

Sanjiv Singh

List of Publications by Year in descending order

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Version: 2024-02-01

93
papers

5,615
citations

186265

28
h-index

182427

51
g-index

100
all docs

100
docs citations

100
times ranked

4439
citing authors

#	ARTICLE	IF	CITATIONS
1	Autonomous driving in urban environments: Boss and the Urban Challenge. Journal of Field Robotics, 2008, 25, 425-466.	6.0	1,242
2	Low-drift and real-time lidar odometry and mapping. Autonomous Robots, 2017, 41, 401-416.	4.8	511
3	Visual-lidar odometry and mapping: low-drift, robust, and fast. , 2015, , .		414
4	Flying Fast and Low Among Obstacles: Methodology and Experiments. International Journal of Robotics Research, 2008, 27, 549-574.	8.5	188
5	Robot and Sensor Networks for First Responders. IEEE Pervasive Computing, 2004, 3, 24-33.	1.3	186
6	Automated Visual Yield Estimation in Vineyards. Journal of Field Robotics, 2014, 31, 837-860.	6.0	176
7	Laser-visual-inertial odometry and mapping with high robustness and low drift. Journal of Field Robotics, 2018, 35, 1242-1264.	6.0	153
8	A Robotic Excavator for Autonomous Truck Loading. Autonomous Robots, 1999, 7, 175-186.	4.8	134
9	Efficient Multi-robot Search for a Moving Target. International Journal of Robotics Research, 2009, 28, 201-219.	8.5	128
10	An autonomous mobile manipulator for assembly tasks. Autonomous Robots, 2010, 28, 131-149.	4.8	121
11	Automated Crop Yield Estimation for Apple Orchards. Springer Tracts in Advanced Robotics, 2013, , 745-758.	0.4	113
12	River mapping from a flying robot: state estimation, river detection, and obstacle mapping. Autonomous Robots, 2012, 33, 189-214.	4.8	111
13	Multirobot Coordination With Periodic Connectivity: Theory and Experiments. IEEE Transactions on Robotics, 2012, 28, 967-973.	10.3	104
14	Yield estimation in vineyards by visual grape detection. , 2011, , .		103
15	Real-time depth enhanced monocular odometry. , 2014, , .		96
16	Distributed Search and Rescue with Robot and Sensor Teams. , 0, , 529-538.		89
17	State of the Art in Automation of Earthmoving. Journal of Aerospace Engineering, 1997, 10, 179-188.	1.4	79
18	Autonomous landing at unprepared sites by a full-scale helicopter. Robotics and Autonomous Systems, 2012, 60, 1545-1562.	5.1	72

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19	Flying Fast and Low Among Obstacles. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	70
20	Multi-robot coordination with periodic connectivity. , 2010, , .		68
21	An efficient on-line path planner for outdoor mobile robots. Robotics and Autonomous Systems, 2000, 32, 129-143.	5.1	61
22	A real-time method for depth enhanced visual odometry. Autonomous Robots, 2017, 41, 31-43.	4.8	52
23	A cascaded method to detect aircraft in video imagery. International Journal of Robotics Research, 2011, 30, 1527-1540.	8.5	47
24	Autonomous Exploration and Motion Planning for an Unmanned Aerial Vehicle Navigating Rivers. Journal of Field Robotics, 2015, 32, 1141-1162.	6.0	46
25	Distributed Data Fusion for Multirobot Search. IEEE Transactions on Robotics, 2015, 31, 55-66.	10.3	43
26	Long-range GPS-denied aerial inertial navigation with LIDAR localization. , 2016, , .		43
27	Autonomous Driving in Urban Environments: Boss and the Urban Challenge. Springer Tracts in Advanced Robotics, 2009, , 1-59.	0.4	42
28	Sparse Tangential Network (SPARTAN): Motion planning for micro aerial vehicles. , 2013, , .		39
29	Global pose estimation with limited GPS and long range visual odometry. , 2012, , .		34
30	Falco: Fast likelihood-based collision avoidance with extension to human-guided navigation. Journal of Field Robotics, 2020, 37, 1300-1313.	6.0	34
31	Learning obstacle avoidance parameters from operator behavior. Journal of Field Robotics, 2006, 23, 1037-1058.	6.0	33
32	Comprehensive Automation for Specialty Crops: Year 1 results and lessons learned. Intelligent Service Robotics, 2010, 3, 245-262.	2.6	31
33	Distributed coordination and data fusion for underwater search. , 2011, , .		29
34	A Robust Method of Localization and Mapping Using Only Range. Springer Tracts in Advanced Robotics, 2009, , 341-351.	0.4	29
35	Passive, Long-Range Detection of Aircraft: Towards a Field Deployable Sense and Avoid System. Springer Tracts in Advanced Robotics, 2010, , 113-123.	0.4	28
36	Explicit Path Tracking by Autonomous Vehicles. Robotica, 1992, 10, 539-554.	1.9	27

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37	Probabilistic Strategies for Pursuit in Cluttered Environments with Multiple Robots. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	27
38	Target tracking without line of sight using range from radio. Autonomous Robots, 2012, 32, 1-14.	4.8	27
39	RRT*-AR: Sampling-based alternate routes planning with applications to autonomous emergency landing of a helicopter. , 2013, , .		27
40	A graph search algorithm for indoor pursuit/evsion. Mathematical and Computer Modelling, 2009, 50, 1305-1317.	2.0	25
41	Self-supervised segmentation of river scenes. , 2011, , .		25
42	Results with autonomous vehicles operating in specialty crops. , 2012, , .		25
43	Infrastructure-free shipdeck tracking for autonomous landing. , 2013, , .		24
44	Robust multi-sensor fusion for micro aerial vehicle navigation in GPS-degraded/denied environments. , 2014, , .		24
45	Maximum Likelihood Path Planning for Fast Aerial Maneuvers and Collision Avoidance. , 2019, , .		24
46	A practical obstacle detection system for autonomous orchard vehicles. , 2012, , .		23
47	<title>Collection of environmental data from an airship platform</title>. , 2001, , .		22
48	GSST: anytime guaranteed search. Autonomous Robots, 2010, 29, 99-118.	4.8	21
49	Proofs and Experiments in Scalable, Near-Optimal Search by Multiple Robots. , 0, , .		21
50	Efficient Aerial Coverage Search in Road Networks. , 2013, , .		20
51	An efficient system for combined route traversal and collision avoidance. Autonomous Robots, 2008, 24, 365-385.	4.8	19
52	Improving the Efficiency of Clearing with Multi-agent Teams. International Journal of Robotics Research, 2010, 29, 1088-1105.	8.5	18
53	Autonomous River Exploration. Springer Tracts in Advanced Robotics, 2015, , 93-106.	0.4	16
54	Reckless motion estimation from omnidirectional image and inertial measurements. , 2003, , .		15

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55	Mobile robotic dynamic tracking for assembly tasks. , 2009, , .		15
56	Robust Monocular Visual Odometry for a Ground Vehicle in Undulating Terrain. Springer Tracts in Advanced Robotics, 2014, , 311-326.	0.4	15
57	Yield estimation in vineyards by visual grape detection. , 2011, , .		15
58	3D perception for accurate row following: Methodology and results. , 2013, , .		14
59	Decentralized mapping of robot-aided sensor networks. , 2008, , .		13
60	Motion-aided network SLAM with range. International Journal of Robotics Research, 2012, 31, 604-625.	8.5	13
61	Efficient C-space and cost function updates in 3D for unmanned aerial vehicles. , 2009, , .		12
62	Robust robotic assembly through contingencies, plan repair and re-planning. , 2010, , .		12
63	P-CAP: Pre-Computed Alternative Paths to Enable Aggressive Aerial Maneuvers in Cluttered Environments. , 2018, , .		12
64	Aerial and Ground-Based Collaborative Mapping: An Experimental Study. Springer Proceedings in Advanced Robotics, 2018, , 397-412.	1.3	11
65	Learning to Detect Aircraft at Low Resolutions. , 2008, , 474-483.		11
66	Coordinated Search in Cluttered Environments Using Range from Multiple Robots. Springer Tracts in Advanced Robotics, 2008, , 433-442.	0.4	10
67	Visual-Inertial Combined Odometry System for Aerial Vehicles. Journal of Field Robotics, 2015, 32, 1043-1055.	6.0	8
68	Preliminary Results in Tracking Mobile Targets Using Range Sensors from Multiple Robots. , 2006, , 125-134.		8
69	Tracking a moving target in cluttered environments with ranging radios. , 2008, , .		7
70	Integrated long-range UAV/UGV collaborative target tracking. Proceedings of SPIE, 2009, , .	0.8	7
71	Improving Orchard Efficiency with Autonomous Utility Vehicles. , 2010, , .		7
72	Monocular visual navigation of an autonomous vehicle in natural scene corridor-like environments. , 2012, , .		7

#	ARTICLE	IF	CITATIONS
73	Combining search and action for mobile robots. , 2009, , .		6
74	Editorial for issue number 1, Journal of Field Robotics. Journal of Field Robotics, 2006, 23, 1-2.	6.0	5
75	Modeling mobile robot motion with polar representations. , 2009, , .		5
76	First results in autonomous landing and obstacle avoidance by a full-scale helicopter. , 2012, , .		5
77	Representing Substantial Heading Uncertainty for Accurate Geolocation by Small UAVs. , 2010, , .		5
78	First results in autonomous retrieval of buried objects. Automation in Construction, 1995, 4, 111-123.	9.8	4
79	Motion-Aided Network SLAM. Springer Tracts in Advanced Robotics, 2014, , 447-460.	0.4	4
80	Learning to Drive Among Obstacles. , 2006, , .		3
81	Results in Combined Route Traversal and Collision Avoidance. , 2006, , 491-504.		3
82	Guaranteed road network search with small unmanned aircraft. , 2014, , .		2
83	Grading of vegetative cuttings using computer vision. Advanced Robotics, 1997, 12, 551-564.	1.8	1
84	Toward autonomous rotorcraft flight in degraded visual environments: experiments and lessons learned. , 2016, , .		1
85	Further Results with Localization and Mapping Using Range from Radio. , 2006, , 231-242.		1
86	Long-Term Motion Estimation from Images. Springer Tracts in Advanced Robotics, 2008, , 65-74.	0.4	1
87	Editorial: Multimedia Editorsâ€™ Introduction. International Journal of Robotics Research, 2001, 20, 511-511.	8.5	0
88	Editorial to Announce Introduction of Multimedia. International Journal of Robotics Research, 2001, 20, 187-187.	8.5	0
89	Overcoming sensor noise for low-tolerance autonomous assembly. , 2008, , .		0
90	Mobile Robotic Assembly on a Moving Vehicle. , 2012, , .		0

#	ARTICLE	IF	CITATIONS
91	Session 2: Autonomous Driving. Springer Tracts in Advanced Robotics, 2009, , 53-54.	0.4	0
92	Towards Experimental Analysis of Challenge Scenarios in Robotics. Springer Tracts in Advanced Robotics, 2014, , 909-921.	0.4	0
93	Results in Combined Route Traversal and Collision Avoidance. , 2006, , 491-504.		0