Nancy M Amato

List of Publications by Year
in descending order

61 papers	1,259 citations	759233 12 h-index	713466 21 g-index
61 all docs	61 docs citations	61 times ranked	799 citing authors

#	Article	IF	Citations
1	Representation-Optimal Multi-Robot Motion Planning Using Conflict-Based Search. IEEE Robotics and Automation Letters, 2021, 6, 4608-4615.	5.1	12
2	Parallel Hierarchical Composition Conflict-Based Search for Optimal Multi-Agent Pathfinding. IEEE Robotics and Automation Letters, 2021, 6, 7001-7008.	5.1	9
3	Topology-Guided Roadmap Construction With Dynamic Region Sampling. IEEE Robotics and Automation Letters, 2020, 5, 6161-6168.	5.1	16
4	Asymptotically-Optimal Topological Nearest-Neighbor Filtering. IEEE Robotics and Automation Letters, 2020, 5, 6916-6923.	5.1	1
5	Multi-Robot Task and Motion Planning With Subtask Dependencies. IEEE Robotics and Automation Letters, 2020, 5, 3338-3345.	5.1	21
6	Dynamic Region-biased Rapidly-exploring Random Trees. Springer Proceedings in Advanced Robotics, 2020, , 640-655.	1.3	18
7	Interaction Templates for Multi-Robot Systems. IEEE Robotics and Automation Letters, 2019, 4, 2926-2933.	5.1	5
8	A General and Flexible Search Framework for Disassembly Planning. , 2018, , .		8
9	Affordance Wayfields for Task and Motion Planning. , 2018, , .		5
10	Topological Nearest-Neighbor Filtering for Sampling-Based Planners. , 2018, , .		3
11	Multi-agent push behaviors for large sets of passive objects. , 2016, , .		9
12	On the theory of user-guided planning. , 2016, , .		8
13	Motion planning using hierarchical aggregation of workspace obstacles. , 2016, , .		1
14	Adaptive local learning in sampling based motion planning for protein folding. BMC Systems Biology, 2016, 10, 49.	3.0	16
15	Guest Editorial Special Section on the 11th Workshop on the Algorithmic Foundations of Robotics (WAFR 2014). IEEE Transactions on Automation Science and Engineering, 2016, 13, 414-414.	5.2	0
16	Adaptive local learning in sampling based motion planning for protein folding. , 2015, , .		0
17	Improved roadmap connection via local learning for sampling based planners. , 2015, , .		13
18	Guest Editorial Special Section on the 2014 Workshop on the Algorithmic Foundations of Robotics. IEEE Transactions on Automation Science and Engineering, 2015, 12, 1297-1297.	5.2	0

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19	Decoy Database Improvement for Protein Folding. Journal of Computational Biology, 2015, 22, 823-836.	1.6	2
20	A Region-Based Strategy for Collaborative Roadmap Construction. Springer Tracts in Advanced Robotics, 2015, , 125-141.	0.4	7
21	Robust online belief space planning in changing environments: Application to physical mobile robots. , 2014, , .		20
22	The anatomy of a distributed motion planning roadmap. , 2014, , .		0
23	Reciprocally-Rotating Velocity Obstacles. , 2014, , .		19
24	Spark PRM: Using RRTs within PRMs to efficiently explore narrow passages. , 2014, , .		22
25	FIRM: Sampling-based feedback motion-planning under motion uncertainty and imperfect measurements. International Journal of Robotics Research, 2014, 33, 268-304.	8.5	168
26	Faster Parallel Traversal of Scale Free Graphs at Extreme Scale with Vertex Delegates. , 2014, , .		55
27	Using Load Balancing to Scalably Parallelize Sampling-Based Motion Planning Algorithms. , 2014, , .		3
28	Scaling Techniques for Massive Scale-Free Graphs in Distributed (External) Memory. , 2013, , .		47
29	Lazy Toggle PRM: A single-query approach to motion planning. , 2013, , .		16
30	Optimizing aspects of pedestrian traffic in building designs. , 2013, , .		4
31	Multi-robot caravanning. , 2013, , .		1
32	Adaptive neighbor connection for PRMs: A natural fit for heterogeneous environments and parallelism. , 2013, , .		9
33	Adapting RRT growth for heterogeneous environments. , 2013, , .		16
34	Improving aggregate behavior in parking lots with appropriate local maneuvers. , 2013, , .		0
35	Blind RRT: A probabilistically complete distributed RRT. , 2013, , .		12
36	A scalable distributed RRT for motion planning. , 2013, , .		23

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37	Graph-based stochastic control with constraints: A unified approach with perfect and imperfect measurements. , 2013, , .		0
38	On the probabilistic completeness of the sampling-based feedback motion planners in belief space. , 2012, , .		9
39	A sampling-based approach to probabilistic pursuit evasion. , 2012, , .		3
40	Sampling-based nonholonomic motion planning in belief space via Dynamic Feedback Linearization-based FIRM. , 2012, , .		6
41	UOBPRM: A uniformly distributed obstacle-based PRM. , 2012, , .		33
42	A scalable method for parallelizing sampling-based motion planning algorithms. , 2012, , .		15
43	Toggle PRM: Simultaneous mapping of C-free and C-obstacle - A study in 2D -. , 2011, , .		26
44	Toward realistic pursuit-evasion using a roadmap-based approach. , 2011, , .		6
45	FIRM: Feedback controller-based information-state roadmap - A framework for motion planning under uncertainty. , 2011, , .		35
46	Toggle PRM: Simultaneous mapping of C-free and C-obstacle - a study in 2D -. , 2011, , .		3
47	Finding critical changes in dynamic configuration spaces. , 2011, , .		0
48	Behavior-based evacuation planning. , 2010, , .		39
49	Multithreaded Asynchronous Graph Traversal for In-Memory and Semi-External Memory. , 2010, , .		106
50	An unsupervised adaptive strategy for constructing probabilistic roadmaps. , 2009, , .		8
51	A framework for planning motion in environments with moving obstacles. , 2007, , .		13
52	Simulating Protein Motions with Rigidity Analysis. Journal of Computational Biology, 2007, 14, 839-855.	1.6	52
53	Analysis of the Evolution of C-Space Models built through Incremental Exploration. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	4
54	Parallel protein folding with STAPL. Concurrency Computation Practice and Experience, 2005, 17, 1643-1656.	2.2	8

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55	An Experimental Evaluation of the HP V-Class and SGI Origin 2000 Multiprocessors using Microbenchmarks and Scientific Applications. International Journal of Parallel Programming, 2005, 33, 307-350.	1.5	4
56	A Machine Learning Approach for Feature-Sensitive Motion Planning. Springer Tracts in Advanced Robotics, 2005, , 361-376.	0.4	53
57	Distributed reconfiguration of metamorphic robot chains. Distributed Computing, 2004, 17, 171.	0.8	43
58	Using Motion Planning to Map Protein Folding Landscapes and Analyze Folding Kinetics of Known Native Structures. Journal of Computational Biology, 2003, 10, 239-255.	1.6	78
59	Using Motion Planning to Study Protein Folding Pathways. Journal of Computational Biology, 2002, 9, 149-168.	1.6	104
60	Enhancing Randomized Motion Planners: Exploring with Haptic Hints. Autonomous Robots, 2001, 10, 163-174.	4.8	35
61	DETERMINING THE SEPARATION OF SIMPLE POLYGONS. International Journal of Computational Geometry and Applications, 1994, 04, 457-474.	0.5	7