Rong Song

List of Publications by Year
in descending order

96 papers	1,656 citations	331670 21 h-index	330143 37 g-index
97 all docs	97 docs citations	97 times ranked	1718 citing authors

#	Article	IF	Citations
1	Assistive Control System Using Continuous Myoelectric Signal in Robot-Aided Arm Training for Patients After Stroke. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 371-379.	4.9	165
2	Multi-Sensor Guided Hand Gesture Recognition for a Teleoperated Robot Using a Recurrent Neural Network. IEEE Robotics and Automation Letters, 2021, 6, 6039-6045.	5.1	132
3	The design and control of a 3DOF lower limb rehabilitation robot. Mechatronics, 2016, 33, 13-22.	3.3	106
4	Movement Performance of Humanâ€“Robot Cooperation Control Based on EMG-Driven Hill-Type and Proportional Models for an Ankle Power-Assist Exoskeleton Robot. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1125-1134.	4.9	106
5	Myoelectrically controlled wrist robot for stroke rehabilitation. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 52.	4.6	84
6	A 3D printed smartphone optosensing platform for point-of-need food safety inspection. Analytica Chimica Acta, 2017, 966, 81-89.	5.4	64
7	Adaptive Admittance Control for an Ankle Exoskeleton Using an EMG-Driven Musculoskeletal Model. Frontiers in Neurorobotics, 2018, 12, 16.	2.8	64
8	Admittance Control Based on EMG-Driven Musculoskeletal Model Improves the Humanâ€“Robot Synchronization. IEEE Transactions on Industrial Informatics, 2019, 15, 1211-1218.	11.3	55
9	Complexity Analysis of EMG Signals for Patients After Stroke During Robot-Aided Rehabilitation Training Using Fuzzy Approximate Entropy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 1013-1019.	4.9	52
10	Adaptive control with a fuzzy tuner for cable-based rehabilitation robot. International Journal of Control, Automation and Systems, 2016, 14, 865-875.	2.7	49
11	Rewiring the Lesioned Brain: Electrical Stimulation for Post-Stroke Motor Restoration. Journal of Stroke, 2020, 22, 47-63.	3.2	48
12	Mediator-free electron-transfer on patternable hierarchical meso/macro porous bienzyme interface for highly-sensitive sweat glucose and surface electromyography monitoring. Sensors and Actuators B: Chemical, 2020, 312, 127962.	7.8	47
13	Characterization of Stroke- and Aging-Related Changes in the Complexity of EMG Signals During Tracking Tasks. Annals of Biomedical Engineering, 2015, 43, 990-1002.	2.5	33
14	Voluntary Control of an Ankle Joint Exoskeleton by Able-Bodied Individuals and Stroke Survivors Using EMG-Based Admittance Control Scheme. IEEE Transactions on Biomedical Engineering, 2021, 68, 695-705.	4.2	30
15	Humanâ€“Robot Cooperation Control Based on Trajectory Deformation Algorithm for a Lower Limb Rehabilitation Robot. IEEE/ASME Transactions on Mechatronics, 2021, 26, 3128-3138.	5.8	30
16	A sparsity-based stochastic pooling mechanism for deep convolutional neural networks. Neural Networks, 2018, 105, 340-345.	5.9	28
17	Performance-Based Hybrid Control of a Cable-Driven Upper-Limb Rehabilitation Robot. IEEE Transactions on Biomedical Engineering, 2021, 68, 1351-1359.	4.2	28
18	Brainâ€“Machine Interfacing-Based Teleoperation of Multiple Coordinated Mobile Robots. IEEE Transactions on Industrial Electronics, 2017, 64, 5161-5170.	7.9	27

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19	A Hybrid Fuzzy Cognitive Map/Support Vector Machine Approach for EEG-Based Emotion Classification Using Compressed Sensing. International Journal of Fuzzy Systems, 2019, 21, 263-273.	4.0	27
20	Sliding Mode Tracking Control of a Wire-Driven Upper-Limb Rehabilitation Robot with Nonlinear Disturbance Observer. Frontiers in Neurology, 2017, 8, 646.	2.4	25
21	Design and Test of Admittance Control with Inner Adaptive Robust Position Control for a Lower Limb Rehabilitation Robot. International Journal of Control, Automation and Systems, 2020, 18, 134-142.	2.7	25
22	Sensorimotor Control of Tracking Movements at Various Speeds for Stroke Patients as Well as Age-Matched and Young Healthy Subjects. PLoS ONE, 2015, 10, e0128328.	2.5	24
23	Alterations of Muscle Activation Pattern in Stroke Survivors during Obstacle Crossing. Frontiers in Neurology, 2017, 8, 70.	2.4	23
24	A Hybrid Arm-Hand Rehabilitation Robot With EMG-Based Admittance Controller. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 1332-1342.	4.0	22
25	Kinetic measurements of hand motor impairments after mild to moderate stroke using grip control tasks. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 84.	4.6	20
26	Reduced Complexity in Stroke with Motor Deficits: A Resting-State fMRI Study. Neuroscience, 2020, 434, 35-43.	2.3	18
27	EMG and kinematic analysis of sensorimotor control for patients after stroke using cyclic voluntary movement with visual feedback. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 18.	4.6	15
28	Stroke-Related Changes in the Complexity of Muscle Activation during Obstacle Crossing Using Fuzzy Approximate Entropy Analysis. Frontiers in Neurology, 2018, 9, 131.	2.4	15
29	Nonlinear disturbance observer based sliding mode control of a cable-driven rehabilitation robot. , 2017, 2017, 664-669.		13
30	Assessing postural stability via the correlation patterns of vertical ground reaction force components. BioMedical Engineering OnLine, 2016, 15, 90.	2.7	12
31	Investigating Aging-Related Changes in the Coordination of Agonist and Antagonist Muscles Using Fuzzy Entropy and Mutual Information. Entropy, 2016, 18, 229.	2.2	11
32	Iterative Adjustment of Stimulation Timing and Intensity During FES-Assisted Treadmill Walking for Patients After Stroke. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1292-1298.	4.9	11
33	Effects of Task Demands on Kinematics and EMG Signals during Tracking Tasks Using Multiscale Entropy. Entropy, 2017, 19, 307.	2.2	10
34	A Robust Electrode Configuration for Bioimpedance Measurement of Respiration. Journal of Healthcare Engineering, 2014, 5, 313-328.	1.9	9
35	Kinematic Outcome Measures using Target-Reaching Arm Movement in Stroke. Annals of Biomedical Engineering, 2017, 45, 2794-2803.	2.5	9
36	Speed-adaptive control of functional electrical stimulation for dropfoot correction. Journal of NeuroEngineering and Rehabilitation, 2018, 15, 98.	4.6	9

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37	Identify the Alteration of Balance Control and Risk of Falling in Stroke Survivors During Obstacle Crossing Based on Kinematic Analysis. Frontiers in Neurology, 2019, 10, 813.	2.4	9
38	Hybrid Active Control With Human Intention Detection of an Upper-Limb Cable-Driven Rehabilitation Robot. IEEE Access, 2020, 8, 195206-195215.	4.2	9
39	Modulating and restoring inter-muscular coordination in stroke patients using two-dimensional myoelectric computer interface: a cross-sectional and longitudinal study. Journal of Neural Engineering, 2021, 18, 036005.	3.5	9
40	Armâ€“eye coordination test to objectively quantify motor performance and muscles activation in persons after stroke undergoing robot-aided rehabilitation training: a pilot study. Experimental Brain Research, 2013, 229, 373-382.	1.5	7
41	Multiparameter Electromyography Analysis of the Masticatory Muscle Activities in Patients with Brainstem Stroke at Different Head Positions. Frontiers in Neurology, 2017, 8, 221.	2.4	7
42	Characterizing Patients with Unilateral Vestibular Hypofunction Using Kinematic Variability and Local Dynamic Stability during Treadmill Walking. Behavioural Neurology, 2017, 2017, 1-7.	2.1	7
43	Continuous Description of Human 3D Motion Intent Through Switching Mechanism. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 277-286.	4.9	7
44	Stroke-induced alteration in multi-layer information transmission of cortico-motor system during elbow isometric contraction modulated by myoelectric-controlled interfaces. Journal of Neural Engineering, 2021, 18, 0460e1.	3.5	7
45	Evaluation of Velocity-Dependent Performance of the Spastic Elbow During Voluntary Movements. Archives of Physical Medicine and Rehabilitation, 2008, 89, 1140-1145.	0.9	6
46	Effect of different terrains on onset timing, duration and amplitude of tibialis anterior activation. Biomedical Signal Processing and Control, 2015, 19, 115-121.	5.7	6
47	Assessment of Motor Control during Three-Dimensional Movements Tracking with Position-Varying Gravity Compensation. Frontiers in Neuroscience, 2017, 11, 253.	2.8	6
48	Age-Related Differences in Complexity During Handgrip Control Using Multiscale Entropy. IEEE Access, 2018, 6, 45552-45561.	4.2	6
49	Increased Muscle Activity Accompanying With Decreased Complexity as Spasticity Appears: High-Density EMG-Based Case Studies on Stroke Patients. Frontiers in Bioengineering and Biotechnology, 2020, 8, 589321.	4.1	6
50	Wavelet coherence analysis of muscle coupling during reaching movement in stroke. Computers in Biology and Medicine, 2021, 131, 104263.	7.0	6
51	Characterization of alternating current impedance properties of biomedical electrodes. Journal of Central South University, 2013, 20, 1254-1258.	3.0	5
52	Fuzzy Logic Based PID Control of a 3 DOF Lower Limb Rehabilitation Robot. , 2018, , .		5
53	Characterization of the coordination of agonist and antagonist muscles among stroke patients, healthy late middle-aged and young controls using a myoelectric-controlled interface. Journal of Neural Engineering, 2018, 15, 056015.	3.5	5
54	Kinematic Analysis of Trajectory Dimension-Dependent Sensorimotor Control in Arm Tracking. IEEE Access, 2019, 7, 8890-8900.	4.2	5

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55	Voluntary intention-driven rehabilitation robots for the upper limb. , 2020, , 111-130.		5
56	Human Motion Intent Description Based on Bumpless Switching Mechanism for Rehabilitation Robot. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 673-682.	4.9	5
57	Detection of functional connectivity in the brain during visuoâ€guided grip force tracking tasks: A functional nearâ€infrared spectroscopy study. Journal of Neuroscience Research, 2021, 99, 1108-1119.	2.9	5
58	More than just statics: Altered complexity of dynamic amplitude of low-frequency fluctuations in the resting brain after stroke. Journal of Neural Engineering, 0, , .	3.5	5
59	Intensity- and Duration-Adaptive Functional Electrical Stimulation Using Fuzzy Logic Control and a Linear Model for Dropfoot Correction. Frontiers in Neurology, 2018, 9, 165.	2.4	4
60	The Step Response in Isometric Grip Force Tracking: A Model to Characterize Aging- and Stroke-Induced Changes. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 673-681.	4.9	4
61	Design and Validation of a Wearable Hand Exoskeleton System. , 2020, , .		4
62	Neuromuscular Control of the Agonistâ€“Antagonist Muscle Coordination Affected by Visual Dimension: An EMG-fNIRS Study. IEEE Access, 2020, 8, 100768-100777.	4.2	4
63	Developing a Low-Cost Force Treadmill via Dynamic Modeling. Journal of Healthcare Engineering, 2017, 2017, 1-9.	1.9	3
64	Admittance control of a 3-DOF cable-driven rehabilitation robot for upper-limb in three dimensional workspace. , 2017, , .		3
65	The effect of gender on vection perception and postural responses induced by immersive virtual rotation drum. , 2017, , .		3
66	Characterization of the Stroke-Induced Changes in the Variability and Complexity of Handgrip Force. Entropy, 2018, 20, 377.	2.2	3
67	Effects of Different Interventions on Cardiac Regulation Using Fuzzy Entropy. IEEE Access, 2019, 7, 75949-75956.	4.2	3
68	Nonparametric Model Prediction for Intelligent Regulation of Human Cardiorespiratory System to Prescribed Exercise Medicine. IEEE Access, 2020, 8, 224621-224630.	4.2	3
69	Admittance Control Strategy with Output Joint Space Constraints for a Lower Limb Rehabilitation Robot. , 2020, , .		3
70	Modeling Ankle Torque and Stiffness Induced by Functional Electrical Stimulation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 3013-3021.	4.9	3
71	Fast finite-time tracking control for a 3-DOF cable-driven parallel robot by adding a power integratorâœ°. Mechatronics, 2022, 84, 102782.	3.3	3
72	EMG-Based Control for Three-Dimensional Upper Limb Movement Assistance Using a Cable-Based Upper Limb Rehabilitation Robot. Lecture Notes in Computer Science, 2017, , 273-279.	1.3	2

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73	Torque Tracking Impedance Control for a 3DOF Lower Limb Rehabilitation Robot. , 2018, , .		2
74	Nonparametric dynamical model of cardiorespiratory responses at the onset and offset of treadmill exercises. Medical and Biological Engineering and Computing, 2018, 56, 2337-2351.	2.8	2
75	Gait tracking based triple-step nonlinear control for a lower limb rehabilitation robot. , 2019, , .		2
76	Design and Simulation of a Rotating Magnetorheological Fluid Damper for the Ankle Rehabilitation Robot. , 2020, , .		2
77	Effects of Future Information and Trajectory Complexity on Kinematic Signal and Muscle Activation during Visual-Motor Tracking. Entropy, 2021, 23, 111.	2.2	2
78	Investigating the Stroke- and Aging-Related Changes in Global and Instantaneous Intermuscular Coupling Using Cross-Fuzzy Entropy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1573-1582.	4.9	2
79	Adaptive Admittance Control Based on Linear Quadratic Regulation Optimization Technique for a Lower Limb Rehabilitation Robot. , 2021, , .		2
80	Editorial: Automations in Long-Term Neurorehabilitation. Frontiers in Neurology, 2022, 13, 864953.	2.4	2
81	Design and control of a wire-based rehabilitation robot. , 2014, , .		1
82	Differences in grip force control between young and late middle-aged adults. Australasian Physical and Engineering Sciences in Medicine, 2017, 40, 595-602.	1.3	1
83	Effect of Deep Breathing on Interaction between Sympathetic and Parasympathetic Activities. , 2018, , .		1
84	Dual-channel Speed-Adaptive Control of Functional Electrical Stimulation of Tibialis Anterior (TA) and Gastrocnemius (GAS) for Dropfoot Correction. , 2018, , .		1
85	Stroke-related Difference in Electromyographic Signals Using Refined Composite Multiscale Dispersion Entropy-a Case Study. , 2018, , .		1
86	The Effects of Walking Speed and Hardness of Terrain on the Foot-Terrain Interaction and Driving Torque for Planar Human Walking. IEEE Access, 2019, 7, 56174-56189.	4.2	1
87	The effects of different tracking tasks on muscle synergy through visual feedback. , 2019, 2019, 417-420.		1
88	Deep Reinforcement Learning Based Cable Tension Distribution Optimization for Cable-driven Rehabilitation Robot. , 2021, , .		1
89	Triple-step Nonlinear Controller with MLFNN for a Lower Limb Rehabilitation Robot. , 2021, , .		1
90	Active Learning Strategy of Finger Flexion Tracking using sEMG for Robot Hand Control. , 2021, , .		1

#	Article	IF	Citations
91	Variable Impedance Control Based on Target Position and Tracking Error for Rehabilitation Robots During a Reaching Task. Frontiers in Neurorobotics, 2022, 16, 850692.	2.8	1
92	Stiffness change of ankle joint during different activations of tibialis anterior muscle. , 2016, , .		0
93	Dimensionality effect of myoelectric-controlled interface on the coordination of agonist and antagonist muscles during voluntary isometric elbow flexion and extension. Biomedical Signal Processing and Control, 2018, 40, 149-155.	5.7	0
94	Velocity Control of an Upper-Limb Cable-Driven Rehabilitation Robot. , 2018, , .		0
95	Robust Finite-Time Convergence Control for a Knee Rehabilitation Robot*. , 2019, , .		0
96	Impact of visual signals on axial segmental control during walking in patients with vestibular disorder and healthy persons. Journal of Biomechanics, 2020, 104, 109712.	2.1	0