Zeng-Guang Hou

List of Publications by Year
in descending order

112 papers	6,463 citations	71061 41 h-index	69214 77 g-index
114 all docs	114 docs citations	114 times ranked	4184 citing authors

#	ARTICLE	IF	CITATIONS
1	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.	6.2	26
2	Prediction of Human Voluntary Torques Based on Collaborative Neuromusculoskeletal Modeling and Adaptive Learning. IEEE Transactions on Industrial Electronics, 2021, 68, 5217-5226.	5.2	13
3	A Rapid Spiking Neural Network Approach With an Application on Hand Gesture Recognition. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 151-161.	2.6	39
4	Bilinear neural network with 3-D attention for brain decoding of motor imagery movements from the human EEG. Cognitive Neurodynamics, 2021, 15, 181-189.	2.3	28
5	CNN-LSTM Network Based Prediction of Human Joint Angles Using Multi-Band SEMG and Historical Angles. , 2021, , .		3
6	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.	5.9	13
7	Exponential Finite-Time Consensus of Fractional-Order Multiagent Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 1549-1558.	5.9	68
8	Engagement Enhancement Based on Human-in-the-Loop Optimization for Neural Rehabilitation. Frontiers in Neurorobotics, 2020, 14, 596019.	1.6	3
9	An Adaptive Fuzzy Predictive Controller with Hysteresis Compensation for Piezoelectric Actuators. Cognitive Computation, 2020, 12, 736-747.	3.6	7
10	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.	2.7	20
11	A Greedy Assist-as-Needed Controller for Upper Limb Rehabilitation. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 3433-3443.	7.2	39
12	Damping Control Based Speed Adjustment Strategy for a Lower Limb Rehabilitation Robot. , 2019, , .		3
13	Position Based Impedance Control Strategy for a Lower Limb Rehabilitation Robot. , 2019, 2019, 437-441.		3
14	RAUNet: Residual Attention U-Net for Semantic Segmentation of Cataract Surgical Instruments. Lecture Notes in Computer Science, 2019, , 139-149.	1.0	59
15	Neuromuscular Activation Based SEMG-Torque Hybrid Modeling and Optimization for Robot Assisted Neurorehabilitation. Lecture Notes in Computer Science, 2019, , 591-602.	1.0	2
16	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.	2.7	38
17	A Neural-Network-Based Controller for Piezoelectric-Actuated Stick–Slip Devices. IEEE Transactions on Industrial Electronics, 2018, 65, 2598-2607.	5.2	95
18	Adaptive Modeling and Control of an Upper-Limb Rehabilitation Robot Using RBF Neural Networks. Lecture Notes in Computer Science, 2018, , 235-245.	1.0	1

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19	An Adaptive Takagiâ€"Sugeno Fuzzy Model-Based Predictive Controller for Piezoelectric Actuators. IEEE Transactions on Industrial Electronics, 2017, 64, 3048-3058.	5.2	100
20	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.	2.7	35
21	Prediction of natural guidewire rotation using an sEMG-based NARX neural network. , 2017, , .		3
22	Relative torque contribution based model simplification for robotic dynamics identification. , 2017, , .		0
23	Towards Robot-Assisted Post-Stroke Hand Rehabilitation: Fugl-Meyer Gesture Recognition Using sEMG. , 2017, , .		9
24	Distributed Tracking Control of Uncertain Multiple Manipulators Under Switching Topologies Using Neural Networks. Lecture Notes in Computer Science, 2016, , 233-241.	1.0	4
25	Convergence rate of leader-following consensus of networks of discrete-time linear agents in noisy environments. , 2016, , .		2
26	sEMG-based prediction of human lower extremity movements by using a dynamic recurrent neural network. , 2016, , .		5
27	An sEMG-driven neuromusculoskeletal model of upper limb for rehabilitation robot control. , 2016, , .		4
28	Toward Patientsâ€™ Motion Intention Recognition: Dynamics Modeling and Identification of iLegâ€"An LLRR Under Motion Constraints. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2016, 46, 980-992.	5.9	35
29	Neural-network based model predictive control for piezoelectric-actuated stick-slip micro-positioning devices. , 2016, , .		7
30	<italic>iLeg</italic>â€"A Lower Limb Rehabilitation Robot: A Proof of Concept. IEEE Transactions on Human-Machine Systems, 2016, 46, 761-768.	2.5	48
31	Containment Control of Multiagent Systems With Dynamic Leaders Based on a PI^{n} -Type Approach. IEEE Transactions on Cybernetics, 2016, 46, 3004-3017.	6.2	131
32	On Convergence Rate of Leader-Following Consensus of Linear Multi-Agent Systems With Communication Noises. IEEE Transactions on Automatic Control, 2016, 61, 3586-3592.	3.6	115
33	Evolving spatio-temporal data machines based on the NeuCube neuromorphic framework: Design methodology and selected applications. Neural Networks, 2016, 78, 1-14.	3.3	123
34	Optimal Formation of Multirobot Systems Based on a Recurrent Neural Network. IEEE Transactions on Neural Networks and Learning Systems, 2016, 27, 322-333.	7.2	88
35	Reaching a consensus in networks of high-order integral agents under switching directed topologies. International Journal of Systems Science, 2016, 47, 1966-1981.	3.7	62
36	An inversion-free model predictive control with error compensation for piezoelectric actuators. , 2015, , .		9

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37	New Strategy to Reduce the Global Burden of Stroke. Stroke, 2015, 46, 1740-1747.	1.0	71
38	An RBF-based neuro-adaptive control scheme to drive a lower limb rehabilitation robot. , 2015, , .		1
39	Dynamic modeling and control of a parallel upper-limb rehabilitation robot. , 2015, , .		9
40	An sEMG-driven musculoskeletal model of shoulder and elbow based on neural networks. , 2015, , .		2
41	sEMG-based torque estimation for robot-assisted lower limb rehabilitation. , 2015, , .		16
42	Coordinated transportation of a group of unmanned ground vehicles. , 2015, , .		8
43	An Inversion-free Predictive Controller for Piezoelectric Actuators Based on A Dynamic Linearized Neural Network Model. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	3.7	53
44	Neural network based FastSLAM for autonomous robots in unknown environments. Neurocomputing, 2015, 165, 99-110.	3.5	34
45	Consensus seeking in a network of discrete-time linear agents with communication noises. International Journal of Systems Science, 2015, 46, 1874-1888.	3.7	42
46	Containment control of continuous-time linear multi-agent systems with aperiodic sampling. Automatica, 2015, 57, 78-84.	3.0	134
47	Neural-Network-Based Nonlinear Model Predictive Control for Piezoelectric Actuators. IEEE Transactions on Industrial Electronics, 2015, 62, 7717-7727.	5.2	213
48	Leader-following consensus of discrete-time linear multi-agent systems with communication noises. , 2015, , .		7
49	Evolved neural network ensemble by multiple heterogeneous swarm intelligence. Neurocomputing, 2015, 149, 29-38.	3.5	22
50	Seeking Consensus in Networks of Linear Agents: Communication Noises and Markovian Switching Topologies. IEEE Transactions on Automatic Control, 2015, 60, 1374-1379.	3.6	129
51	Dynamic behavior analysis on SISO multi-agent systems in a noisy environment. , 2014, , .		1
52	Polynomial trajectory tracking of networked Euler-Lagrange systems. , 2014, , .		8
53	Containment control of double-integrator multi-agent systems with aperiodic sampling: A small-gain theorem based method. , 2014, , .		8
54	Feasibility of NeuCube SNN architecture for detecting motor execution and motor intention for use in BCIapplications. , 2014, , .		6

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55	EEG-based classification of upper-limb ADL using SNN for active robotic rehabilitation. , 2014, , .		9
56	Dynamics modeling and identification of the human-robot interface based on a lower limb rehabilitation robot. , 2014, , .		10
57	A Mean Square Consensus Protocol for Linear Multi-Agent Systems With Communication Noises and Fixed Topologies. IEEE Transactions on Automatic Control, 2014, 59, 261-267.	3.6	192
58	Evolving spiking neural networks for personalised modelling, classification and prediction of spatio-temporal patterns with a case study on stroke. Neurocomputing, 2014, 134, 269-279.	3.5	117
59	Mobile robots×³ modular navigation controller using spiking neural networks. Neurocomputing, 2014, 134, 230-238.	3.5	35
60	A novel leg orthosis for lower limb rehabilitation robots of the sitting/lying type. Mechanism and Machine Theory, 2014, 74, 337-353.	2.7	28
61	Stochastic consensus of linear multi-agent systems: Communication noises and Markovian switching topologies. , 2014, , .		7
62	Containment control of multi-agent systems in a noisy communication environment. Automatica, 2014, 50, 1922-1928.	3.0	119
63	Leader-Following Output Consensus in a Network of Linear Agents with Communication Noises. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1825-1830.	0.4	5
64	Distributed consensus control for multiâ€agent systems using terminal sliding mode and Chebyshev neural networks. International Journal of Robust and Nonlinear Control, 2013, 23, 334-357.	2.1	77
65	Sampled-data based average consensus of second-order integral multi-agent systems: Switching topologies and communication noises. Automatica, 2013, 49, 1458-1464.	3.0	155
66	Necessary and sufficient conditions for solving leader-following problem of multi-agent systems with communication noises. , 2013, , .		14
67	A sampled-data based average consensus protocol for double-integrator multi-agent systems with switching topologies and communication noises. , 2012, , .		1
68	A Target-Reaching Controller for Mobile Robots Using Spiking Neural Networks. Lecture Notes in Computer Science, 2012, , 652-659.	1.0	2
69	Attitude Coordination Control for a Group of Spacecraft Without Velocity Measurements. IEEE Transactions on Control Systems Technology, 2012, 20, 1160-1174.	3.2	89
70	Tracking Control of a Closed-Chain Five-Bar Robot With Two Degrees of Freedom by Integration of an Approximation-Based Approach and Mechanical Design. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 1470-1479.	5.5	74
71	Gabor face recognition by multi-channel classifier fusion of supervised kernel manifold learning. Neurocomputing, 2012, 97, 398-404.	3.5	23
72	sEMG-based continuous estimation of joint angles of human legs by using BP neural network. Neurocomputing, 2012, 78, 139-148.	3.5	163

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73	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.	3.7	29
74	Necessary and Sufficient Conditions for Consensus of Double-Integrator Multi-Agent Systems With Measurement Noises. IEEE Transactions on Automatic Control, 2011, 56, 1958-1963.	3.6	206
75	Finite-Time Attitude Tracking Control for Spacecraft Using Terminal Sliding Mode and Chebyshev Neural Network. IEEE Transactions on Systems, Man, and Cybernetics, 2011, 41, 950-963.	5.5	378
76	Adaptive Tracking Control of Hybrid Machines: A Closed-Chain Five-Bar Mechanism Case. IEEE/ASME Transactions on Mechatronics, 2011, 16, 1155-1163.	3.7	50
77	Solving a modified consensus problem of linear multi-agent systems. Automatica, 2011, 47, 2218-2223.	3.0	89
78	Improved mobile robot's Corridor-Scene Classifier based on probabilistic Spiking Neuron Model. , 2011, , .		5
79	Recurrent Neural Network for Non-Smooth Convex Optimization Problems With Application to the Identification of Genetic Regulatory Networks. IEEE Transactions on Neural Networks, 2011, 22, 714-726.	4.8	192
80	Image category learning and classification via optimal linear combination of multiple partially matching kernels. Soft Computing, 2010, 14, 181-192.	2.1	3
81	Formation control for multiple mobile robots based on the Spiking Neural Network. , 2010, , .		1
82	Multiple kernel learning with ICA: Local discriminative image descriptors for recognition. , 2010, , .		3
83	Neural-Network-Based Adaptive Leader-Following Control for Multiagent Systems With Uncertainties. IEEE Transactions on Neural Networks, 2010, 21, 1351-1358.	4.8	309
84	Quaternion-Based Adaptive Output Feedback Attitude Control of Spacecraft Using Chebyshev Neural Networks. IEEE Transactions on Neural Networks, 2010, 21, 1457-1471.	4.8	114
85	Multicriteria Optimization for Coordination of Redundant Robots Using a Dual Neural Network. IEEE Transactions on Systems, Man, and Cybernetics, 2010, 40, 1075-1087.	5.5	93
86	Distributed Adaptive Coordinated Control ofÂMulti-Manipulator Systems Using Neural Networks. Advanced Information and Knowledge Processing, 2010, , 49-69.	0.2	18
87	Solving convex optimization problems using recurrent neural networks in finite time. , 2009, , .		14
88	The Wall-Following Controller for the Mobile Robot Using Spiking Neurons. , 2009, , .		13
89	Solving linear variational inequalities by projection neural network with time-varying delays. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 1739-1743.	0.9	19
90	A Simplified Neural Network for Linear Matrix Inequality Problems. Neural Processing Letters, 2009, 29, 213-230.	2.0	18

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91	Adaptive neural network tracking control for manipulators with uncertain kinematics, dynamics and actuator model. Automatica, 2009, 45, 2312-2318.	3.0	219
92	Adaptive Control of an Electrically Driven Nonholonomic Mobile Robot via Backstepping and Fuzzy Approach. IEEE Transactions on Control Systems Technology, 2009, 17, 803-815.	3.2	202
93	A Delayed Projection Neural Network for Solving Linear Variational Inequalities. IEEE Transactions on Neural Networks, 2009, 20, 915-925.	4.8	54
94	Decentralized Robust Adaptive Control for the Multiagent System Consensus Problem Using Neural Networks. IEEE Transactions on Systems, Man, and Cybernetics, 2009, 39, 636-647.	5.5	539
95	A behavior controller based on spiking neural networks for mobile robots. Neurocomputing, 2008, 71, 655-666.	3.5	68
96	Decentralized adaptive consensus control for multi-manipulator system with uncertain dynamics. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , .	0.0	35
97	Multi-Agent Based Adaptive Consensus Control for Multiple Manipulators with Kinematic Uncertainties. , 2008, , .		50
98	Adaptive Control of a Class of Nonlinear Pure-Feedback Systems Using Fuzzy Backstepping Approach. IEEE Transactions on Fuzzy Systems, 2008, 16, 886-897.	6.5	283
99	A Neutral-Type Delayed Projection Neural Network for Solving Nonlinear Variational Inequalities. IEEE Transactions on Circuits and Systems II: Express Briefs, 2008, 55, 806-810.	2.2	81
100	A simplified recurrent neural network for solving nonlinear variational inequalities. , 2008, , .		4
101	Corridor-Scene Classification for Mobile Robot Using Spiking Neurons. , 2008, , .		11
102	Adaptive neural network tracking control of manipulators using quaternion feedback. , 2008, , .		8
103	Adaptive Neural Network Tracking Control for Manipulators with Uncertainties. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 2382-2387.	0.4	2
104	CORRIDOR-SCENE CLASSIFYING METHODS FOR MOBILE ROBOT BASED ON MULTI-SONAR-SENSOR INFORMATION FUSION. International Journal of Information Acquisition, 2007, 04, 15-26.	0.2	3
105	A Recurrent Neural Network for Hierarchical Control of Interconnected Dynamic Systems. IEEE Transactions on Neural Networks, 2007, 18, 466-481.	4.8	56
106	Constrained multi-variable generalized predictive control using a dual neural network. Neural Computing and Applications, 2007, 16, 505-512.	3.2	37
107	Neural Networks for Mobile Robot Navigation: A Survey. Lecture Notes in Computer Science, 2006, , 1218-1226.	1.0	35
108	Neural Units with Higher-Order Synaptic Operations for Robotic Image Processing Applications. Soft Computing, 2006, 11, 221-228.	2.1	19

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109	Relaxation Labeling Using an Improved Hopfield Neural Network. , 2006, , 430-439.		6
110	Real-time optimization and computation for interconnected nonlinear systems using neural networks. , 2004, , .		0
111	A hierarchical optimization neural network for large-scale dynamic systems. Automatica, 2001, 37, 1931-1940.	3.0	44
112	A neural network for hierarchical optimization of nonlinear large-scale systems. International Journal of Systems Science, 1998, 29, 159-166.	3.7	17