Rustam Stolkin

List of Publications by Year
in descending order

101 papers	3,961 citations	201674 27 h-index	133252 59 g-index
102 all docs	102 docs citations	102 times ranked	4002 citing authors

#	Article	IF	Citations
1	Recycling lithium-ion batteries from electric vehicles. Nature, 2019, 575, 75-86.	27.8	1,699
2	An Evolutionary Multiobjective Approach to Sparse Reconstruction. IEEE Transactions on Evolutionary Computation, 2014, 18, 827-845.	10.0	110
3	Non-Negative Spectral Learning and Sparse Regression-Based Dual-Graph Regularized Feature Selection. IEEE Transactions on Cybernetics, 2018, 48, 793-806.	9.5	103
4	A Novel Weakly-Supervised Approach for RGB-D-Based Nuclear Waste Object Detection. IEEE Sensors Journal, 2019, 19, 3487-3500.	4.7	91
5	SAR Targets Classification Based on Deep Memory Convolution Neural Networks and Transfer Parameters. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 2834-2846.	4.9	89
6	One-shot learning and generation of dexterous grasps for novel objects. International Journal of Robotics Research, 2016, 35, 959-976.	8.5	86
7	Dense connection and depthwise separable convolution based CNN for polarimetric SAR image classification. Knowledge-Based Systems, 2020, 194, 105542.	7.1	77
8	Subspace learning-based graph regularized feature selection. Knowledge-Based Systems, 2016, 112, 152-165.	7.1	74
9	Region-sequence based six-stream CNN features for general and fine-grained human action recognition in videos. Pattern Recognition, 2018, 76, 506-521.	8.1	69
10	Multi-scale Adaptive Feature Fusion Network for Semantic Segmentation in Remote Sensing Images. Remote Sensing, 2020, 12, 872.	4.0	63
11	A Spatial Fuzzy Clustering Algorithm With Kernel Metric Based on Immune Clone for SAR Image Segmentation. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 1640-1652.	4.9	62
12	A novel selection evolutionary strategy for constrained optimization. Information Sciences, 2013, 239, 122-141.	6.9	58
13	A multiobjective evolutionary algorithm to find community structures based on affinity propagation. Physica A: Statistical Mechanics and Its Applications, 2016, 453, 203-227.	2.6	54
14	Dynamic grasp and trajectory planning for moving objects. Autonomous Robots, 2019, 43, 1241-1256.	4.8	50
15	Let's Push Things Forward: A Survey on Robot Pushing. Frontiers in Robotics and AI, 2020, 7, 8.	3.2	50
16	Particle Filter Tracking of Camouflaged Targets by Adaptive Fusion of Thermal and Visible Spectra Camera Data. IEEE Sensors Journal, 2014, 14, 159-166.	4.7	48
17	Change detection in SAR images by artificial immune multi-objective clustering. Engineering Applications of Artificial Intelligence, 2014, 31, 53-67.	8.1	44
18	Semi-Supervised Graph Regularized Deep NMF With Bi-Orthogonal Constraints for Data Representation. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 3245-3258.	11.3	43

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19	A community integration strategy based on an improved modularity density increment for large-scale networks. Physica A: Statistical Mechanics and Its Applications, 2017, 469, 471-485.	2.6	37
20	Large-scale community detection based on node membership grade and sub-communities integration. Physica A: Statistical Mechanics and Its Applications, 2015, 428, 279-294.	2.6	35
21	Guiding Trajectory Optimization by Demonstrated Distributions. IEEE Robotics and Automation Letters, 2017, 2, 819-826.	5.1	34
22	An EM/E-MRF algorithm for adaptive model based tracking in extremely poor visibility. Image and Vision Computing, 2008, 26, 480-495.	4.5	33
23	A Three-Component Fisher-Based Feature Weighting Method for Supervised PolSAR Image Classification. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 731-735.	3.1	30
24	Continuously Adaptive Data Fusion and Model Relearning for Particle Filter Tracking With Multiple Features. IEEE Sensors Journal, 2016, 16, 2639-2649.	4.7	30
25	Multi-objective artificial immune algorithm for fuzzy clustering based on multiple kernels. Swarm and Evolutionary Computation, 2019, 50, 100485.	8.1	29
26	Estimation and exploitation of objects †™ inertial parameters in robotic grasping and manipulation: A survey. Robotics and Autonomous Systems, 2020, 124, 103374.	5.1	29
27	Learning Monocular Visual Odometry with Dense 3D Mapping from Dense 3D Flow. , 2018, , .		28
28	Change-Detection Map Learning Using Matching Pursuit. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4712-4723.	6.3	27
29	Model-free and learning-free grasping by Local Contact Moment matching. , 2018, , .		27
30	Learning modular and transferable forward models of the motions of push manipulated objects. Autonomous Robots, 2017, 41, 1061-1082.	4.8	26
31	A Fast Algorithm for SAR Image Segmentation Based on Key Pixels. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 5657-5673.	4.9	25
32	Motion Planning and Control of an Omnidirectional Mobile Robot in Dynamic Environments. Robotics, 2021, 10, 48.	3.5	25
33	Mixed-initiative Variable Autonomy for Remotely Operated Mobile Robots. ACM Transactions on Human-Robot Interaction, 2021, 10, 1-34.	4.1	23
34	Immune clonal algorithm based on directed evolution for multi-objective capacitated arc routing problem. Applied Soft Computing Journal, 2016, 49, 748-758.	7.2	22
35	Benchmarking Protocol for Grasp Planning Algorithms. IEEE Robotics and Automation Letters, 2020, 5, 315-322.	5.1	22
36	A fully end-to-end deep learning approach for real-time simultaneous 3D reconstruction and material recognition. , 2017, , .		21

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37	Learning Kalman Network: A deep monocular visual odometry for on-road driving. Robotics and Autonomous Systems, 2019, 121, 103234.	5.1	20
38	A thumbnail-based hierarchical fuzzy clustering algorithm for SAR image segmentation. Signal Processing, 2020, 171, 107518.	3.7	20
39	Object shape estimation and modeling, based on sparse Gaussian process implicit surfaces, combining visual data and tactile exploration. Robotics and Autonomous Systems, 2020, 126, 103433.	5.1	20
40	Planning Maximum-Manipulability Cutting Paths. IEEE Robotics and Automation Letters, 2020, 5, 1999-2006.	5.1	19
41	Simultaneous Tactile Exploration and Grasp Refinement for Unknown Objects. IEEE Robotics and Automation Letters, 2021, 6, 3349-3356.	5.1	19
42	An Enhanced Adaptive Coupled-Layer LGTracker++. , 2013, , .		18
43	Single-shot clothing category recognition in free-configurations with application to autonomous clothes sorting. , 2017, , .		18
44	Dense RGB-D Semantic Mapping with Pixel-Voxel Neural Network. Sensors, 2018, 18, 3099.	3.8	18
45	Weather Classification: A new multi-class dataset, data augmentation approach and comprehensive evaluations of Convolutional Neural Networks. , 2018, , .		18
46	Deformable Dictionary Learning for SAR Image Change Detection. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 4605-4617.	6.3	17
47	Using Environmental Models to Optimize Sensor Placement. IEEE Sensors Journal, 2007, 7, 319-320.	4.7	16
48	Unsupervised feature selection based on kernel fisher discriminant analysis and regression learning. Machine Learning, 2019, 108, 659-686.	5.4	16
49	Rapid Model-Free State of Health Estimation for End-Of-First-Life Electric Vehicle Batteries Using Impedance Spectroscopy. Energies, 2021, 14, 2597.	3.1	16
50	Semi-Autonomous Behaviour Tree-Based Framework for Sorting Electric Vehicle Batteries Components. Robotics, 2021, 10, 82.	3.5	16
51	An assisted telemanipulation approach: combining autonomous grasp planning with haptic cues. , 2019, , .		14
52	Towards the Principled Study of Variable Autonomy in Mobile Robots. , 2015, , .		13
53	Dynamics-Based Modified Fast Simultaneous Localization and Mapping for Unmanned Aerial Vehicles With Joint Inertial Sensor Bias and Drift Estimation. IEEE Access, 2021, 9, 120247-120260.	4.2	13
54	Bayesian fusion of thermal and visible spectra camera data for mean shift tracking with rapid background adaptation. , 2012, , .		12

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55	Mixed second order partial derivatives decomposition method for large scale optimization. Applied Soft Computing Journal, 2017, 61, 1013-1021.	7.2	11
56	Vision-Based Framework to Estimate Robot Configuration and Kinematic Constraints. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2402-2412.	5.8	11
57	Dynamic Immunization Node Model for Complex Networks Based on Community Structure and Threshold. IEEE Transactions on Cybernetics, 2022, 52, 1539-1552.	9.5	11
58	VFH+ based shared control for remotely operated mobile robots. , 2020, , .		11
59	Quantum-Inspired Immune Clonal Algorithm for solving large-scale capacitated arc routing problems. Memetic Computing, 2018, 10, 81-102.	4.0	10
60	A compressed sensing approach for efficient ensemble learning. Pattern Recognition, 2014, 47, 3451-3465.	8.1	9
61	Immune clonal selection algorithm for capacitated arc routing problem. Soft Computing, 2016, 20, 2177-2204.	3.6	9
62	Semantic Segmentation for SAR Image Based on Texture Complexity Analysis and Key Superpixels. Remote Sensing, 2020, 12, 2141.	4.0	9
63	Application of a parallel robot in lower limb rehabilitation: A brief capability study. , 2016, , .		8
64	Dynamic multi-level appearance models and adaptive clustered decision trees for single target tracking. Pattern Recognition, 2017, 69, 169-183.	8.1	8
65	Nonnegative Matrix Factorization with Rank Regularization and Hard Constraint. Neural Computation, 2017, 29, 2553-2579.	2.2	8
66	Gamma-Induced Image Degradation Analysis of Robot Vision Sensor for Autonomous Inspection of Nuclear Sites. IEEE Sensors Journal, 2022, 22, 17378-17390.	4.7	8
67	Nut Unfastening by Robotic Surface Exploration. Robotics, 2021, 10, 107.	3.5	8
68	Estimating An Object's Inertial Parameters By Robotic Pushing: A Data-Driven Approach. , 2020, , .		8
69	Sensing the Environment: Student-Created Water Quality Sensors. Marine Technology Society Journal, 2015, 49, 140-148.	0.4	7
70	A local-global coupled-layer puppet model for robust online human pose tracking. Computer Vision and Image Understanding, 2016, 153, 163-178.	4.7	7
71	The Grasp Strategy of a Robot Passer Influences Performance and Quality of the Robot-Human Object Handover. Frontiers in Robotics and AI, 2020, 7, 542406.	3.2	7
72	SAR Image Segmentation Based on Constrained Smoothing and Hierarchical Label Correction. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16.	6.3	7

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73	Towards robotizing the processes of testing lithium-ion batteries. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2021, 235, 1309-1325.	1.0	7
74	Trust, Shared Understanding and Locus of Control in Mixed-Initiative Robotic Systems. , 2021, , .		7
75	Dual Quaternion-Based Visual Servoing for Grasping Moving Objects. , 2021, , .		7
76	Adaptive fusion of infra-red and visible spectra camera data for particle filter tracking of moving targets. , 2012, , .		6
77	Coverage Path Planning Techniques for Inspection of Disjoint Regions With Precedence Provision. IEEE Access, 2021, 9, 5412-5427.	4.2	6
78	Path planning for mobile manipulator robots under non-holonomic and task constraints. , 2020, , .		6
79	Local Community Detection Algorithm Based on Alternating Strategy of Strong Fusion and Weak Fusion. IEEE Transactions on Cybernetics, 2023, 53, 818-831.	9.5	6
80	Synthetic aperture radar image change detection based on improved bilateral filtering and fuzzy C mean. Journal of Applied Remote Sensing, 2016, 10, 046017.	1.3	5
81	A dynamic local cluster ratio-based band selection algorithm for hyperspectral images. Soft Computing, 2019, 23, 8281-8289.	3.6	5
82	Human operator cognitive availability aware Mixed-Initiative control. , 2020, , .		5
83	Vision-Guided MPC for Robotic Path Following Using Learned Memory-Augmented Model. Frontiers in Robotics and AI, 2021, 8, 688275.	3.2	5
84	Adaptive Closed-Loop Identification and Tracking Control of an Aerial Vehicle with Unknown Inertia Parameters. IFAC-PapersOnLine, 2021, 54, 785-790.	0.9	5
85	Multi-objective artificial immune algorithm for fuzzy clustering based on multiple kernels. , 2017, , .		4
86	Real-Time Application Processing for FPGA-Based Resilient Embedded Systems in Harsh Environments. , 2018, , .		4
87	Stacked auto-encoder for classification of polarimetric SAR images based on scattering energy. International Journal of Remote Sensing, 2019, 40, 5094-5120.	2.9	4
88	Singularity-Robust Inverse Kinematics Solver for Tele-manipulation. , 2019, , .		4
89	Degradation Measurement of Kinect Sensor Under Fast Neutron Beamline. , 2019, , .		4
90	An Automatic and Optimal MPA Design Method. IEEE Transactions on Image Processing, 2021, 30, 8046-8058.	9.8	4

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91	Gamma-induced Degradation Analysis of Commercial off-the-shelf Camera Sensors. , 2019, , .		3
92	A training free technique for 3D object recognition using the concept of vibration, energy and frequency. Computers and Graphics, 2021, 95, 92-105.	2.5	3
93	SpectGRASP: Robotic Grasping by Spectral Correlation. , 2021, , .		3
94	Improving the Manipulability of a Redundant Arm Using Decoupled Hybrid Visual Servoing. Applied Sciences (Switzerland), 2021, 11, 11566.	2.5	3
95	Grasp that optimises objectives along post-grasp trajectories. , 2017, , .		2
96	Tracking linear deformable objects using slicing method. Robotica, 2022, 40, 1188-1206.	1.9	2
97	Simultaneous Material Segmentation and 3D Reconstruction in Industrial Scenarios. Frontiers in Robotics and AI, 2020, 7, 52.	3.2	1
98	Joint sparse learning for classification ensemble. , 2017, , .		0
99	Selective Ensemble Learning based Human Action Recognition Using Fusing Visual Features. , 2018, , .		0
100	Optimal grasp selection, and control for stabilising a grasped object, with respect to slippage and external forces. , 2021, , .		0
101	Grasp Transfer for Deformable Objects by Functional Map Correspondence. , 2022, , .		0