Yuanchang Liu

List of Publications by Year
in descending order

62 papers	1,679 citations	331670 21 h-index	289244 40 g-index
62 all docs	62 docs citations	62 times ranked	942 citing authors

#	Article	IF	Citations
1	Path planning algorithm for unmanned surface vehicle formations in a practical maritime environment. Ocean Engineering, 2015, 97, 126-144.	4.3	193
2	Smoothed A* algorithm for practical unmanned surface vehicle path planning. Applied Ocean Research, 2019, 83, 9-20.	4.1	174
3	A survey of formation control and motion planning of multiple unmanned vehicles. Robotica, 2018, 36, 1019-1047.	1.9	114
4	A multi-layered fast marching method for unmanned surface vehicle path planning in a time-variant maritime environment. Ocean Engineering, 2017, 129, 301-317.	4.3	113
5	Learn to Navigate: Cooperative Path Planning for Unmanned Surface Vehicles Using Deep Reinforcement Learning. IEEE Access, 2019, 7, 165262-165278.	4.2	82
6	The angle guidance path planning algorithms for unmanned surface vehicle formations by using the fast marching method. Applied Ocean Research, 2016, 59, 327-344.	4.1	78
7	Efficient multi-task allocation and path planning for unmanned surface vehicle in support of ocean operations. Neurocomputing, 2018, 275, 1550-1566.	5.9	72
8	The fast marching method based intelligent navigation of an unmanned surface vehicle. Ocean Engineering, 2017, 142, 363-376.	4.3	65
9	Decision-Making for the Autonomous Navigation of Maritime Autonomous Surface Ships Based on Scene Division and Deep Reinforcement Learning. Sensors, 2019, 19, 4055.	3.8	61
10	A ship movement classification based on Automatic Identification System (AIS) data using Convolutional Neural Network. Ocean Engineering, 2020, 218, 108182.	4.3	55
11	Intelligent multi-task allocation and planning for multiple unmanned surface vehicles (USVs) using self-organising maps and fast marching method. Information Sciences, 2019, 496, 180-197.	6.9	52
12	A Robust Localization Method for Unmanned Surface Vehicle (USV) Navigation Using Fuzzy Adaptive Kalman Filtering. IEEE Access, 2019, 7, 46071-46083.	4.2	48
13	Smartphone-app based point-of-care testing for myocardial infarction biomarker cTnI using an autonomous capillary microfluidic chip with self-aligned on-chip focusing (SOF) lenses. Lab on A Chip, 2019, 19, 1797-1807.	6.0	37
14	Uninterrupted path planning system for Multi-USV sampling mission in a cluttered ocean environment. Ocean Engineering, 2022, 254, 111328.	4.3	35
15	Optimised MOPSO with the grey relationship analysis for the multi-criteria objective energy dispatch of a novel SOFC-solar hybrid CCHP residential system in the UK. Energy Conversion and Management, 2021, 243, 114406.	9.2	32
16	Two-phase energy efficiency optimisation for ships using parallel hybrid electric propulsion system. Ocean Engineering, 2021, 238, 109733.	4.3	31
17	Unsupervised learning based coordinated multi-task allocation for unmanned surface vehicles. Neurocomputing, 2021, 420, 227-245.	5.9	27
18	Near-optimal energy management for plug-in hybrid fuel cell and battery propulsion using deep reinforcement learning. International Journal of Hydrogen Energy, 2021, 46, 40022-40040.	7.1	26

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19	Predictive navigation of unmanned surface vehicles in a dynamic maritime environment when using the fast marching method. International Journal of Adaptive Control and Signal Processing, 2017, 31, 464-488.	4.1	25
20	A novel path planning approach for smart cargo ships based on anisotropic fast marching. Expert Systems With Applications, 2020, 159, 113558.	7.6	25
21	A novel ship energy efficiency model considering random environmental parameters. Journal of Marine Engineering and Technology, 2020, 19, 215-228.	4.1	22
22	Adaptive and extendable control of unmanned surface vehicle formations using distributed deep reinforcement learning. Applied Ocean Research, 2021, 110, 102590.	4.1	21
23	A microfluidic design to provide a stable and uniform in vitro microenvironment for cell culture inspired by the redundancy characteristic of leaf areoles. Lab on A Chip, 2017, 17, 3921-3933.	6.0	20
24	WODIS: Water Obstacle Detection Network Based on Image Segmentation for Autonomous Surface Vehicles in Maritime Environments. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-13.	4.7	18
25	ShorelineNet: An Efficient Deep Learning Approach for Shoreline Semantic Segmentation for Unmanned Surface Vehicles. , 2021, , .		18
26	Filtering based multi-sensor data fusion algorithm for a reliable unmanned surface vehicle navigation. Journal of Marine Engineering and Technology, 2023, 22, 67-83.	4.1	16
27	On Aerial Robots with Grasping and Perching Capabilities: A Comprehensive Review. Frontiers in Robotics and AI, 2021, 8, 739173.	3.2	16
28	A practical path planning and navigation algorithm for an unmanned surface vehicle using the fast marching algorithm. , 2015, , .		15
29	A Novel Design of a Solid Oxide Fuel Cell-Based Combined Cooling, Heat and Power Residential System in the U.K.. IEEE Transactions on Industry Applications, 2021, 57, 805-813.	4.9	14
30	A novel path following approach for autonomous ships based on fast marching method and deep reinforcement learning. Ocean Engineering, 2022, 257, 111495.	4.3	14
31	Anisotropic GPMP2: A Fast Continuous-Time Gaussian Processes Based Motion Planner for Unmanned Surface Vehicles in Environments With Ocean Currents. IEEE Transactions on Automation Science and Engineering, 2022, 19, 3914-3931.	5.2	13
32	A novel deep-learning based surrogate modeling of stochastic electric vehicle traffic user equilibrium in low-carbon electricityâ€“transportation nexus. Applied Energy, 2022, 315, 118961.	10.1	12
33	One-step selective-wettability modification of PMMA microfluidic devices by using controllable gradient UV irradiation (CGUI). Sensors and Actuators B: Chemical, 2018, 273, 1508-1518.	7.8	11
34	Navigating highâ€speed unmanned surface vehicles: System approach and validations. Journal of Field Robotics, 2021, 38, 619-652.	6.0	11
35	Ocean Explorations Using Autonomy: Technologies, Strategies and Applications. Offshore Robotics, 2022, , 35-58.	2.7	11
36	A semi-supervised deep learning model for ship encounter situation classification. Ocean Engineering, 2021, 239, 109824.	4.3	9

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37	Intelligent Tracking of Moving Ships in Constrained Maritime Environments Using AIS. Cybernetics and Systems, 2019, 50, 539-555.	2.5	8
38	Deep Learning-Based Maritime Environment Segmentation for Unmanned Surface Vehicles Using Superpixel Algorithms. Journal of Marine Science and Engineering, 2021, 9, 1329.	2.6	8
39	A Locking Sweeping Method Based Path Planning for Unmanned Surface Vehicles in Dynamic Maritime Environments. Journal of Marine Science and Engineering, 2020, 8, 887.	2.6	7
40	Ultrasonic measurement of lubricant film thickness distribution of journal bearing. Review of Scientific Instruments, 2020, 91, 065111.	1.3	7
41	A microfluidic platform culturing two cell lines paralleled under in-vivo like fluidic microenvironment for testing the tumor targeting of nanoparticles. Talanta, 2020, 208, 120355.	5.5	6
42	Sensitive immunoassay of cardiac troponin I using an optimized microelectrode array in a novel integrated microfluidic electrochemical device. Analytical and Bioanalytical Chemistry, 2020, 412, 8325-8338.	3.7	6
43	Nanodelivery vehicles induce remote biochemical changes in vivo. Nanoscale, 2021, 13, 12623-12633.	5.6	6
44	Controlling a cargo ship without human experience using deep Q-network. Journal of Intelligent and Fuzzy Systems, 2020, 39, 7363-7379.	1.4	5
45	Practical Moving Target Detection in Maritime Environments Using Fuzzy Multi-sensor Data Fusion. International Journal of Fuzzy Systems, 2021, 23, 1860-1878.	4.0	5
46	Global tool axis vector optimization based on the minimum angular acceleration of rotary axes. International Journal of Advanced Manufacturing Technology, 2020, 107, 2121-2136.	3.0	5
47	Developing an Energy Effective Autonomous USV for Undertaking Missions at the Highlands of Peru. , 2018, , .		4
48	Collision Avoidance for Unmanned Surface Vehicles based on COLREGS. , 2019, , .		4
49	Adaptive Localisation for Unmanned Surface Vehicles Using IMU-Interacting Multiple Model. , 2020, , .		4
50	A Multi-Sensor Environmental Perception System for an Automatic Electric Shovel Platform. Sensors, 2021, 21, 4355.	3.8	4
51	A two-layered fast marching path planning algorithm for an unmanned surface vehicle operating in a dynamic environment. , 2015, , .		3
52	Machining-path mapping from free-state to clamped-state for thin-walled parts. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2022, 236, 1305-1316.	2.4	3
53	The Design of an Embedded Multi-Sensor Data Fusion System for Unmanned Surface Vehicle Navigation Based on Real Time Operating System. , 2018, , .		2
54	Novel sinuous band microelectrode array for electrochemical amperometric sensing. Electrochemistry Communications, 2021, 133, 107159.	4.7	2

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55	A bioinspired bubble removal method in microchannels based on angiosperm xylem embolism repair. Microsystems and Nanoengineering, 2022, 8, 34.	7.0	2
56	A novel design of solid oxide fuel cell-based combined cooling, heat and power residential system in the UK. , 2019, , .		1
57	Robust trajectory tracking control for unmanned surface vessels under motion constraints and environmental disturbances. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 0, , 147509022110396.	0.5	1
58	Aspects of a reliable autonomous navigation and guidance system for an unmanned surface vehicle. , 2016, , .		0
59	A device mimicking the biomechanical characteristics of crocodile skull for lumbar fracture reduction. Bioinspiration and Biomimetics, 2016, 11, 056004.	2.9	0
60	A bionic MIS device for lumbar fracture reduction. , 2016, , .		0
61	Wide-ranging radar simulation data generation method based on multi-scale electronic charts in a maritime simulator. Journal of Marine Engineering and Technology, 2016, 15, 47-56.	4.1	0
62	Modelling and control of autonomous marine vehicles. , 2019, , 1-30.		0