Dezhen Song

List of Publications by Year
in descending order

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Version: 2024-02-01

		567281	434195
75	1,385	15	31
papers	citations	h-index	g-index

76	76	76	979
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Kinematic Modeling and Analysis of Skid-Steered Mobile Robots With Applications to Low-Cost Inertial-Measurement-Unit-Based Motion Estimation. IEEE Transactions on Robotics, 2009, 25, 1087-1097.	10.3	155
2	Steady-State Throughput and Scheduling Analysis of Multicluster Tools: A Decomposition Approach. IEEE Transactions on Automation Science and Engineering, 2008, 5, 321-336.	5.2	118
3	Automatic Pavement Crack Detection by Multi-Scale Image Fusion. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 2025-2036.	8.0	117
4	Visual Navigation Using Heterogeneous Landmarks and Unsupervised Geometric Constraints. IEEE Transactions on Robotics, 2015, 31, 736-749.	10.3	75
5	Optimal Scheduling of Multicluster Tools With Constant Robot Moving Times, Part II: Tree-Like Topology Configurations. IEEE Transactions on Automation Science and Engineering, 2011, 8, 17-28.	5.2	66
6	Adaptive Trajectory Tracking Control of Skid-Steered Mobile Robots. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	58
7	Simultaneous Localization of Multiple Unknown and Transient Radio Sources Using a Mobile Robot. IEEE Transactions on Robotics, 2012, 28, 668-680.	10.3	43
8	Systems and algorithms for autonomous and scalable crowd surveillance using robotic PTZ cameras assisted by a wide-angle camera. Autonomous Robots, 2010, 29, 53-66.	4.8	41
9	Cooperative Search of Multiple Unknown Transient Radio Sources Using Multiple Paired Mobile Robots. IEEE Transactions on Robotics, 2014, 30, 1161-1173.	10.3	35
10	GPR-RCNN: An Algorithm of Subsurface Defect Detection for Airport Runway Based on GPR. IEEE Robotics and Automation Letters, 2021, 6, 3001-3008.	5.1	34
11	Autonomous motorcycles for agile maneuvers, part I: Dynamic modeling. , 2009, , .		31
12	Vision-based motion planning for an autonomous motorcycle onÂill-structured roads. Autonomous Robots, 2007, 23, 197-212.	4.8	29
13	IMU-based localization and slip estimation for skid-steered mobile robots. , 2007, , .		27
14	Balance control and analysis of stationary riderless motorcycles. , 2011, , .		27
15	Toward Automatic Subsurface Pipeline Mapping by Fusing a Ground-Penetrating Radar and a Camera. IEEE Transactions on Automation Science and Engineering, 2020, 17, 722-734.	5.2	27
16	Hierarchical activity discovery within spatio-temporal context for video anomaly detection. , 2013, , .		23
17	A robotic bipedal model for human walking with slips. , 2015, , .		23
18	Stationary balance control of a bikebot. , 2014, , .		22

#	Article	IF	Citations
19	Robustness to lighting variations: An RGB-D indoor visual odometry using line segments. , 2015, , .		22
20	Exact algorithms for single frame selection on multiaxis Satellites. IEEE Transactions on Automation Science and Engineering, 2006, 3, 16-28.	5.2	21
21	A Hybrid Model and Model-Free Position Control for a Reconfigurable Manipulator. IEEE/ASME Transactions on Mechatronics, 2019, 24, 785-795.	5.8	21
22	Autonomous motorcycles for agile maneuvers, part II: Control systems design. , 2009, , .		20
23	Steady-State Throughput and Scheduling Analysis of Multi-Cluster Tools for Semiconductor Manufacturing: A Decomposition Approach. , 0, , .		17
24	Motion planning for aggressive autonomous vehicle maneuvers. , 2016, , .		17
25	STA-VPR: Spatio-Temporal Alignment for Visual Place Recognition. IEEE Robotics and Automation Letters, 2021, 6, 4297-4304.	5.1	17
26	Gaussian Processes Model-Based Control of Underactuated Balance Robots. , 2019, , .		16
27	Toward Robotic Weed Control: Detection of Nutsedge Weed in Bermudagrass Turf Using Inaccurate and Insufficient Training Data. IEEE Robotics and Automation Letters, 2021, 6, 7365-7372.	5.1	15
28	Kinematic-Free Orientation Control for a Deformable Manipulator Based on the Geodesic in Rotation Group SO(3). IEEE Robotics and Automation Letters, 2018, 3, 2432-2438.	5.1	14
29	Localization of Unknown Networked Radio Sources Using a Mobile Robot with a Directional Antenna. Proceedings of the American Control Conference, 2007, , .	0.0	13
30	On the Time to Search for an Intermittent Signal Source Under a Limited Sensing Range. IEEE Transactions on Robotics, 2011, 27, 313-323.	10.3	13
31	Systems, control models, and codec for collaborative observation of remote environments with anÂautonomous networked robotic camera. Autonomous Robots, 2008, 24, 435-449.	4.8	11
32	A Low False Negative Filter for Detecting Rare Bird Species From Short Video Segments Using a Probable Observation Data Set-Based EKF Method. IEEE Transactions on Image Processing, 2010, 19, 2321-2331.	9.8	11
33	A two-view based multilayer feature graph for robot navigation. , 2012, , .		11
34	Mirror-assisted calibration of a multi-modal sensing array with a ground penetrating radar and a camera. , 2017, , .		11
35	Automatic building exterior mapping using multilayer feature graphs. , 2013, , .		10
36	Toward Fingertip Non-Contact Material Recognition and Near-Distance Ranging for Robotic Grasping. , 2019, , .		10

#	Article	IF	Citations
37	Encoder-Camera-Ground Penetrating Radar Sensor Fusion: Bimodal Calibration and Subsurface Mapping. IEEE Transactions on Robotics, 2021, 37, 67-81.	10.3	10
38	Vision-based Motion Planning for an Autonomous Motorcycle on Ill-Structured Road. , 2006, , .		9
39	Encoder-Camera-Ground Penetrating Radar Tri-Sensor Mapping for Surface and Subsurface Transportation Infrastructure Inspection. , 2018, , .		9
40	System and algorithms for an autonomous observatory assisting the search for the Ivory-Billed Woodpecker. , 2008, , .		8
41	Systems and algorithms for autonomously simultaneous observation of multiple objects using robotic PTZ cameras assisted by a wide-angle camera. , 2009, , .		8
42	Simultaneous localization of multiple unknown CSMA-based wireless sensor network nodes using a mobile robot with a directional antenna. Intelligent Service Robotics, 2009, 2, 219-231.	2.6	8
43	Modeling and motion stability analysis of skid-steered mobile robots. , 2009, , .		8
44	Robust recognition of planar mirrored walls using a single view. , 2011, , .		8
45	Automatic recognition of spurious surface in building exterior survey. , 2013, , .		8
46	On the error analysis of vertical line pair-based monocular visual odometry in urban area. , 2009, , .		6
47	Real-time Shape Recognition of a Deformable Link by Using Self-Organizing Map. , 2018, , .		6
48	Extrinsic calibration of a ground penetrating radar. , 2016, , .		5
49	Algorithm and System Development for Robotic Micro-Volume Herbicide Spray Towards Precision Weed Management. IEEE Robotics and Automation Letters, 2022, 7, 11633-11640.	5.1	5
50	On-demand sharing of a high-resolution panorama video from networked robotic cameras. , 2007, , .		4
51	Actuator networks for navigating an unmonitored mobile robot. , 2008, , .		4
52	Robotic Subsurface Pipeline Mapping with a Ground-penetrating Radar and a Camera. , 2018, , .		4
53	Lane Marking Verification for High Definition Map Maintenance Using Crowdsourced Images. , 2020, , .		4
54	Scheduling Analysis of Cluster Tools with Buffer/Process Modules. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	3

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55	Path planning for clothes climbing robots on deformable clothes surface. , 2012, , .		3
56	Visual programming for mobile robot navigation using high-level landmarks. , 2016, , .		3
57	Proprioceptive Localization Assisted by Magnetoreception: A Minimalist Intermittent Heading Based Approach. IEEE Robotics and Automation Letters, 2019, 4, 586-593.	5.1	3
58	On the Tunable Sparse Graph Solver for Pose Graph Optimization in Visual SLAM Problems. , 2019, , .		3
59	On Perpendicular Curve-Based Model-Less Control Considering Incomplete Orientation Constraint. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1479-1489.	5.8	3
60	Graph-Based Proprioceptive Localization Using a Discrete Heading-Length Feature Sequence Matching Approach. IEEE Transactions on Robotics, 2021, 37, 1268-1281.	10.3	3
61	Localization in Inconsistent WiFi Environments. Springer Proceedings in Advanced Robotics, 2020, , 661-678.	1.3	3
62	Towards Learning Geometric Transformations through Play:. , 2021, , .		3
63	Learning Geometric Transformations for Parametric Design: An Augmented Reality (AR)-Powered Approach. Communications in Computer and Information Science, 2022, , 515-527.	0.5	3
64	Learning Spatial Transformations and their Math Representations through Embodied Learning in Augmented Reality. Lecture Notes in Computer Science, 2022, , 112-128.	1.3	3
65	An approximation algorithm for the least overlapping p-Frame problem with non-partial coverage for networked robotic cameras. , 2008, , .		2
66	Aligning windows of live video from an imprecise pan-tilt-zoom camera into a remote panoramic display for remote nature observation. Journal of Real-Time Image Processing, 2010, 5, 57-70.	3.5	2
67	Steering Co-centered and Co-directional Optical and Acoustic Beams with a Water-immersible MEMS Scanning Mirror for Underwater Ranging and Communication. , 2019, , .		2
68	Vehicle-to-Vehicle Collaborative Graph-Based Proprioceptive Localization. IEEE Robotics and Automation Letters, 2021, 6, 990-997.	5.1	2
69	Improving Ego-Velocity Estimation of Low-Cost Doppler Radars for Vehicles. IEEE Robotics and Automation Letters, 2022, 7, 9445-9452.	5.1	2
70	A hybrid model and kinematic-free control framework for a low-cost deformable manipulator using in home service. , 2016, , .		1
71	Model Quality Aware RANSAC: A Robust Camera Motion Estimator. , 2020, , .		1
72	On Perpendicular Curve-Based Task Space Trajectory Tracking Control With Incomplete Orientation Constraint. IEEE Transactions on Automation Science and Engineering, 2023, 20, 1244-1261.	5.2	1

#	Article	IF	Citations
73	Exact algorithms for non-overlapping 2-frame problem with non-partial coverage for networked robotic cameras. , 2010, , .		0
74	Fundamental Theories and Practice in Service Robotics. Mathematical Problems in Engineering, 2015, 2015, 1-2.	1.1	0
75	Semi-semantic Line-Cluster Assisted Monocular SLAM for Indoor Environments. Lecture Notes in Computer Science, 2019, , 63-74.	1.3	0