Nathan Michael

List of Publications by Year
in descending order

56 papers	2,247 citations	623734 14 h-index	642732 23 g-index
57 all docs	57 docs citations	57 times ranked	1965 citing authors

#	ARTICLE	IF	CITATIONS
1	Autonomous Cave Surveying With an Aerial Robot. IEEE Transactions on Robotics, 2022, 38, 1016-1032.	10.3	20
2	Fast Exploration Using Multirotors: Analysis, Planning, and Experimentation. Springer Proceedings in Advanced Robotics, 2021, , 291-305.	1.3	6
3	Rapid and High-Fidelity Subsurface Exploration with Multiple Aerial Robots. Springer Proceedings in Advanced Robotics, 2021, , 436-448.	1.3	6
4	Simultaneous Localization and Mapping of Subterranean Voids with Gaussian Mixture Models. Springer Proceedings in Advanced Robotics, 2021, , 173-187.	1.3	5
5	An Intention Guided Hierarchical Framework for Trajectory-based Teleoperation of Mobile Robots. , 2021, , .		2
6	Volumetric Objectives for Multi-Robot Exploration of Three-Dimensional Environments. , 2021, , .		6
7	Scalable Distributed Planning for Multi-Robot, Multi-Target Tracking. , 2021, , .		3
8	Data Driven Online Multi-Robot Formation Planning. , 2020, , .		2
9	Allocating Limited Sensing Resources to Accurately Map Dynamic Environments. , 2020, , .		0
10	Distributed matroid-constrained submodular maximization for multi-robot exploration: theory and practice. Autonomous Robots, 2019, 43, 485-501.	4.8	58
11	Efficient Kinodynamic Multi-Robot Replanning in Known Workspaces. , 2019, , .		7
12	RaD-VIO: Rangefinder-aided Downward Visual-Inertial Odometry. , 2019, , .		6
13	Communication-Efficient Planning and Mapping for Multi-Robot Exploration in Large Environments. IEEE Robotics and Automation Letters, 2019, 4, 1715-1721.	5.1	57
14	Efficient, Multifidelity Perceptual Representations via Hierarchical Gaussian Mixture Models. IEEE Transactions on Robotics, 2019, 35, 248-260.	10.3	16
15	Variable Resolution Occupancy Mapping Using Gaussian Mixture Models. IEEE Robotics and Automation Letters, 2019, 4, 2015-2022.	5.1	35
16	Online adaptive teleoperation via motion primitives for mobile robots. Autonomous Robots, 2019, 43, 1357-1373.	4.8	13
17	Environment model adaptation for mobile robot exploration. Autonomous Robots, 2018, 42, 257-272.	4.8	15
18	Online planning for human–multi-robot interactive theatrical performance. Autonomous Robots, 2018, 42, 1771-1786.	4.8	11

#	ARTICLE	IF	CITATIONS
19	Reactive Collision Avoidance Using Real-Time Local Gaussian Mixture Model Maps. , 2018, , .		13
20	Distributed Submodular Maximization on Partition Matroids for Planning on Large Sensor Networks. , 2018, , .		20
21	Fast Monte-Carlo Localization on Aerial Vehicles Using Approximate Continuous Belief Representations. , 2018, , .		10
22	Supervisory Control of Multirotor Vehicles in Challenging Conditions Using Inertial Measurements. IEEE Transactions on Robotics, 2018, 34, 1490-1501.	10.3	10
23	Leveraging experience for robust, adaptive nonlinear MPC on computationally constrained systems with time-varying state uncertainty. International Journal of Robotics Research, 2018, 37, 1690-1712.	8.5	10
24	On-Manifold GMM Registration. IEEE Robotics and Automation Letters, 2018, 3, 3805-3812.	5.1	25
25	A framework for efficient teleoperation via online adaptation. , 2017, , .		15
26	Leveraging experience for computationally efficient adaptive nonlinear model predictive control. , 2017, , .		9
27	Active estimation of mass properties for safe cooperative lifting. , 2017, , .		8
28	Computationally efficient information-theoretic exploration of pits and caves. , 2016, , .		21
29	Persistent robot formation flight via online substitution. , 2016, , .		5
30	Dynamically feasible and safe shape transitions for teams of aerial robots. , 2016, , .		4
31	Robust direct visual odometry using mutual information. , 2016, , .		6
32	Efficient multi-sensor exploration using dependent observations and conditional mutual information. , 2016, , .		6
33	Approximate continuous belief distributions for precise autonomous inspection. , 2016, , .		10
34	Incremental Distributed Inference from Arbitrary Poses and Unknown Data Association: Using Collaborating Robots to Establish a Common Reference. IEEE Control Systems, 2016, 36, 41-74.	0.8	16
35	Fast nonlinear model predictive control via partial enumeration. , 2016, , .		8
36	Initialization-Free Monocular Visual-Inertial State Estimation with Application to Autonomous MAVs. Springer Tracts in Advanced Robotics, 2016, , 211-227.	0.4	25

#	Article	IF	Citations
37	Tightly-coupled monocular visual-inertial fusion for autonomous flight of rotorcraft MAVs. , 2015, , .		148
38	Communication constrained task allocation with optimized local task swaps. Autonomous Robots, 2015, 39, 429-444.	4.8	13
39	Distributed real-time cooperative localization and mapping using an uncertainty-aware expectation maximization approach. , 2015, , .		56
40	Information-theoretic mapping using Cauchy-Schwarz Quadratic Mutual Information. , 2015, , .		93
41	Multi-Robot Persistent Coverage with stochastic task costs. , 2015, , .		10
42	Information-theoretic occupancy grid compression for high-speed information-based exploration. , 2015, , .		12
43	Vision-based landing site evaluation and informed optimal trajectory generation toward autonomous rooftop landing. Autonomous Robots, 2015, 39, 445-463.	4.8	27
44	Multi-robot long-term persistent coverage with fuel constrained robots. , 2015, , .		40
45	Multi-robot pose graph localization and data association from unknown initial relative poses via expectation maximization. , 2014, , .		45
46	From selfish auctioning to incentivized marketing. Autonomous Robots, 2014, 37, 417-430.	4.8	2
47	Hierarchical adaptive planning in environments with uncertain, spatially-varying disturbance forces. , 2014, , .		4
48	Multi-sensor fusion for robust autonomous flight in indoor and outdoor environments with a rotorcraft MAV. , 2014, , .		116
49	Exploiting mobility heterogeneity in micro-aerial vehicle deployments for environment exploration. , 2013, , .		2
50	Decentralized controllers for perimeter surveillance with teams of aerial robots. Advanced Robotics, 2013, 27, 697-709.	1.8	27
51	Swarm Coordination Based on Smoothed Particle Hydrodynamics Technique. IEEE Transactions on Robotics, 2013, 29, 383-399.	10.3	76
52	Vision-based state estimation for autonomous rotorcraft MAVs in complex environments. , 2013, , .		59
53	Collaborative mapping of an earthquake–damaged building via ground and aerial robots. Journal of Field Robotics, 2012, 29, 832-841.	6.0	294
54	The GRASP Multiple Micro-UAV Testbed. IEEE Robotics and Automation Magazine, 2010, 17, 56-65.	2.0	615

#	Article	IF	Citations
55	Vision-Based State Estimation and Trajectory Control Towards High-Speed Flight with a Quadrotor. , 0, , .		98
56	Real-Time Information-Theoretic Exploration with Gaussian Mixture Model Maps. , 0, , .		21