

Zeng-Guang Hou

List of Publications by Year in descending order

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146
papers

3,797
citations

136950

32
h-index

144013

57
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146
all docs

146
docs citations

146
times ranked

3039
citing authors

#	ARTICLE	IF	CITATIONS
1	Personalized gait trajectory generation based on anthropometric features using Random Forest. <i>Journal of Ambient Intelligence and Humanized Computing</i> , 2023, 14, 15597-15608.	4.9	18
2	Learning Skill Characteristics From Manipulations. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2023, 34, 9727-9741.	11.3	10
3	Removing Feasibility Conditions on Adaptive Neural Tracking Control of Nonlinear Time-Delay Systems With Time-Varying Powers, Input, and Full-State Constraints. <i>IEEE Transactions on Cybernetics</i> , 2022, 52, 2553-2564.	9.5	16
4	Adaptive Fuzzy Asymptotic Tracking Control of State-Constrained High-Order Nonlinear Time-Delay Systems and Its Applications. <i>IEEE Transactions on Cybernetics</i> , 2022, 52, 1671-1680.	9.5	26
5	A Multilayer and Multimodal-Fusion Architecture for Simultaneous Recognition of Endovascular Manipulations and Assessment of Technical Skills. <i>IEEE Transactions on Cybernetics</i> , 2022, 52, 2565-2577.	9.5	10
6	Target Tracking Control of a Biomimetic Underwater Vehicle Through Deep Reinforcement Learning. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2022, 33, 3741-3752.	11.3	22
7	Neural Correlates of Single-Task Versus Cognitive-Motor Dual-Task Training. <i>IEEE Transactions on Cognitive and Developmental Systems</i> , 2022, 14, 532-540.	3.8	3
8	Further Results on Adaptive Practical Tracking for High-Order Nonlinear Systems With Full-State Constraints. <i>IEEE Transactions on Cybernetics</i> , 2022, 52, 9978-9985.	9.5	13
9	Adversarial Binary Mutual Learning for Semi-Supervised Deep Hashing. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2022, 33, 4110-4124.	11.3	6
10	A Unified Framework for Multi-Guidewire Endpoint Localization in Fluoroscopy Images. <i>IEEE Transactions on Biomedical Engineering</i> , 2022, 69, 1406-1416.	4.2	3
11	A Hierarchical Architecture for Multisymptom Assessment of Early Parkinson's Disease via Wearable Sensors. <i>IEEE Transactions on Cognitive and Developmental Systems</i> , 2022, 14, 1553-1563.	3.8	3
12	Machine Learning for Structure Determination in Single-Particle Cryo-Electron Microscopy: A Systematic Review. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2022, 33, 452-472.	11.3	5
13	Automated Localization of Myocardial Infarction of Image-Based Multilead ECG Tensor With Tucker2 Decomposition. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-15.	4.7	2
14	Finite-Time Observer-Based Variable Impedance Control of Cable-Driven Continuum Manipulators. <i>IEEE Transactions on Human-Machine Systems</i> , 2022, 52, 26-40.	3.5	5
15	Surgical Skill Assessment Based on Dynamic Warping Manipulations. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2022, 4, 50-61.	3.2	12
16	SurgiNet: Pyramid Attention Aggregation and Class-wise Self-Distillation for Surgical Instrument Segmentation. <i>Medical Image Analysis</i> , 2022, 76, 102310.	11.6	18
17	Design and Experiments of a Novel Halbach-Cylinder-Based Magnetic Skin: A Preliminary Study. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-11.	4.7	13
18	3-D Electromagnetic Position Estimation System Using High-Magnetic-Permeability Metal for Continuum Medical Robots. <i>IEEE Robotics and Automation Letters</i> , 2022, 7, 2581-2588.	5.1	6

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19	Space Squeeze Reasoning and Low-Rank Bilinear Feature Fusion for Surgical Image Segmentation. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 3209-3217.	6.3	11
20	Efficient Brain Decoding Based on Adaptive EEG Channel Selection and Transformation. IEEE Transactions on Emerging Topics in Computational Intelligence, 2022, 6, 1314-1323.	4.9	5
21	A Control Framework for Adaptation of Training Task and Robotic Assistance for Promoting Motor Learning With an Upper Limb Rehabilitation Robot. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 7737-7747.	9.3	6
22	A Dual-Stream Architecture for Real-Time Morphological Analysis of Aneurysm in Robot-Assisted Minimally Invasive Surgery. , 2022, , .		0
23	GPR and SPSO-CG based gait pattern generation for subject-specific training. Science China Information Sciences, 2021, 64, 1.	4.3	3
24	Prediction of Human Voluntary Torques Based on Collaborative Neuromusculoskeletal Modeling and Adaptive Learning. IEEE Transactions on Industrial Electronics, 2021, 68, 5217-5226.	7.9	13
25	A Rapid Spiking Neural Network Approach With an Application on Hand Gesture Recognition. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 151-161.	3.8	39
26	Comparative validation of multi-instance instrument segmentation in endoscopy: Results of the ROBUST-MIS 2019 challenge. Medical Image Analysis, 2021, 70, 101920.	11.6	41
27	A multi-dimensional association information analysis approach to automated detection and localization of myocardial infarction. Engineering Applications of Artificial Intelligence, 2021, 97, 104092.	8.1	27
28	Bilinear neural network with 3-D attention for brain decoding of motor imagery movements from the human EEG. Cognitive Neurodynamics, 2021, 15, 181-189.	4.0	28
29	Design of a Low-Cost Miniature Robot to Assist the COVID-19 Nasopharyngeal Swab Sampling. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 289-293.	3.2	48
30	Stability-Guaranteed Variable Impedance Control of Robots Based on Approximate Dynamic Inversion. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 4193-4200.	9.3	30
31	A Safety Joint with Passive Compliant and Manual Override Mechanisms for Medical Robotics. , 2021, , .		0
32	Robotic Intra-Operative Ultrasound: Virtual Environments and Parallel Systems. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 1095-1106.	13.1	22
33	Novel sliding-mode disturbance observer-based tracking control with applications to robot manipulators. Science China Information Sciences, 2021, 64, 1.	4.3	16
34	CNN-LSTM Network Based Prediction of Human Joint Angles Using Multi-Band SEMG and Historical Angles. , 2021, , .		3
35	Real-Time Multi-Guidewire Endpoint Localization in Fluoroscopy Images. IEEE Transactions on Medical Imaging, 2021, 40, 2002-2014.	8.9	14
36	A Real-Time Multifunctional Framework for Guidewire Morphological and Positional Analysis in Interventional X-Ray Fluoroscopy. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 657-667.	3.8	14

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37	A Real-Time Multi-Task Framework for Guidewire Segmentation and Endpoint Localization in Endovascular Interventions. , 2021, , .		1
38	Group Feature Learning and Domain Adversarial Neural Network for aMCI Diagnosis System Based on EEG. , 2021, , .		3
39	A Gait Events Detection Algorithm Based on the Invariant Characteristic of Hip Joint Kinematics. , 2021, , .		2
40	An Interventionalist-Behavior-Based Data Fusion Framework for Guidewire Tracking in Percutaneous Coronary Intervention. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 4836-4849.	9.3	13
41	Composite Learning Enhanced Robot Impedance Control. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 1052-1059.	11.3	52
42	Exponential Finite-Time Consensus of Fractional-Order Multiagent Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 1549-1558.	9.3	68
43	Qualitative and Quantitative Assessment of Technical Skills in Percutaneous Coronary Intervention: <i>In Vivo</i> Porcine Studies. IEEE Transactions on Biomedical Engineering, 2020, 67, 353-364.	4.2	25
44	Toward Improving Engagement in Neural Rehabilitation: Attention Enhancement Based on Brain-Computer Interface and Audiovisual Feedback. IEEE Transactions on Cognitive and Developmental Systems, 2020, 12, 787-796.	3.8	21
45	Attention-Guided Lightweight Network for Real-Time Segmentation of Robotic Surgical Instruments. , 2020, , .		26
46	A Multilayer-Multimodal Fusion Architecture for Pattern Recognition of Natural Manipulations in Percutaneous Coronary Interventions. , 2020, , .		2
47	3-D Gaze-Estimation Method Using a Multi-Camera-Multi-Light-Source System. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 9695-9708.	4.7	11
48	Enhanced Motor Imagery Based Brain- Computer Interface via FES and VR for Lower Limbs. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1846-1855.	4.9	45
49	Engagement Enhancement Based on Human-in-the-Loop Optimization for Neural Rehabilitation. Frontiers in Neurobotics, 2020, 14, 596019.	2.8	3
50	Learning impedance control of robots with enhanced transient and steady-state control performances. Science China Information Sciences, 2020, 63, 1.	4.3	13
51	Cross-modality paired-images generation and augmentation for RGB-infrared person re-identification. Neural Networks, 2020, 128, 294-304.	5.9	49
52	FRR-NET: Fast Recurrent Residual Networks for Real-Time Catheter Segmentation and Tracking in Endovascular Aneurysm Repair. , 2020, , .		5
53	Pyramid attention recurrent networks for real-time guidewire segmentation and tracking in intraoperative X-ray fluoroscopy. Computerized Medical Imaging and Graphics, 2020, 83, 101734.	5.8	14
54	Quantitative Assessment of Upper-Limb Motor Function for Post-Stroke Rehabilitation Based on Motor Synergy Analysis and Multi-Modality Fusion. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 943-952.	4.9	39

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55	An Adaptive Fuzzy Predictive Controller with Hysteresis Compensation for Piezoelectric Actuators. Cognitive Computation, 2020, 12, 736-747.	5.2	7
56	Analysis of Interventionalistsâ€™ Natural Behaviors for Recognizing Motion Patterns of Endovascular Tools During Percutaneous Coronary Interventions. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 330-342.	4.0	20
57	A Greedy Assist-as-Needed Controller for Upper Limb Rehabilitation. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 3433-3443.	11.3	39
58	Fully Automatic Dual-Guidewire Segmentation for Coronary Bifurcation Lesion. , 2019, , .		4
59	Faster R-CNN Based Indoor Flame Detection for Firefighting Robot. , 2019, , .		6
60	Design and Validation of an Asymmetric Bowden-Cable-Driven Series Elastic Actuator. , 2019, , .		1
61	A Novel Assist-As-Needed Controller Based on Fuzzy-Logic Inference and Human Impedance Identification for Upper-Limb Rehabilitation. , 2019, , .		4
62	Damping Control Based Speed Adjustment Strategy for a Lower Limb Rehabilitation Robot. , 2019, , .		3
63	Path Planning for Surgery Robot with Bidirectional Continuous Tree Search and Neural Network. , 2019, , .		5
64	BCI and Multimodal Feedback Based Attention Regulation for Lower Limb Rehabilitation. , 2019, , .		4
65	Applying maximally stable extremal regions and local binary patterns for guideâ€™wire detecting in percutaneous coronary intervention. IET Image Processing, 2019, 13, 2579-2586.	2.5	3
66	A Two-Stage Framework for Real-Time Guidewire Endpoint Localization. Lecture Notes in Computer Science, 2019, , 357-365.	1.3	5
67	Real-Time Guidewire Segmentation and Tracking in Endovascular Aneurysm Repair. Lecture Notes in Computer Science, 2019, , 491-500.	1.3	5
68	Simultaneous Recognition and Assessment of Post-Stroke Hemiparetic Gait by Fusing Kinematic, Kinetic, and Electrophysiological Data. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 856-864.	4.9	38
69	Research on data fusion technology of the online monitoring system for optics bonnet polishing. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2018, 232, 1436-1443.	2.4	4
70	A Neural-Network-Based Controller for Piezoelectric-Actuated Stickâ€™Slip Devices. IEEE Transactions on Industrial Electronics, 2018, 65, 2598-2607.	7.9	95
71	Genetic Algorithm Based Dynamics Modeling and Control of a Parallel Rehabilitation Robot. , 2018, , .		3
72	Towards Enhancement of Patientsâ€™ Engagement: Online Modification of Rehabilitation Training Modes Using Facial Expression and Muscle Fatigue. , 2018, 2018, 2304-2307.		1

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73	A simulator with an elastic guidewire and vascular system for minimally invasive vascular surgery. Science China Information Sciences, 2018, 61, 1.	4.3	5
74	Automatic Guidewire Tip Segmentation in 2D X-ray Fluoroscopy Using Convolution Neural Networks. , 2018, , .		13
75	Semi-supervised Generative Adversarial Hashing for Image Retrieval. Lecture Notes in Computer Science, 2018, , 491-507.	1.3	28
76	Brain Functional Connectivity Analysis and Crucial Channel Selection Using Channel-Wise CNN. Lecture Notes in Computer Science, 2018, , 40-49.	1.3	3
77	An Adaptive Takagiâ€“Sugeno Fuzzy Model-Based Predictive Controller for Piezoelectric Actuators. IEEE Transactions on Industrial Electronics, 2017, 64, 3048-3058.	7.9	100
78	A Multimodal Framework Based on Integration of Cortical and Muscular Activities for Decoding Human Intentions About Lower Limb Motions. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 889-899.	4.0	35
79	Guide-wire detection using region proposal network for X-ray image-guided navigation. , 2017, , .		18
80	Epileptic seizure detection based on the kernel extreme learning machine. Technology and Health Care, 2017, 25, 399-409.	1.2	14
81	Robot assisted rehabilitation of the arm after stroke: prototype design and clinical evaluation. Science China Information Sciences, 2017, 60, 1.	4.3	18
82	Dynamic model based fuzzy-impedance interaction control for rehabilitation robots. , 2017, , .		5
83	Relative torque contribution based model simplification for robotic dynamics identification. , 2017, , .		0
84	Move like humans: End-to-end Gaussian process regression based target tracking control for mobile robots. , 2017, , .		2
85	sEMG-based prediction of human lower extremity movements by using a dynamic recurrent neural network. , 2016, , .		5
86	Development of a multi-modal interactive system for Endoscopic Endonasal Approach surgery simulation. , 2016, , .		0
87	A 3-DOF compact haptic interface for endoscopic endonasal approach surgery simulation. , 2016, , .		4
88	<i>A Lower Limb Rehabilitation Robot: A Proof of Concept. IEEE Transactions on Human-Machine Systems, 2016, 46, 761-768.	3.5	48
89	Tracking natural guidewire manipulations with an improved data glove. , 2016, , .		1
90	Reaching a stochastic consensus in the noisy networks of linear MIMO agents: Dynamic output-feedback and convergence rate. Science China Technological Sciences, 2016, 59, 45-54.	4.0	4

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91	Containment Control of Multiagent Systems With Dynamic Leaders Based on a PI^n -Type Approach. IEEE Transactions on Cybernetics, 2016, 46, 3004-3017.	9.5	131
92	On Convergence Rate of Leader-Following Consensus of Linear Multi-Agent Systems With Communication Noises. IEEE Transactions on Automatic Control, 2016, 61, 3586-3592.	5.7	115
93	Evolving spatio-temporal data machines based on the NeuCube neuromorphic framework: Design methodology and selected applications. Neural Networks, 2016, 78, 1-14.	5.9	123
94	Reaching a consensus in networks of high-order integral agents under switching directed topologies. International Journal of Systems Science, 2016, 47, 1966-1981.	5.5	62
95	An inversion-free fuzzy predictive control for piezoelectric actuators. , 2015, , .		7
96	An RBF-based neuro-adaptive control scheme to drive a lower limb rehabilitation robot. , 2015, , .		1
97	Dynamic modeling and control of a parallel upper-limb rehabilitation robot. , 2015, , .		9
98	An sEMG-driven musculoskeletal model of shoulder and elbow based on neural networks. , 2015, , .		2
99	Design of CASIA-ARM: A novel rehabilitation robot for upper limbs. , 2015, , .		7
100	An Inversion-free Predictive Controller for Piezoelectric Actuators Based on A Dynamic Linearized Neural Network Model. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	5.8	53
101	Implementation of active training for an upper-limb rehabilitation robot based on impedance control. , 2015, , .		10
102	Consensus seeking in a network of discrete-time linear agents with communication noises. International Journal of Systems Science, 2015, 46, 1874-1888.	5.5	42
103	Dynamic modeling and control simulation of a modified delta manipulator. , 2015, , .		3
104	Design and evaluation of a bio-inspired robotic hand for percutaneous coronary intervention. , 2015, , .		31
105	Haptic intelligent interfaces for NAO robot hand control. , 2015, , .		4
106	Multi-scale wavelet kernel extreme learning machine for EEG feature classification. , 2015, , .		1
107	Distributed exponential finite-time coordination of multi-agent systems: containment control and consensus. International Journal of Control, 2015, 88, 237-247.	1.9	64
108	Seeking Consensus in Networks of Linear Agents: Communication Noises and Markovian Switching Topologies. IEEE Transactions on Automatic Control, 2015, 60, 1374-1379.	5.7	129

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109	Centerlines extraction for lumen model of human vasculature for computer-aided simulation of intravascular procedures. , 2014, , .		3
110	FEM-based guide wire simulation and interaction for a minimally invasive vascular surgery training system. , 2014, , .		4
111	Dynamic behavior analysis on SISO multi-agent systems in a noisy environment. , 2014, , .		1
112	Segmentation and visualization of the heart region for 3-D simulation of coronary intervention procedures. , 2014, , .		1
113	Polynomial trajectory tracking of networked Euler-Lagrange systems. , 2014, , .		8
114	Containment control of double-integrator multi-agent systems with aperiodic sampling: A small-gain theorem based method. , 2014, , .		8
115	Haptic rendering of guide wire manipulation in vascular surgery simulation. , 2014, , .		0
116	EEG-based classification of upper-limb ADL using SNN for active robotic rehabilitation. , 2014, , .		9
117	3D interactive virtual environments for minimally invasive vascular surgery. , 2014, , .		0
118	Survey of single-target visual tracking methods based on online learning. IET Computer Vision, 2014, 8, 419-428.	2.0	24
119	Lumen segmentation and visualization of abdominal aorta using geodesic active contours for intravascular surgical simulation. , 2014, , .		0
120	Mobile robots ^{x3} modular navigation controller using spiking neural networks. Neurocomputing, 2014, 134, 230-238.	5.9	35
121	Stochastic consensus of linear multi-agent systems: Communication noises and Markovian switching topologies. , 2014, , .		7
122	An 3D interactive virtual reality software toolkit for minimally invasive vascular surgery. , 2014, , .		1
123	Containment control of multi-agent systems in a noisy communication environment. Automatica, 2014, 50, 1922-1928.	5.0	119
124	Backward swimming gaits for a carangiform robotic fish. Neural Computing and Applications, 2013, 23, 2015-2021.	5.6	10
125	A multi-body mass-spring model for virtual reality training simulators based on a robotic guide wire operating system. , 2013, , .		11
126	3D modeling of coronary arteries based on tubular-enhanced CURVES segmented regions for robotic surgical simulation. , 2013, , .		11

#	ARTICLE	IF	CITATIONS
127	Correction to "Attitude coordination control for a group of spacecraft without velocity measurements" [Sep 12 1146-1159]. IEEE Transactions on Control Systems Technology, 2013, 21, 1044-1044.	5.2	2
128	An FES-assisted training strategy combined with impedance control for a lower limb rehabilitation robot. , 2013, , .		6
129	Task-oriented active training based on adaptive impedance control with iLeg — A horizontal exoskeleton for lower limb rehabilitation. , 2013, , .		2
130	An enhanced dual-finger robotic Hand for Catheter manipulating in vascular intervention: A preliminary study. , 2013, , .		21
131	A sampled-data based average consensus protocol for double-integrator multi-agent systems with switching topologies and communication noises. , 2012, , .		1
132	Residual vibration suppression using off-line learning input shaping method for a flexible joint robot. , 2012, , .		6
133	Attitude Coordination Control for a Group of Spacecraft Without Velocity Measurements. IEEE Transactions on Control Systems Technology, 2012, 20, 1160-1174.	5.2	89
134	Experimental validation of a trajectory planning method with continuous acceleration implemented on a DSP-based motion controller. , 2012, , .		2
135	sEMG-based continuous estimation of joint angles of human legs by using BP neural network. Neurocomputing, 2012, 78, 139-148.	5.9	163
136	Integrated Design of Machine Body and Control Algorithm for Improving the Robustness of a Closed-Chain Five-Bar Machine. IEEE/ASME Transactions on Mechatronics, 2012, 17, 587-591.	5.8	29
137	Solving a modified consensus problem of linear multi-agent systems. Automatica, 2011, 47, 2218-2223.	5.0	89
138	Editorial to special issue: Biomedical engineering: information processing, modeling, and control. Neural Computing and Applications, 2011, 20, 1129-1130.	5.6	0
139	Neural-Network-Based Adaptive Leader-Following Control for Multiagent Systems With Uncertainties. IEEE Transactions on Neural Networks, 2010, 21, 1351-1358.	4.2	309
140	Multicriteria Optimization for Coordination of Redundant Robots Using a Dual Neural Network. IEEE Transactions on Systems, Man, and Cybernetics, 2010, 40, 1075-1087.	5.0	93
141	Editorial to special issue: computational intelligence for optimization, modeling and control. Neural Computing and Applications, 2009, 18, 407-408.	5.6	1
142	Adaptive neural network tracking control for manipulators with uncertain kinematics, dynamics and actuator model. Automatica, 2009, 45, 2312-2318.	5.0	219
143	Adaptive Control of an Electrically Driven Nonholonomic Mobile Robot via Backstepping and Fuzzy Approach. IEEE Transactions on Control Systems Technology, 2009, 17, 803-815.	5.2	202
144	Neurodynamic programming: a case study of the traveling salesman problem. Neural Computing and Applications, 2008, 17, 347-355.	5.6	8

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145	Constrained multi-variable generalized predictive control using a dual neural network. Neural Computing and Applications, 2007, 16, 505-512.	5.6	37
146	Neural Units with Higher-Order Synaptic Operations for Robotic Image Processing Applications. Soft Computing, 2006, 11, 221-228.	3.6	19