Zeng-Guang Hou

List of Publications by Year
in descending order

146	3,797	136950	144013
papers	citations	32	57
		h-index	g-index

146	146	146	3039
all docs	docs citations	times ranked	citing authors

#	ARTICLE	IF	CITATIONS
1	Neural-Network-Based Adaptive Leader-Following Control for Multiagent Systems With Uncertainties. IEEE Transactions on Neural Networks, 2010, 21, 1351-1358.	4.2	309
2	Adaptive neural network tracking control for manipulators with uncertain kinematics, dynamics and actuator model. Automatica, 2009, 45, 2312-2318.	5.0	219
3	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
4	sEMG-based continuous estimation of joint angles of human legs by using BP neural network. Neurocomputing, 2012, 78, 139-148.	5.9	163
5	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
6	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
7	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
8	Containment control of multi-agent systems in a noisy communication environment. Automatica, 2014, 50, 1922-1928.	5.0	119
9	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
10	An Adaptive Takagiâ€"Sugeno Fuzzy Model-Based Predictive Controller for Piezoelectric Actuators. IEEE Transactions on Industrial Electronics, 2017, 64, 3048-3058.	7.9	100
11	A Neural-Network-Based Controller for Piezoelectric-Actuated Stickâ€"Slip Devices. IEEE Transactions on Industrial Electronics, 2018, 65, 2598-2607.	7.9	95
12	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
13	Solving a modified consensus problem of linear multi-agent systems. Automatica, 2011, 47, 2218-2223.	5.0	89
14	Attitude Coordination Control for a Group of Spacecraft Without Velocity Measurements. IEEE Transactions on Control Systems Technology, 2012, 20, 1160-1174.	5.2	89
15	Exponential Finite-Time Consensus of Fractional-Order Multiagent Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 1549-1558.	9.3	68
16	Distributed exponential finite-time coordination of multi-agent systems: containment control and consensus. International Journal of Control, 2015, 88, 237-247.	1.9	64
17	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
18	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

#	ARTICLE	IF	CITATIONS
19	Composite Learning Enhanced Robot Impedance Control. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 1052-1059.	11.3	52
20	Cross-modality paired-images generation and augmentation for RGB-infrared person re-identification. Neural Networks, 2020, 128, 294-304.	5.9	49
21	<italic>iLeg</italic>â€"A Lower Limb Rehabilitation Robot: A Proof of Concept. IEEE Transactions on Human-Machine Systems, 2016, 46, 761-768.	3.5	48
22	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
23	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
24	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
25	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
26	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
27	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
28	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
29	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
30	Constrained multi-variable generalized predictive control using a dual neural network. Neural Computing and Applications, 2007, 16, 505-512.	5.6	37
31	Mobile robots×³ modular navigation controller using spiking neural networks. Neurocomputing, 2014, 134, 230-238.	5.9	35
32	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
33	Design and evaluation of a bio-inspired robotic hand for percutaneous coronary intervention. , 2015, , .		31
34	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
35	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
36	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

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37	Semi-supervised Generative Adversarial Hashing for Image Retrieval. Lecture Notes in Computer Science, 2018, , 491-507.	1.3	28
38	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
39	Attention-Guided Lightweight Network for Real-Time Segmentation of Robotic Surgical Instruments. , 2020, , .		26
40	Adaptive Fuzzy Asymptotic Tracking Control of State-Constrained High-Order Nonlinear Time-Delay Systems and Its Applications. IEEE Transactions on Cybernetics, 2022, 52, 1671-1680.	9.5	26
41	Qualitative and Quantitative Assessment of Technical Skills in Percutaneous Coronary Intervention:*In Vivo*Porcine Studies. IEEE Transactions on Biomedical Engineering, 2020, 67, 353-364.	4.2	25
42	Survey of single‐target visual tracking methods based on online learning. IET Computer Vision, 2014, 8, 419-428.	2.0	24
43	Target Tracking Control of a Biomimetic Underwater Vehicle Through Deep Reinforcement Learning. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 3741-3752.	11.3	22
44	Robotic Intra-Operative Ultrasound: Virtual Environments and Parallel Systems. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 1095-1106.	13.1	22
45	An enhanced dual-finger robotic Hand for Catheter manipulating in vascular intervention: A preliminary study. , 2013, , .		21
46	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
47	Analysis of Interventionalists' 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
48	Neural Units with Higher-Order Synaptic Operations for Robotic Image Processing Applications. Soft Computing, 2006, 11, 221-228.	3.6	19
49	Guide-wire detection using region proposal network for X-ray image-guided navigation. , 2017, , .		18
50	Robot assisted rehabilitation of the arm after stroke: prototype design and clinical evaluation. Science China Information Sciences, 2017, 60, 1.	4.3	18
51	Personalized gait trajectory generation based on anthropometric features using Random Forest. Journal of Ambient Intelligence and Humanized Computing, 2023, 14, 15597-15608.	4.9	18
52	SurgiNet: Pyramid Attention Aggregation and Class-wise Self-Distillation for Surgical Instrument Segmentation. Medical Image Analysis, 2022, 76, 102310.	11.6	18
53	Removing Feasibility Conditions on Adaptive Neural Tracking Control of Nonlinear Time-Delay Systems With Time-Varying Powers, Input, and Full-State Constraints. IEEE Transactions on Cybernetics, 2022, 52, 2553-2564.	9.5	16
54	Novel sliding-mode disturbance observer-based tracking control with applications to robot manipulators. Science China Information Sciences, 2021, 64, 1.	4.3	16

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55	Epileptic seizure detection based on the kernel extreme learning machine. Technology and Health Care, 2017, 25, 399-409.	1.2	14
56	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
57	Real-Time Multi-Guidewire Endpoint Localization in Fluoroscopy Images. IEEE Transactions on Medical Imaging, 2021, 40, 2002-2014.	8.9	14
58	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
59	Automatic Guidewire Tip Segmentation in 2D X-ray Fluoroscopy Using Convolution Neural Networks. , 2018, , .		13
60	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
61	Learning impedance control of robots with enhanced transient and steady-state control performances. Science China Information Sciences, 2020, 63, 1.	4.3	13
62	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
63	Further Results on Adaptive Practical Tracking for High-Order Nonlinear Systems With Full-State Constraints. IEEE Transactions on Cybernetics, 2022, 52, 9978-9985.	9.5	13
64	Design and Experiments of a Novel Halbach-Cylinder-Based Magnetic Skin: A Preliminary Study. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	4.7	13
65	Surgical Skill Assessment Based on Dynamic Warping Manipulations. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 50-61.	3.2	12
66	A multi-body mass-spring model for virtual reality training simulators based on a robotic guide wire operating system. , 2013, , .		11
67	3D modeling of coronary arteries based on tubular-enhanced CURVES segmented regions for robotic surgical simulation. , 2013, , .		11
68	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
69	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
70	Backward swimming gaits for a carangiform robotic fish. Neural Computing and Applications, 2013, 23, 2015-2021.	5.6	10
71	Implementation of active training for an upper-limb rehabilitation robot based on impedance control. , 2015, , .		10
72	A Multilayer and Multimodal-Fusion Architecture for Simultaneous Recognition of Endovascular Manipulations and Assessment of Technical Skills. IEEE Transactions on Cybernetics, 2022, 52, 2565-2577.	9.5	10

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73	Learning Skill Characteristics From Manipulations. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 9727-9741.	11.3	10
74	EEG-based classification of upper-limb ADL using SNN for active robotic rehabilitation. , 2014, , .		9
75	Dynamic modeling and control of a parallel upper-limb rehabilitation robot. , 2015, , .		9
76	Neurodynamic programming: a case study of the traveling salesman problem. Neural Computing and Applications, 2008, 17, 347-355.	5.6	8
77	Polynomial trajectory tracking of networked Euler-Lagrange systems. , 2014, , .		8
78	Containment control of double-integrator multi-agent systems with aperiodic sampling: A small-gain theorem based method. , 2014, , .		8
79	Stochastic consensus of linear multi-agent systems: Communication noises and Markovian switching topologies. , 2014, , .		7
80	An inversion-free fuzzy predictive control for piezoelectric actuators. , 2015, , .		7
81	Design of CASIA-ARM: A novel rehabilitation robot for upper limbs. , 2015, , .		7
82	An Adaptive Fuzzy Predictive Controller with Hysteresis Compensation for Piezoelectric Actuators. Cognitive Computation, 2020, 12, 736-747.	5.2	7
83	Residual vibration suppression using off-line learning input shaping method for a flexible joint robot. , 2012, , .		6
84	An FES-assisted training strategy combined with impedance control for a lower limb rehabilitation robot. , 2013, , .		6
85	Faster R-CNN Based Indoor Flame Detection for Firefighting Robot. , 2019, , .		6
86	Adversarial Binary Mutual Learning for Semi-Supervised Deep Hashing. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 4110-4124.	11.3	6
87	3-D Electromagnetic Position Estimation System Using High-Magnetic-Permeability Metal for Continuum Medical Robots. IEEE Robotics and Automation Letters, 2022, 7, 2581-2588.	5.1	6
88	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
89	sEMG-based prediction of human lower extremity movements by using a dynamic recurrent neural network. , 2016, , .		5
90	Dynamic model based fuzzy-impedance interaction control for rehabilitation robots. , 2017, , .		5

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91	A simulator with an elastic guidewire and vascular system for minimally invasive vascular surgery. Science China Information Sciences, 2018, 61, 1.	4.3	5
92	Path Planning for Surgery Robot with Bidirectional Continuous Tree Search and Neural Network. , 2019, , .		5
93	FRR-NET: Fast Recurrent Residual Networks for Real-Time Catheter Segmentation and Tracking in Endovascular Aneurysm Repair. , 2020, , .		5
94	A Two-Stage Framework for Real-Time Guidewire Endpoint Localization. Lecture Notes in Computer Science, 2019, , 357-365.	1.3	5
95	Real-Time Guidewire Segmentation and Tracking in Endovascular Aneurysm Repair. Lecture Notes in Computer Science, 2019, , 491-500.	1.3	5
96	Machine Learning for Structure Determination in Single-Particle Cryo-Electron Microscopy: A Systematic Review. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 452-472.	11.3	5
97	Finite-Time Observer-Based Variable Impedance Control of Cable-Driven Continuum Manipulators. IEEE Transactions on Human-Machine Systems, 2022, 52, 26-40.	3.5	5
98	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
99	FEM-based guide wire simulation and interaction for a minimally invasive vascular surgery training system. , 2014, , .		4
100	Haptic intelligent interfaces for NAO robot hand control. , 2015, , .		4
101	A 3-DOF compact haptic interface for endoscopic endonasal approach surgery simulation. , 2016, , .		4
102	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
103	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
104	Fully Automatic Dual-Guidewire Segmentation for Coronary Bifurcation Lesion. , 2019, , .		4
105	A Novel Assist-As-Needed Controller Based on Fuzzy-Logic Inference and Human Impedance Identification for Upper-Limb Rehabilitation. , 2019, , .		4
106	BCI and Multimodal Feedback Based Attention Regulation for Lower Limb Rehabilitation. , 2019, , .		4
107	Centerlines extraction for lumen model of human vasculature for computer-aided simulation of intravascular procedures. , 2014, , .		3
108	Dynamic modeling and control simulation of a modified delta manipulator. , 2015, , .		3

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109	Genetic Algorithm Based Dynamics Modeling and Control of a Parallel Rehabilitation Robot. , 2018, , .		3
110	Damping Control Based Speed Adjustment Strategy for a Lower Limb Rehabilitation Robot. , 2019, , .		3
111	Applying maximally stable extremal regions and local binary patterns for guide–wire detecting in percutaneous coronary intervention. IET Image Processing, 2019, 13, 2579-2586.	2.5	3
112	Engagement Enhancement Based on Human-in-the-Loop Optimization for Neural Rehabilitation. Frontiers in Neurorobotics, 2020, 14, 596019.	2.8	3
113	GPR and SPSO-CG based gait pattern generation for subject-specific training. Science China Information Sciences, 2021, 64, 1.	4.3	3
114	Neural Correlates of Single-Task Versus Cognitive-Motor Dual-Task Training. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 532-540.	3.8	3
115	CNN-LSTM Network Based Prediction of Human Joint Angles Using Multi-Band SEMG and Historical Angles. , 2021, , .		3
116	Brain Functional Connectivity Analysis and Crucial Channel Selection Using Channel-Wise CNN. Lecture Notes in Computer Science, 2018, , 40-49.	1.3	3
117	A Unified Framework for Multi-Guidewire Endpoint Localization in Fluoroscopy Images. IEEE Transactions on Biomedical Engineering, 2022, 69, 1406-1416.	4.2	3
118	A Hierarchical Architecture for Multisymptom Assessment of Early Parkinson's Disease via Wearable Sensors. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 1553-1563.	3.8	3
119	Group Feature Learning and Domain Adversarial Neural Network for aMCI Diagnosis System Based on EEG. , 2021, , .		3
120	Experimental validation of a trajectory planning method with continuous acceleration implemented on a DSP-based motion controller. , 2012, , .		2
121	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
122	Task-oriented active training based on adaptive impedance control with iLeg — A horizontal exoskeleton for lower limb rehabilitation. , 2013, , .		2
123	An sEMG-driven musculoskeletal model of shoulder and elbow based on neural networks. , 2015, , .		2
124	Move like humans: End-to-end Gaussian process regression based target tracking control for mobile robots. , 2017, , .		2
125	A Multilayer-Multimodal Fusion Architecture for Pattern Recognition of Natural Manipulations in Percutaneous Coronary Interventions. , 2020, , .		2
126	A Gait Events Detection Algorithm Based on the Invariant Characteristic of Hip Joint Kinematics. , 2021, , .		2

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127	Automated Localization of Myocardial Infarction of Image-Based Multilead ECG Tensor With Tucker2 Decomposition. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-15.	4.7	2
128	Editorial to special issue: computational intelligence for optimization, modeling and control. Neural Computing and Applications, 2009, 18, 407-408.	5.6	1
129	A sampled-data based average consensus protocol for double-integrator multi-agent systems with switching topologies and communication noises. , 2012, , .		1
130	Dynamic behavior analysis on SISO multi-agent systems in a noisy environment. , 2014, , .		1
131	Segmentation and visualization of the heart region for 3-D simulation of coronary intervention procedures. , 2014, , .		1
132	An 3D interactive virtual reality software toolkit for minimally invasive vascular surgery. , 2014, , .		1
133	An RBF-based neuro-adaptive control scheme to drive a lower limb rehabilitation robot. , 2015, , .		1
134	Multi-scale wavelet kernel extreme learning machine for EEG feature classification. , 2015, , .		1
135	Tracking natural guidewire manipulations with an improved data glove. , 2016, , .		1
136	Towards Enhancement of Patientsâ€™ Engagement: Online Modification of Rehabilitation Training Modes Using Facial Expression and Muscle Fatigue. , 2018, 2018, 2304-2307.		1
137	Design and Validation of an Asymmetric Bowden-Cable-Driven Series Elastic Actuator. , 2019, , .		1
138	A Real-Time Multi-Task Framework for Guidewire Segmentation and Endpoint Localization in Endovascular Interventions. , 2021, , .		1
139	Editorial to special issue: Biomedical engineering: information processing, modeling, and control. Neural Computing and Applications, 2011, 20, 1129-1130.	5.6	0
140	Haptic rendering of guide wire manipulation in vascular surgery simulation. , 2014, , .		0
141	3D interactive virtual environments for minimally invasive vascular surgery. , 2014, , .		0
142	Lumen segmentation and visualization of abdominal aorta using geodesic active contours for intravascular surgical simulation. , 2014, , .		0
143	Development of a multi-modal interactive system for Endoscopic Endonasal Approach surgery simulation. , 2016, , .		0
144	Relative torque contribution based model simplification for robotic dynamics identification. , 2017, , .		0

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145	A Safety Joint with Passive Compliant and Manual Override Mechanisms for Medical Robotics. , 2021, , .		0
146	A Dual-Stream Architecture for Real-Time Morphological Analysis of Aneurysm in Robot-Assisted Minimally Invasive Surgery. , 2022, , .		0