Matthew T Mason

List of Publications by Year
in descending order

71 papers	5,486 citations	304602 22 h-index	233338 45 g-index
77 all docs	77 docs citations	77 times ranked	2236 citing authors

#	Article	IF	Citations
1	An Efficient Closed-Form Method for Optimal Hybrid Force-Velocity Control. , 2021, , .		1
2	Contact Localization using Velocity Constraints. , 2020, , .		10
3	A Survey of Automated Threaded Fastening. IEEE Transactions on Automation Science and Engineering, 2019, 16, 298-310.	3.4	37
4	Robust Execution of Contact-Rich Motion Plans by Hybrid Force-Velocity Control. , 2019, , .		20
5	Data-Efficient Process Monitoring and Failure Detection for Robust Robotic Screwdriving. , 2019, , .		6
6	Pushing revisited: Differential flatness, trajectory planning, and stabilization. International Journal of Robotics Research, 2019, 38, 1477-1489.	5.8	26
7	Sensorless Pose Determination using Randomized Action Sequences. Entropy, 2019, 21, 154.	1.1	5
8	A convex polynomial model for planar sliding mechanics: theory, application, and experimental validation. International Journal of Robotics Research, 2018, 37, 249-265.	5.8	36
9	Toward Robotic Manipulation. Annual Review of Control, Robotics, and Autonomous Systems, 2018, 1, 1-28.	7.5	77
10	Sensor Selection and Stage & Result Classifications for Automated Miniature Screwdriving. , 2018, , .		4
11	Fast Planning for 3D Any-Pose-Reorienting Using Pivoting. , 2018, , .		31
12	Motion analysis of two-link nonholonomic swimmers. Nonlinear Dynamics, 2017, 89, 2739-2751.	2.7	4
13	Origami Folding Sequence Generation Using Discrete Particle Swarm Optimization. Lecture Notes in Computer Science, 2017, , 484-493.	1.0	0
14	A Probabilistic Planning Framework for Planar Grasping Under Uncertainty. IEEE Robotics and Automation Letters, 2017, 2, 2111-2118.	3.3	22
15	The complexities of grasping in the wild. , 2017, , .		16
16	Data-driven statistical modeling of a cube regrasp. , 2016, , .		6
17	Fast radiation mapping and multiple source localization using topographic contour map and incremental density estimation. , 2016, , .		15
18	A convex polynomial force-motion model for planar sliding: Identification and application. , 2016, , .		29

#	Article	IF	Citations
19	A two-phase gripper to reorient and grasp. , 2015, , .		31
20	A novel nonlinear compliant link on simple grippers. , 2015, , .		4
21	A general framework for open-loop pivoting. , 2015, , .		22
22	Improving regrasp algorithms to analyze the utility of work surfaces in a workcell. , 2015, , .		21
23	Regrasping objects using extrinsic dexterity. , 2014, , .		11
24	Extrinsic dexterity: In-hand manipulation with external forces. , 2014, , .		154
25	A data-driven statistical framework for post-grasp manipulation. International Journal of Robotics Research, 2014, 33, 600-615.	5.8	33
26	Design and Open-Loop Control of the ParkourBot, a Dynamic Climbing Robot. IEEE Transactions on Robotics, 2014, 30, 705-718.	7.3	15
27	A simple and compliant force sensing palm for the MLab Simple Hand. , 2013, , .		1
28	Multiple impacts: A state transition diagram approach. International Journal of Robotics Research, 2013, 32, 84-114.	5.8	27
29	Effector form design for 1DOF planar actuation. , 2013, , .		14
30	A Data-Driven Statistical Framework for Post-Grasp Manipulation. Springer Tracts in Advanced Robotics, 2013, , 417-431.	0.3	2
31	Autonomous manipulation with a general-purpose simple hand. International Journal of Robotics Research, 2012, 31, 688-703.	5.8	60
32	Grasp invariance. International Journal of Robotics Research, 2012, 31, 236-248.	5.8	14
33	Toward a deeper understanding of motion alternatives via an equivalence relation on local paths. International Journal of Robotics Research, 2012, 31, 167-186.	5.8	27
34	Real-time informed path sampling for motion planning search. International Journal of Robotics Research, 2012, 31, 1231-1250.	5.8	21
35	Path Connectivity of the Free Space. IEEE Transactions on Robotics, 2012, 28, 1177-1180.	7.3	7
36	From caging to grasping. International Journal of Robotics Research, 2012, 31, 886-900.	5.8	213

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37	Creation Myths: The Beginnings of Robotics Research. IEEE Robotics and Automation Magazine, 2012, 19, 72-77.	2.2	44
38	An approximate decoupled dynamics and kinematics analysis of legless locomotion. Nonlinear Dynamics, 2012, 67, 2123-2138.	2.7	1
39	The ParkourBot - a dynamic BowLeg climbing robot. , 2011, , .		14
40	Generality and Simple Hands. Springer Tracts in Advanced Robotics, 2011, , 345-361.	0.3	13
41	DTARâ€"A Dynamic, Tube-Ascending Robot. IEEE Transactions on Robotics, 2011, 27, 360-364.	7.3	4
42	Impedance control of a non-linearly coupled tendon driven thumb. , 2011, , .		3
43	Abort and retry in grasping. , 2011, , .		19
44	Improved hierarchical planner performance using local path equivalence. , 2011, , .		1
45	Abort and retry in grasping. , 2011, , .		0
46	Minimalistic, dynamic, tube climbing robot. , 2010, , .		9
47	DSAC - Dynamic, Single Actuated Climber: Local stability and bifurcations. , 2010, , .		14
48	Hierarchical planning architectures for mobile manipulation tasks in indoor environments. , 2010, , .		20
49	Grasp Invariance. Springer Tracts in Advanced Robotics, 2010, , 321-336.	0.3	1
50	An Equivalence Relation for Local Path Sets. Springer Tracts in Advanced Robotics, 2010, , 19-35.	0.3	8
51	Path diversity is only part of the problem. , 2009, , .		23
52	Minimum Wheel-Rotation Paths for Differential-Drive Mobile Robots. International Journal of Robotics Research, 2009, 28, 66-80.	5.8	52
53	Empirical Sampling of Path Sets for Local Area Motion Planning. Springer Tracts in Advanced Robotics, 2009, , 451-462.	0.3	12
54	Two Finger Caging: Squeezing and Stretching. Springer Tracts in Advanced Robotics, 2009, , 119-133.	0.3	18

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55	A State Transition Diagram for Simultaneous Collisions with Application in Billiard Shooting. Springer Tracts in Advanced Robotics, 2009, , 135-150.	0.3	3
56	Legless Locomotion: A Novel Locomotion Technique for Legged Robots. International Journal of Robotics Research, 2008, 27, 575-594.	5.8	12
57	Robotic origami folding. International Journal of Robotics Research, 2008, 27, 613-627.	5.8	145
58	The Minimum-Time Trajectories for an Omni-Directional Vehicle. Springer Tracts in Advanced Robotics, 2008, , 343-358.	0.3	7
59	A dynamic single actuator vertical climbing robot. , 2007, , .		16
60	Time-optimal Trajectories for an Omni-directional Vehicle. International Journal of Robotics Research, 2006, 25, 985-999.	5.8	65
61	Toward Legless Locomotion Control. , 2006, , .		1
62	Time Optimal Trajectories for Bounded Velocity Differential Drive Vehicles. International Journal of Robotics Research, 2002, 21, 199-217.	5.8	161
63	Mechanics of Robotic Manipulation. , 2001, , .		340
64	Stable Pushing: Mechanics, Controllability, and Planning. International Journal of Robotics Research, 1996, 15, 533-556.	5.8	354
65	Mechanical parts orienting: The case of a polyhedron on a table. Algorithmica, 1993, 10, 226-247.	1.0	34
66	Closure to â€œDiscussion of â€˜Two-Dimensional Rigid-Body Collisions With Frictionâ€™â€•(1993, ASME J. Appl) Tj ETQq0 0 0 rgBT /Ov	1.1	0
67	Two-Dimensional Rigid-Body Collisions With Friction. Journal of Applied Mechanics, Transactions ASME, 1992, 59, 635-642.	1.1	265
68	Learning reliable manipulation strategies without initial physical models. Robotics and Autonomous Systems, 1991, 8, 7-18.	3.0	5
69	Mechanics and Planning of Manipulator Pushing Operations. International Journal of Robotics Research, 1986, 5, 53-71.	5.8	446
70	Automatic Synthesis of Fine-Motion Strategies for Robots. International Journal of Robotics Research, 1984, 3, 3-24.	5.8	734
71	Compliance and Force Control for Computer Controlled Manipulators. IEEE Transactions on Systems, Man, and Cybernetics, 1981, 11, 418-432.	0.9	1,262