Yang Gao

List of Publications by Year
in descending order

79 papers	1,902 citations	361045 20 h-index	288905 40 g-index
86 all docs	86 docs citations	86 times ranked	1507 citing authors

#	Article	IF	Citations
1	A fast approach for automatic generation of fuzzy rules by generalized dynamic fuzzy neural networks. IEEE Transactions on Fuzzy Systems, 2001, 9, 578-594.	6.5	319
2	NARMAX time series model prediction: feedforward and recurrent fuzzy neural network approaches. Fuzzy Sets and Systems, 2005, 150, 331-350.	1.6	201
3	Online adaptive fuzzy neural identification and control of a class of mimo nonlinear systems. IEEE Transactions on Fuzzy Systems, 2003, 11, 462-477.	6.5	172
4	Review on space robotics: Toward top-level science through space exploration. Science Robotics, 2017, 2, .	9.9	150
5	Robust adaptive control of robot manipulators using generalized fuzzy neural networks. IEEE Transactions on Industrial Electronics, 2003, 50, 620-628.	5.2	104
6	Fast polygonal integration and its application in extending haar-like features to improve object detection. , 2010, , .		54
7	Planetary Micro-Penetrator Concept Study with Biomimetric Drill and Sampler Design. IEEE Transactions on Aerospace and Electronic Systems, 2007, 43, 875-885.	2.6	52
8	An Intelligent Adaptive Control Scheme for Postsurgical Blood Pressure Regulation. IEEE Transactions on Neural Networks, 2005, 16, 475-483.	4.8	51
9	Robotics and AI-Enabled On-Orbit Operations With Future Generation of Small Satellites. Proceedings of the IEEE, 2018, 106, 429-439.	16.4	37
10	Bioinspired Drill for Planetary Sampling: Literature Survey, Conceptual Design, and Feasibility Study. Journal of Spacecraft and Rockets, 2007, 44, 703-709.	1.3	35
11	Building large telescopes in orbit using small satellites. Acta Astronautica, 2017, 141, 183-195.	1.7	32
12	Adaptive control of robot manipulators using fuzzy neural networks. IEEE Transactions on Industrial Electronics, 2001, 48, 1274-1278.	5.2	30
13	First experimental investigation of dual-reciprocating drilling in planetary regoliths: Proposition of penetration mechanics. Planetary and Space Science, 2011, 59, 1529-1541.	0.9	30
14	A survey on recent object detection techniques useful for monocular vision-based planetary terrain classification. Robotics and Autonomous Systems, 2014, 62, 151-167.	3.0	30
15	Analysis of drill head designs for dual-reciprocating drilling technique in planetary regoliths. Advances in Space Research, 2015, 56, 1765-1776.	1.2	29
16	Investigation of the properties of icy lunar polar regolith simulants. Advances in Space Research, 2016, 57, 1197-1208.	1.2	29
17	Lunar science with affordable small spacecraft technologies: MoonLITE and Moonraker. Planetary and Space Science, 2008, 56, 368-377.	0.9	27
18	Visual classification of waste material for nuclear decommissioning. Robotics and Autonomous Systems, 2016, 75, 365-378.	3.0	27

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19	Regolith simulant preparation methods for hardware testing. Planetary and Space Science, 2010, 58, 1977-1984.	0.9	26
20	Probabilistic RGB-D odometry based on points, lines and planes under depth uncertainty. Robotics and Autonomous Systems, 2018, 104, 25-39.	3.0	24
21	Autonomous Nuclear Waste Management. IEEE Intelligent Systems, 2018, 33, 47-55.	4.0	23
22	Peircing the Extraterrestrial Surface: Integrated Robotic Drill for Planetary Exploration. IEEE Robotics and Automation Magazine, 2015, 22, 45-53.	2.2	21
23	Reconfigurable Autonomy. KI - Kunstliche Intelligenz, 2014, 28, 199-207.	2.2	19
24	Towards Camera-LIDAR Fusion-Based Terrain Modelling for Planetary Surfaces: Review and Analysis. Sensors, 2016, 16, 1952.	2.1	19
25	Planetary Monocular Simultaneous Localization and Mapping. Journal of Field Robotics, 2016, 33, 229-242.	3.2	16
26	A Novel Penetration System for in <i>situ</i> Astrobiological Studies. International Journal of Advanced Robotic Systems, 2005, 2, 29.	1.3	15
27	Development of thermal sensors and drilling systems for lunar and planetary regoliths. Advances in Space Research, 2008, 42, 363-368.	1.2	15
28	Lunar soil strength estimation based on Chang€™E-3 images. Advances in Space Research, 2016, 58, 1893-1899.	1.2	15
29	Fast Cylinder and Plane Extraction from Depth Cameras for Visual Odometry. , 2018, , .		14
30	Development of Thermal Sensors and Drilling Systems for Application on Lunar Lander Missions. Earth, Moon and Planets, 2008, 103, 119-141.	0.3	13
31	First implementation of burrowing motions in dual-reciprocating drilling using an integrated actuation mechanism. Advances in Space Research, 2017, 59, 1368-1380.	1.2	13
32	Development of the Third Generation of the Dual-Reciprocating Drill. Biomimetics, 2020, 5, 38.	1.5	13
33	Analysis of state-of-the-art single-thruster attitude control techniques for spinning penetrator. Acta Astronautica, 2012, 76, 60-78.	1.7	12
34	Real-time visual sinkage detection for planetary rovers. Robotics and Autonomous Systems, 2015, 72, 307-317.	3.0	12
35	DROD: A hybrid biomimetic undulatory and reciprocatory drill: Quantitative analysis and numerical study. Acta Astronautica, 2021, 182, 131-143.	1.7	12
36	Modelling, control, and stability analysis of non-linear systems using generalized fuzzy neural networks. International Journal of Systems Science, 2003, 34, 427-438.	3.7	11

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37	Low-Cost, High-Performance Monocular Vision System for Air Bearing Table Attitude Determination. Journal of Spacecraft and Rockets, 2014, 51, 66-75.	1.3	11
38	An experimental study of ultrasonic vibration and the penetration of granular material. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160673.	1.0	11
39	Ontology-Based Self-Reconfiguring Guidance, Navigation, and Control for Planetary Rovers. Journal of Aerospace Computing, Information, and Communication, 2016, 13, 316-328.	0.8	10
40	Iris Center Localization Using Energy Map With Image Inpaint Technology and Post-Processing Correction. IEEE Access, 2020, 8, 16965-16978.	2.6	10
41	Feature extraction using wavelet packets strategy. , 0, , .		9
42	ExoMars Rover PanCam: Autonomous & Computational Intelligence [Application Notes]. IEEE Computational Intelligence Magazine, 2013, 8, 52-61.	3.4	9
43	China's robotics successes abound. Science, 2014, 345, 523-523.	6.0	9
44	Attention-Mechanism-Based Real-Time Gaze Tracking in Natural Scenes With Residual Blocks. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 696-707.	2.6	9
45	3D virtual reality simulator for planetary rover operation and testing. Virtual Environments, Human-Computer Interfaces and Measurements Systems, 2009 VECIMS '09 IEEE International Conference on, 2009, , .	0.0	8
46	Conv1D Energy-Aware Path Planner for Mobile Robots in Unstructured Environments. , 2021, , .		8
47	Wood Wasp Inspired Planetary and Earth Drill. , 0, , .		6
48	Real-time vision based dynamic sinkage detection for exploration rovers. , 2013, , .		6
49	Smartphone-Controlled Robot Snake for Urban Search and Rescue. Lecture Notes in Computer Science, 2014, , 352-363.	1.0	6
50	Study of the formation of duricrusts on the martian surface and their effect on sampling equipment. Icarus, 2017, 281, 220-227.	1.1	6
51	Deployable Wood Wasp Drill for Planetary Subsurface Sampling. , 0, , .		5
52	Tradeoff Analysis of Attitude-Control Slew Algorithms for Prolate Spinner. Journal of Guidance, Control, and Dynamics, 2012, 35, 1143-1157.	1.6	5
53	Slew Control of Prolate Spinners Using Single Magnetorquer. Journal of Guidance, Control, and Dynamics, 2016, 39, 719-727.	1.6	5
54	A high performance neural-networks-based speech recognition system. , 0, , .		4

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55	UK Lunar Science Missions: Moonlite & Moonraker. , 2007, , .		4
56	Modular Testbed for Spinning Spacecraft. Journal of Spacecraft and Rockets, 2017, 54, 90-100.	1.3	4
57	SPLODE: Semi-probabilistic point and line odometry with depth estimation from RGB-D camera motion. , 2017, , .		4
58	Online Adaptive Fuzzy Neural Identification and Control of Nonlinear Dynamic Systems. Studies in Fuzziness and Soft Computing, 2003, , 373-402.	0.6	4
59	Probabilistic Combination of Noisy Points and Planes for RGB-D Odometry. Lecture Notes in Computer Science, 2017, , 340-350.	1.0	4
60	Development of a multi-sample acquisition technique for efficient planetary subsurface exploration. Acta Astronautica, 2022, 198, 309-319.	1.7	4
61	Single thruster attitude control software simulator for spinning spacecraft. , 2012, , .		3
62	Self-reconfigurable robotics architecture utilising fuzzy and deliberative reasoning. , 2015, , .		3
63	Customizable and Optimized Drill Bits Bio–inspired from Wood–Wasp Ovipositor Morphology for Extraterrestrial Surfaces. , 2019, , .		3
64	Iris center localization using energy map synthesis based on gradient and isophote. Journal of Intelligent and Fuzzy Systems, 2020, 38, 4511-4523.	0.8	3
65	Deep Learning Traversability Estimator for Mobile Robots in Unstructured Environments. Lecture Notes in Computer Science, 2021, , 203-213.	1.0	3
66	Deep Meta-Learning Energy-Aware Path Planner for Unmanned Ground Vehicles in Unknown Terrains. IEEE Access, 2022, 10, 30055-30068.	2.6	3
67	ONLINE ADAPTIVE FUZZY NEURAL IDENTIFICATION AND CONTROL OF A CLASS OF MIMO NONLINEAR SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 301-306.	0.4	2
68	Feedback slew algorithms for prolate spinners using Single–Thruster. Acta Astronautica, 2018, 144, 39-51.	1.7	2
69	A novel study on high-powered ultrasonic penetrators in granular material. , 2014, , .		2
70	Computational Intelligence for Space Systems and Operations [Guest Editorial]. IEEE Computational Intelligence Magazine, 2013, 8, 10-63.	3.4	1
71	Power optimisation for an ultrasonic penetrator in granular materials. , 2015, , .		1
72	Structure augmented monocular saliency for planetary rovers. Robotics and Autonomous Systems, 2017, 88, 1-10.	3.0	1

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73	Intelligent Spacecraft Visual GNC Architecture With the State-Of-the-Art AI Components for On-Orbit Manipulation. Frontiers in Robotics and AI, 2021, 8, 639327.	2.0	1
74	Special issue on "Bio-inspired computing for autonomous vehiclesÂ". International Journal of Intelligent Computing and Cybernetics, 2012, 5, .	1.6	1
75	Self-Reconfiguring Robotic Framework Using Fuzzy and Ontological Decision Making. Studies in Computational Intelligence, 2016, , 133-152.	0.7	1
76	Multi-owner satellite operations: Concept, operations scheduling and recommendations. , 2016, , .		0
77	Adaptive Modeling and Control of Drug Delivery Systems Using Generalized Fuzzy Neural Networks. , 2004, , 327-346.		0
78	Physical Properties of Icy Materials. , 2018, , 15-29.		0
79	Equipment Detection Based Inspection Robot for Industrial Plants. Lecture Notes in Computer Science, 2021, , 419-429.	1.0	0