

Guillaume SARTORETTI

Assistant Professor, National University of Singapore, Mechanical Engineering Dpt. (2019-)

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<http://www.marmotlab.org>

<https://scholar.google.com/citations?user=n7NzZ0sAAAAJ>

Education

June 2018 – June 2019	Manufacturing Futures Initiative (MFI) Postdoctoral Fellow, Robotics Institute, CMU <u>Project Title:</u> <i>Distributed Learning for large-scale multi-robot path planning in complex environments.</i> <u>Advisor:</u> Prof. Howie Choset.
June 2016 – June 2018	Postdoctoral Fellow, Robotics Institute, Carnegie Mellon University <u>Advisor:</u> Prof. Howie Choset.
April 2016	PhD in <i>Robotics, Control and Intelligent Systems</i>, EPFL, Switzerland <u>Title:</u> <i>Control of Agent Swarms in Random Environments</i> <u>Advisor:</u> Prof. Max-Olivier Hongler.
March 2012	Master of Science in Mathematics and Computer Science, University of Geneva.

Professional and Teaching Experience

2019 - Current	Lecturer Activities, Mechanical Engineering Department, NUS. ▪ 2020 – Now: “Microprocessor applications”, ME3241, (Bachelor, 3rd year). ▪ 2022 – Now: “Deep learning for robotics”, ME5406, (Master’s level course). ▪ 2021 – 2023: “Machine Vision”, ME5405 (Master’s level course). ▪ 2023 – Now: “Machine learning in robotics”, ME5418, (Master’s level course). ▪ 2025 – Now: “Robot Programming”, RB2301, (Bachelor, 2nd year).
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Postgraduate Students Supervised to date

2021 – 2025	WANG Yutong, Ph.D, <i>Learning Scalable Policies for Cooperative and Mixed MAS</i>
2021 – 2025	HE Chengyang, Ph.D, <i>Team-Inspired Representation Learning for Decentralized Multi-Robot Coordination</i>
2021 – 2025	ZHANG Yifeng, Ph.D, <i>Distributed Reinforcement Learning for Decentralized Traffic Management in Urban Environments</i>
2020 – 2025	Pamela WANG, SUTD-NUS joint Ph.D, <i>Guided Cooperation for Multi-Agent Teams</i>
2020 – 2024	DAI Weiheng, Ph.D, <i>Distribution and Cooperation in Multi-Agent Systems via Reinforcement Learning</i>
2020 – 2024	SUN Ge, Ph.D, <i>Legged Robot Locomotion: Bio-Inspired Approaches to Environmental Adaptation and Interaction</i>
2022 – 2024	Maxime DE MONTLEBERT, M.Eng, <i>Active SLAM for Decentralized and Disconnected MAS</i>
2021 – 2024	CAO Yuhong, Ph.D, <i>Context-Aware Learning for Autonomous Robotic Deployments in Unknown Environments</i>
2021 – 2023	YANG Tianze, M.Eng, <i>Deep Reinforcement Learning in Multi-Agent Path Finding</i>

Research Grants and Funded Projects

2026 - 2029	Collaborative Research Project, ST Engineering (<u>main PI</u>). <u>Title:</u> Hierarchical Cooperation and Competition Learning for Swarm Defense Scenarios.	<u>Amount:</u> S\$ 1.5M.
2025 - 2028	Funded Research Project, T-Lab@NUS and DSO (<u>main PI</u>). <u>Title:</u> <i>Cooperative Multi-Agent Learning Powered by Generative and Foundation Models.</i>	<u>Amount:</u> S\$ 500k.
2025 - 2026	DSO Drone Challenge, TL@NUS (<u>main PI</u>). <u>Title:</u> Deep RL-based Multi-UAV Target Search in Low-Rise Urban Environments.	<u>Amount:</u> S\$ 360k.
2025 - 2027	Collaborative Research Project, ST Engineering UIS (<u>main PI</u>). <u>Title:</u> Autonomous Multi-Agent Vessel Tugboating.	<u>Amount:</u> S\$ 620k.
2025 - 2026	Seed Research Project, T-Lab@NUS (<u>Co- PI</u>; PI: Prof. C. Laschi). <u>Title:</u> <i>Soft Arm on a Quadruped Robot in Search-and-Rescue Operations.</i>	<u>Amount:</u> S\$ 150k.
2023 - 2028	ST Engineering Research Funds under IPP-PhD Program (<u>main PI</u>; Co-Pi: M. Ang). <u>Title:</u> <i>Deep Learning for Decentralised Multi-Agent Collaboration.</i>	<u>Amount:</u> S\$ 150k.
2023 - 2026	MOE Academic Research Fund (AcRF) Tier 1 FRC Research Grant (<u>main PI</u>). <u>Title:</u> <i>Scalable Whole-Body Control for Legged Mobile Manipulation.</i>	<u>Amount:</u> S\$ 250k.
2023 - 2025	Amazon Research Award - unrestricted gift (<u>main PI</u>). <u>Title:</u> <i>Distributed Learning for Human-Aware Multi-Agent Pathfinding.</i>	<u>Amount:</u> US\$ 80k.
2022 - 2025	Funded Research Project, T-Lab@NUS and DSO (<u>main PI</u>). <u>Title:</u> <i>Decentralized Search of Evasive Agents.</i>	<u>Amount:</u> S\$ 260k.
2022 - 2025	Maritime Transformation Programme White Space Funding (<u>main PI</u> since 01/2024) <u>Title:</u> <i>Robotic Systems for Securing/Un-securing of Containers in Vessels.</i> <u>Co-PIs:</u> Profs. G. Chirikjian (original PI), M. ANG, Dr. H. ZHANG.	<u>Amount:</u> S\$ 4.8M.
2021 - 2026	Project 3, Work Package 4 of “Cisco-NUS Corporate Laboratory” (<u>Co-PI</u>). <u>Title:</u> <i>Scalable, Decentralized Urban Traffic Management for Autonomous Vehicles.</i> <u>Co-PIs:</u> Profs. Biplab Sidkar (PI), Marcelo ANG.	<u>Amount:</u> S\$ 650k.
2021 - 2022	Seed Research Project, T-Lab@NUS (<u>main PI</u>). <u>Title:</u> <i>Learning Based Approaches for Advanced Multi-Agent Search Problems.</i> <u>Co-PIs:</u> Dr. Jiawei CAO.	<u>Amount:</u> S\$ 60k.
2021 - 2024	MOE Academic Research Fund (AcRF) Tier 1 FRC Research Grant (<u>main PI</u>). <u>Title:</u> <i>Comms-Based AI Methods for Multi-Robot Dec. Cooperation.</i>	<u>Amount:</u> S\$ 226,5k.
2020 - 2022	Work Package 3 of “Urban Traffic Flow Smoothing Models” (<u>Co-PI</u>). <u>Title:</u> <i>Traffic Light Control for Optimal Traffic Flow.</i> <u>Co-PIs:</u> Profs. Kien Ming Ng (PI), Marcelo ANG, and Gerard LENG.	<u>Amount:</u> S\$ 780k.
2020 - 2021	Seed Research Project, T-Lab@NUS (<u>main PI</u>). <u>Title:</u> <i>Scalable Decentralized Multi-Robot Search via Distributed RL.</i> <u>Co-PIs:</u> Drs. Swee Huat Rodney TEO and Jiawei CAO.	<u>Amount:</u> S\$ 60k.
2018 - 2019	Manufacturing Futures Initiative (MFI) Postdoctoral Fellowship.	<u>Amount:</u> US\$ 70k.

Prizes and Awards

2025	Best Paper Award Finalist at the IEEE International Symposium on Multi-Robot & Multi-Agent Systems (MRS 2025). See details in publication list below.
2025	Best Student Paper Award and Best Paper Award on Multi-Robot Systems at the IEEE International Conference on Robotics and Automation (ICRA 2025). See details in publication list below.
2023	NUS' College of Design and Engineering (CDE) Outstanding Early Career Award 2023.
2022	Amazon Research Award (ARA). See details in grants and funded projects above.
2022	Best Student Paper Award at the International Symposium on Distributed Autonomous Robotic Systems (DARS 2022), and Best Paper Award at the IEEE International Conference on Unmanned Systems (ICUS 2022). See details in publication list below.
2021	Best Paper Award at the International Symposium on Distributed Autonomous Robotic Systems (DARS 2021). See details in publication list below.
2020	First place at the first round of the NeurIPS 2020 "Flatland" Competition (https://www.aicrowd.com/challenges/flatland), and fourth place overall.

Invited Keynotes, Lectures, and Seminars

18/07/2024	Computational Robotics Lab, ETHZ, Zürich, CH, Invited Seminar.
17/07/2024	Robotics Systems Lab, ETHZ, Zürich, CH, Invited Seminar.
16/06/2025	CMU Robotics Institute Special Seminar; Host: Asst. Prof. Jiaoyang Li.
12/06/2025	CVPR 2025 Workshop on Multi-Agent Embodied Intelligent Systems, Keynote Speaker.
30/05/2025	Multi-Robot Systems Lab, Stanford University, Palo Alto, USA, Invited Seminar.
23/05/2025	ICRA 2025 Workshop on Multi-Agent Robotic Construction, Keynote Speaker.
27/11/2024	Qingbiao LI's Research Group, University of Macau, Invited Seminar.
14/10/2024	IROS 2024 Workshop on Multi-Robot Path Planning, Keynote Speaker.
25/06/2024	Keynote Speaker at ST Engineering's AI Seminar Series.
07/05/2024	AAMAS 2024 Workshop on Optimization and Learning in MAS, Keynote Speaker.
22/02/2024	Caltech Special Seminar; Host: Prof. Soon-Jo Chung.
20/02/2024	Multi-Robot Systems Lab, Stanford University, Palo Alto, USA, Invited Seminar.
19/02/2024	Daltorio Lab, CASE Western Reserve University, Cleveland, USA, Invited Seminar.
16/02/2024	GRASP Seminar, University of Pennsylvania, USA; Host: Prof. M. Ani Hsieh. https://www.youtube.com/watch?v=61RKzhRy0yE
09/02/2024	ARCS Lab, Carnegie Mellon University, Pittsburgh, USA, Invited Seminar.
02/02/2024	Computational Robotics Lab, ETHZ, Zürich, CH, Invited Seminar.
01/02/2024	Biorobotics Lab, EPFL, Lausanne, CH, Invited Seminar.
27/09/2023	Algorithmic Alignment Group, MIT, Cambridge, USA, Invited Seminar.

25/09/2023	Speaker at the SUTD Workshop on Robotic Perception.
20/09/2023	Speaker at the ArmaSuisse Workshop on Swarm Intelligence.
08/06/2023	Prorok Laboratory, Cambridge University, Cambridge, UK, Invited Seminar.
29/05/2023	ICRA 2023 Workshop on Multi-Robot Learning, Panelist.
14/02/2023	AAAI 2023 Workshop on Multi-Agent Pathfinding (MAPF), Keynote Speaker.
17/10/2022	Machine Learning and Its Applications Intl. Workshop, NUS-IMS. Invited Seminar.
20/05/2022	Amazon Robotics, Boston, USA, Invited Seminar.
27/09/2021	ETHZ Autonomy Talk, 1h Invited Seminar (virtual), https://youtu.be/2Jts4uFbbBM
02/12/2019	National University of Singapore, Invited Seminar, Temasek Laboratory.
06/11/2019	Case Western Reserve University, Invited Seminar, Mechanical & Aerospace Eng. Dpt.
09/19/2018	Invited Seminar at the National Robotics Engineering Center (NREC).
08/09/2018	Tufts University, Invited Seminar, Computer Science Department.
01/28/2016	EPFL, Informal private presentation, DISAL laboratory.
09/29/2015	Drexel University, Private presentation, SAS and GRASP laboratories.
Other Academic Activities	
2026	Area Chair for Robotics: Science and Systems (RSS 2026).
26/01/2026	Workshop Organizer at AAAI 2026: “Intl. Workshop on Multi-Agent Path Finding.”
13/05/2024	Workshop Organizer at ICRA 2024: Full Day “Tutorial on Ergodic Planning.”
2023 - Current	Associate Editor for SAGE’s Intl. Journal of Robotics Research (IJRR, Scopus Top 1%).
2022 - Current	Section Editor for Springer Nature’s Encyclopedia of Robotics, for the “Multiple Mobile Robot Systems” Section.
2021 - Current	Associate Editor for the IEEE International Conference on Robotic and Automation (ICRA), in the “Mechanism, Design, and Control” area (2023-2024), “Robot Learning” (2025), and “Autonomy for Mobility and Manipulation” (2026).
2021 - Current	Program Committee Member (PC) for the International Joint Conference on AI (IJCAI), the AAAI Conference on AI, and the European Conference on AI (ECAI).
2021	Associate Editor for the Intl. Symp. on Multi-Robot and Multi-Agent Systems (MRS).
2020 - Current	Associate Editor for IEEE Robotics and Automation Letters in the <i>Multiple and Distributed Systems</i> area (RA-L, Scopus Top 10%).
2019 - 2023	Guest Editor for SNAS’ topical collection on “Distributed Mobile Robotic Systems.”
2019 - Current	Reviewer for <i>Science Robotics</i> (ScienceMag), JAAMAS (Springer), <i>SICOMP</i> (Sage), <i>Robotics and Automation Letters</i> (RA-L, IEEE), as well as various international conferences on robotics and AI (RSS, ICRA, IROS, WAFR, AAMAS, ECC, ACC, CASE).

Publications: Thesis

2016	PhD Thesis: G. Sartoretti and M.-O. Hongler. <i>Control of Agent Swarms in Random Environments</i> . EPFL, Lausanne (CH).
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Publications: Refereed Journal Papers

2026	Y. Zhang, Y. Liu, P. Gong, P. Li, M. Fan, and G. Sartoretti . Unicorn: A Universal and Collaborative Reinforcement Learning Approach Towards Generalizable Network-Wide Traffic Signal Control. <i>IEEE Transactions on Intelligent Transportation Systems (T-ITS)</i> .
2026	J. Chen, Y. Zhang, Y. Zhou, Y. Wu, E. Chung, and G. Sartoretti . Learning-based Lane Selection and Driving Orders for Connected Automated Vehicles at Multi-lane Freeway Merging Sections. <i>IEEE T-ITS</i> .
2026	T. Duhan, C. He, and G. Sartoretti . P3GASUS: Pre-Planned Path Execution Graphs for Multi-Agent Systems at Ultra-Large Scale. <i>IEEE Robotics and Automation Letters (RA-L)</i> .
2025	C. He, T. Duhan, P. Tulsyan, P. Kim, and G. Sartoretti . Social behavior as a key to learning-based multi-agent pathfinding dilemmas. <i>Elsevier's Artificial Intelligence</i> .
2025	Y. Zhang, H. Goel, P. Li, M. Damani, S. Chinchali, and G. Sartoretti . CoordLight: Learning Decentralized Coordination for Network-Wide Traffic Signal Control. <i>IEEE T-ITS</i> .
2025	M. Fan, H. Liu, G. Wu, A. Gunawan, and G. Sartoretti . Multi-UAV reconnaissance mission planning via deep reinforcement learning with simulated annealing. <i>Swarm and Evolutionary Computation</i> , 93 (2025): 101858.
2025	W. Dai, U. Rai, J. Chiun, Y. Cao, and G. Sartoretti . Heterogeneous Multi-robot Task Allocation and Scheduling via Reinforcement Learning. <i>IEEE RRA-L</i> , 10(3):2654-2661.
2024	J. Liang, Y. Cao, Y. Ma, H. Zhao, and G. Sartoretti . HDPlanner: Advancing Autonomous Deployments in Unknown Environments Through Hierarchical Decision Networks. <i>IEEE RA-L</i> , 10(1):256-263.
2024	Y. Cao, R. Zhao, Y. Wang, B. Xiang, and G. Sartoretti . Deep Reinforcement Learning-based Large-scale Robot Exploration. <i>IEEE RA-L</i> , 9(5):4631-4638.
2024	M. Fan, Y. Wu, Z. Cao, W. Song, G. Sartoretti , H. Liu, and G. Wu. Conditional Neural Heuristic for Multiobjective Vehicle Routing Problems. <i>IEEE Transactions on Neural Networks and Learning Systems (T-NNLS)</i> .
2023	Y. Wang, Y. Wang, and G. Sartoretti . Full Communication Memory Networks for Team-Level Cooperation Learning. <i>Autonomous Agents and Multi-Agent Systems (JAAMAS)</i> .
2023	Y. Gong, G. Sun, A. Nair, A. Bidwai, R. CS, J. Grezmak, G. Sartoretti and K. A. Daltorio. Legged robots for object manipulation: A review. <i>Frontiers in Mechanical Engineering</i> .
2022	M. Fan, Y. Wu, G. Wu, Z. Cao, H. Guo, and G. Sartoretti . Deep Reinforcement Learning for UAV Routing in The Presence of Multiple Charging Stations. <i>IEEE Transactions on Vehicular Technology (T-VT)</i> , 72(5):5732-5746.
2022	Y. Wang, M. Damani, P. Wang, Y. Cao, and G. Sartoretti . Distributed Reinforcement Learning for Robot Teams: A Review. <i>Springer's Current Robotics Reports</i> , 3(4):239-257.
2022	G. Sun and G. Sartoretti . Joint-Space CPG for Safe Foothold Planning and Body Pose Control during Locomotion and Climbing. <i>IEEE RA-L</i> , 7(4):9889-9896.
2022	B. Chong, Y. Ozkan-Aydin, J. Rieser, G. Sartoretti , et al. A general locomotion control framework for multi-legged locomotors. <i>Bioinspiration & Biomimetics</i> , 17(4):046015.

2022	S. Shaw, E. Wenzel, A. Walker, and G. Sartoretti . ForMIC: Foraging via Multiagent RL with Implicit Communication. <i>Robotics and Automation Letters (RA-L)</i> , 7(2):4877-4884.
2021	M. Damani, Z. Luo, E. Wenzel, and G. Sartoretti . PRIMAL ₂ : Pathfinding via Reinforcement and Multiagent Imitation Learning - Lifelong. <i>IEEE RA-L</i> , 6(2):2666-2673.
2021	B. Chong, Y.O. Aydin, C. Gong, G. Sartoretti , ..., D.I. Goldman & H. Choset. Coordination of lateral body bending and leg movements for sprawled posture quadrupedal locomotion. <i>The International Journal of Robotics Research</i> , 40(4-5):747-763.
2020	B. Freed, G. Sartoretti , and H. Choset. Simultaneous policy and discrete communication learning for multi-agent cooperation. <i>IEEE RA-L</i> , 5(2):2498-2505.
2019	G. Sartoretti , W. Paivine, Y. Shi, Y. Wu, H. Choset. Distributed learning of decentralized control policies for articulated mobile robots. <i>Transactions in Robotics</i> , 35(5):1109-1122.
2019	G. Sartoretti , J. Kerr, Y. Shi, G. Wagner, T. K. S. Kumar, S. Koenig, H. Choset. PRIMAL: Pathfinding via Reinforcement and Imitation Multi-Agent Learning. <i>IEEE RA-L</i> , 4(3):2378-2385.
2016	G. Sartoretti . Leader-based versus soft control of multi-agent swarms. <i>Artificial Life and Robotics</i> , 21(3):302-307.
2016	G. Sartoretti and M.-O. Hongler. Interacting Brownian swarms: Analytical results. <i>Entropy</i> , 18, 27.
2014	G. Sartoretti , M.-O. Hongler, M. Elias de Oliveira, and F. Mondada. Decentralized self-selection of swarm trajectories: From dynamical system theory to robotic implementation. <i>Swarm Intelligence</i> , vol. 8(no. 4):329-351.
2013	G. Sartoretti and M.-O. Hongler. Self-organized mixed canonical-dissipative dynamics for Brownian planar agents. <i>Cybernetics and Physics</i> , 2(1):41-46.
2013	B. Barbieri, G. Sartoretti , J.-L. Falcone, B. Chopard, and M. J. Gander. Traffic prediction based on a local exchange of information. <i>Journal of Cellular Automata</i> , 8(5-6):429-441.

Publications: Refereed Conference Papers

2026	C. He, X. Liu, G. Sznaiers Camps, J. Bruno, G. Sartoretti , and M. Schwager. Demystifying Robot Diffusion Policies: Action Memorization and a Simple Lookup Table Alternative. Accepted for presentation at ICLR 2026.
2026	H. Ni, J. Liang, C. He, Y. Cao, and G. Sartoretti . GRATE: a Graph transformer-based deep Reinforcement learning Approach for Time-efficient autonomous robot Exploration. Accepted for presentation at ICRA 2026.
2026	J. Lew, Y. Cao, D. Tan, and G. Sartoretti . AID: Agent Intent from Diffusion for Multi-Agent Informative Path Planning. Accepted for presentation at ANTS 2026.
2025	X. Zhang, Y. Wang, and G. Sartoretti . COMPASS: Cooperative Multi-Agent Persistent Monitoring using Spatio-Temporal Attention Network. <i>IEEE International Symposium on Multi-Robot & Multi-Agent Systems (MRS 2025)</i> . Best Paper Award Finalist.
2025	M. Fan, J. Zhou, Y. Zhang, Y. Wu, J. Chen, and G. Sartoretti . Preference-Driven Multi-Objective Combinatorial Optimization with Conditional Computation. <i>39th Annual Conference on Neural Information Processing Systems (NeurIPS 2025)</i> .
2025	Y. Zhang*, P. Gong*, W. He, Y. Liu, M. Fan, and G. Sartoretti . V2XFormer: A Multi-Stage Transformer for Multi-Agent Reinforcement Learning in V2X-Enabled Traffic Signal Control. <i>IEEE Intl. Conference on Intelligent Transportation Systems (ITSC 2025)</i> .

2025	Y. Liu and G. Sartoretti . Ride the Flow: Dynamic Tensor and Adaptive Modeling for Short-Term Traffic Prediction. <i>ITSC 2025</i> .
2025	Y. Wang, H. He, J. Liang, Y. Cao, R. Chakraborty, and G. Sartoretti . CogniPlan: Uncertainty-Guided Path Planning with Conditional Generative Layout Prediction. <i>Conference on Robot Learning (CoRL 2025)</i> .
2025	D. Tan, B. Liu, A. Raj, Q. X. Ang, W. Dai, T. Duhan, J. Chiun, Y. Cao, F. Shkurti, and G. Sartoretti . Search-TTA: A Multimodal Test-Time Adaptation Framework for Visual Search in the Wild. <i>Conference on Robot Learning (CoRL 2025)</i> .
2025	J. Cheng, M. Fan, X. Zhang, J. Liang, Y. Cao, G. Wu, and G. Sartoretti . Multimodal Fused Learning for Solving the Generalized Traveling Salesman Problem in Robotic Task Planning. <i>CoRL 2025</i> .
2025	C. He, G. Sznaier Camps, X. Liu, M. Schwager, and G. Sartoretti . Latent Theory of Mind: A Decentralized Diffusion Architecture for Cooperative Manipulation. Oral presentation at CoRL 2025 (5.7% acceptance rate for oral talk).
2025	P. Li*, H. Li*, G. Sun, J. Cheng, X. Yang, G. Bellegarda, M. Shafiee, Y. Cao, A. Ijspeert, and G. Sartoretti . SATA: Safe and Adaptive Torque-Based Locomotion Policies Inspired by Animal Learning. <i>Robotics: Science and Systems (RSS 2025)</i> .
2025	J. Chiun, S. Zhang, Y. Wang, Y. Cao, and G. Sartoretti . MARVEL: Multi-Agent Reinforcement Learning for constrained field-of-View multi-robot Exploration in Large-scale environments. <i>IEEE Intl. Conference on Robotics and Automation (ICRA 2025)</i> .
2025	Y. Cao*, J. Lew*, J. Liang, J. Cheng, and G. Sartoretti . DARE: Diffusion Policy for Autonomous Robot Exploration. <i>ICRA 2025</i> .
2025	S. Liao, W. Xia, Y. Cao, W. Dai, C. He, W. Wu, and G. Sartoretti . SIGMA: Sheaf-Informed Geometric Multi-Agent Pathfinding. <i>ICRA 2025</i> .
2025	H. Jiang*, Y. Wang*, R. Veerapaneni, T. Duhan, G. Sartoretti , and J. Li. Deploying Ten Thousand Robots: Scalable Imitation Learning for Lifelong Multi-Agent Path Finding. <i>ICRA 2025</i> . Best Student Paper Award and Best Paper Award on Multi-Robot Systems .
2025	Y. Wang, T. Duhan, J. Li, and G. Sartoretti . LNS2+RL: Combining Multi-Agent Reinforcement Learning with Large Neighborhood Search in Multi-Agent Path Finding. Oral presentation at AAAI 2025 (4.6% acceptance rate for oral talk).
2024	Y. Wang, Y. Cao, J. Chiun, S. Koley, M. Pham, and G. Sartoretti . ViPER: Visibility-based Pursuit-Evasion via Reinforcement Learning. <i>Conference on Robot Learning (CoRL 2024)</i> .
2024	J. Chiun, Y. R. Tan, Y. Cao, J. Tan, and G. Sartoretti . STAR: Swarm Technology for Aerial Robotics Research. <i>Intl. Conference on Control, Automation and Systems (ICCAS 2024)</i> .
2024	Y. Ma, J. Liang, Y. Cao, D. Tan, and G. Sartoretti . Privileged Reinforcement and Communication Learning for Distributed, Bandwidth-limited Multi-Robot Exploration. <i>International Symposium on Distributed Autonomous Robotics Systems (DARS 2024)</i> .
2024	G. Sun, M. Shafiee, P. Li, G. Bellegarda, A. Ijspeert, and G. Sartoretti . Learning-based Hierarchical Control: Emulating the Central Nervous System for Bio-Inspired Legged Robot Locomotion. <i>IEEE Intl. Conference on Intelligent Robots and Systems (IROS 2024)</i> .
2024	S. Sood, G. Sun, P. Li, and G. Sartoretti . DecAP: Decaying Action Priors for Accelerated Learning of Torque-Based Legged Locomotion Policies. <i>IROS 2024</i>
2024	D. Tan, Y. Ma, J. Liang, Y. C. Chng, Y. Cao, and G. Sartoretti . IR2: Implicit Rendezvous for Robotic Exploration Teams under Sparse Intermittent Connectivity. <i>IROS 2024</i> .
2024	Y. Zhang, P. Li, M. Fan, and G. Sartoretti . HeteroLight: A General and Efficient Learning Approach for Heterogeneous Traffic Signal Control. <i>IROS 2024</i> .

2024	J. Taylor, I. Nursultan, M. Y. Chuah, W.-Y. Yau, G. Sartoretti , and E. Camci. Reconfigurable multi-rotor for high-precision physical interaction. <i>IROS 2024</i> .
2024	A. Rao, G. Sartoretti , and H. Choset. Learning Heterogeneous Multi-Agent Allocations for Ergodic Search. <i>IEEE Intl. Conference on Robotics and Automation (ICRA 2024)</i> .
2024	C. He, T. Yang, T. Duhan, Y. Wang, and G. Sartoretti . ALPHA: Attention-based Long-horizon Pathfinding in Highly-structured Areas. <i>ICRA 2024</i> .
2024	W. Dai, A. Bidwai, and G. Sartoretti . Dynamic Coalition Formation and Routing for Multirobot Task Allocation via Reinforcement Learning. <i>ICRA 2024</i> .
2024	Y. Wu*, M. Fan*, Z. Cao, R. Gao, Y. Hou, and G. Sartoretti . Collaborative Deep Reinforcement Learning for Solving Multi-Objective Vehicle Routing Problems. <i>International Conf. on Autonomous Agents and Multiagent Systems (AAMAS 2024)</i> .
2024	Y. Yang*, M. Fan*, C. He, J. Wang, H. Huang, and G. Sartoretti . Attention-based Priority Learning for Limited Time Multi-Agent Path Finding. <i>AAMAS 2024</i> .
2023	T. Yang, Y. Cao, and G. Sartoretti . Intent-based Deep Reinforcement Learning for Multi-agent Informative Path Planning. <i>IEEE International Symposium on Multi-Robot and Multi-Agent Systems (MRS 2023)</i> .
2023	J. Liang, Z. Wang, Y. Cao, J. Chiun, M. Zhang, and G. Sartoretti . Context-Aware Deep Reinforcement Learning for Autonomous Robotic Navigation in Unknown Area. <i>Conference on Robot Learning (CoRL 2023)</i> .
2023	Y. Wang, B. Xiang, S. Huang, and G. Sartoretti . SCRIMP: Scalable Communication for Reinforcement- and Imitation-Learning-Based Multi-Agent Pathfinding. <i>International Conference on Intelligent Robots and Systems (IROS 2023)</i> .
2023	Y. Wang, Y. Wang, Y. Cao, and G. Sartoretti . Spatio-Temporal Attention Network for Persistent Monitoring of Multiple Mobile Targets. <i>IROS 2023</i> .
2023	B. Freed, S. Venkatraman, G. Sartoretti , J. Schneider, and H Choset. Learning Temporally Abstract World Models without Online Experimentation. <i>International Conference on Machine Learning (ICML 2023)</i> .
2023	Y. Cao, T. Hou, Y. Wang, X. Yi, and G. Sartoretti . ARiADNE: A Reinforcement learning approach using Attention-based Deep Networks for Exploration. <i>International Conference on Robotics and Automation (ICRA 2023)</i> .
2023	H. Goel, Y. Zhang, M. Damani, and G. Sartoretti . SocialLight: Distributed Cooperation Learning towards Network-Wide Traffic Signal Control. <i>International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2023)</i> .
2023	Y. Wang, B. Xiang, S. Huang, and G. Sartoretti . SCRIMP: Scalable Communication for Reinforcement- and Imitation-Learning-Based MAPF. <i>AAMAS 2023 (extended abstract)</i> .
2022	Y. Cao, Y. Wang, A. Vashisth, H. Fan, and G. Sartoretti . CATnIPP: Context-Aware Attention-based Network for Informative Path Planning. <i>6th Annual Conference on Robot Learning (CoRL 2022)</i> .
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2014	G. Sartoretti , M.-O. Hongler, and R. Filliger. The estimation problem and heterogenous swarms of autonomous agents. <i>SMTDA 2014</i> .
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Languages			
<i>French</i>	mother tongue		
<i>English</i>	fluent	<i>Spanish</i>	oral comprehension
<i>German</i>	good knowledge	<i>Hungarian</i>	weak oral comprehension