** *AAAI Conference on Artificial Intelligence (AAAI)*
Ma, X., Isele, D., Gupta, J. K., Fujimura, K., Kochenderfer, M. J.
2022
- **OVERT: An algorithm for safety verification of neural network control policies for nonlinear systems** *Journal of Machine Learning Research*
Sidrane, C., Maleki, A., Irfan, A., Kochenderfer, M. J.
2022; 23 (117): 1-45
- **ZoPE: A fast optimizer for ReLU networks with low-dimensional inputs** *NASA Formal Methods Symposium (NFM)*
Strong, C. A., Katz, S. M., Corso, A. L., Kochenderfer, M. J.
2022
- **Portfolio construction as linearly constrained separable optimization** *Optimization and Engineering*
Moehle, N., Gindi, J., Boyd, S., Kochenderfer, M. J.
2022
- **Improving automated driving through POMDP planning with human internal states** *IEEE Transactions on Intelligent Transportation Systems*
Sunberg, Z. N., Kochenderfer, M. J.
2022; 23 (11): 20073-20083
- **Algorithms for verifying deep neural networks** *Foundations and Trends in Optimization*
Liu, C., Arnon, T., Lazarus, C., Strong, C., Barrett, C., Kochenderfer, M. J.
2021; 4 (3-4): 244-404
- **Efficient large-scale multi-drone delivery using transit networks** *Journal of Artificial Intelligence Research*
Choudhury, S., Solovey, K., Kochenderfer, M. J., Pavone, M.
2021; 70: 757-788
- **Parameter-conditioned sequential generative modeling of fluid flows** *AIAA Journal*
Morton, J., Witherden, F. D., Kochenderfer, M. J.
2021; 59 (3): 825-841
- **Reachability analysis for neural network aircraft collision avoidance systems** *Journal of Guidance, Control, and Dynamics*
Julian, K. D., Kochenderfer, M. J.
2021; 44 (6): 1132-1142
- **Deep implicit coordination graphs for multi-agent reinforcement learning** *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*

- Li, S., Gupta, J. K., Morales, P., Allen, R., Kochenderfer, M. J.
2021
- **Scalable anytime planning for multi-agent MDPs** *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*
Choudhury, S., Gupta, J., Morales, P., Kochenderfer, M. J.
2021
 - **Hierarchical planning for resource allocation in emergency response systems** *ACM/IEEE International Conference on Cyber-Physical Systems (ICCPs)*
Pettet, G., Mukhopadhyay, A., Kochenderfer, M. J., Dubey, A.
2021
 - **Double-prong ConvLSTM for spatiotemporal occupancy prediction in dynamic environments** *IEEE International Conference on Robotics and Automation (ICRA)*
Toyungyernsub, M., Itkina, M., Senanayake, R., Kochenderfer, M. J.
2021
 - **Transfer learning for efficient iterative safety validation** *AAAI Conference on Artificial Intelligence (AAAI)*
Corso, A., Kochenderfer, M. J., et al
2021
 - **Improved POMDP tree search planning with prioritized action branching** *AAAI Conference on Artificial Intelligence (AAAI)*
Mern, J., Yildiz, A., Bush, L., Mukerji, T., Kochenderfer, M. J.
2021
 - **Bayesian optimized Monte Carlo planning** *AAAI Conference on Artificial Intelligence (AAAI)*
Mern, J., Yildiz, A., Sunberg, Z., Mukerji, T., Kochenderfer, M. J.
2021
 - **Obstacle avoidance using a monocular camera** *AIAA Science and Technology Forum (SciTech)*
Hatch, K., Mern, J., Kochenderfer, M. J.
2021
 - **Out-of-distribution detection for automotive perception** *IEEE International Conference on Intelligent Transportation Systems (ITSC)*
Nitsch, J., Itkina, M., Senanayake, R., Nieto, J., Schmidt, M., Siegart, R., Kochenderfer, M. J.
2021
 - **A survey of algorithms for black-box safety validation of cyber-physical systems** *Journal of Artificial Intelligence Research*
Corso, A., Moss, R. J., Koren, M., Lee, R., Kochenderfer, M. J.
2021; 72: 377–428
 - **Tax-aware portfolio construction via convex optimization** *Journal of Optimization Theory and Applications*
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