

# Rong Song

## List of Publications by Year in descending order

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96  
papers

1,656  
citations

331259

21  
h-index

329751

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. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2008, 16, 371-379.	2.7	165
2	Multi-Sensor Guided Hand Gesture Recognition for a Teleoperated Robot Using a Recurrent Neural Network. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 6039-6045.	3.3	132
3	The design and control of a 3DOF lower limb rehabilitation robot. <i>Mechatronics</i> , 2016, 33, 13-22.	2.0	106
4	Movement Performance of Human-Robot Cooperation Control Based on EMG-Driven Hill-Type and Proportional Models for an Ankle Power-Assist Exoskeleton Robot. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2017, 25, 1125-1134.	2.7	106
5	Myoelectrically controlled wrist robot for stroke rehabilitation. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2013, 10, 52.	2.4	84
6	A 3D printed smartphone optosensing platform for point-of-need food safety inspection. <i>Analytica Chimica Acta</i> , 2017, 966, 81-89.	2.6	64
7	Adaptive Admittance Control for an Ankle Exoskeleton Using an EMG-Driven Musculoskeletal Model. <i>Frontiers in Neurorobotics</i> , 2018, 12, 16.	1.6	64
8	Admittance Control Based on EMG-Driven Musculoskeletal Model Improves the Human-Robot Synchronization. <i>IEEE Transactions on Industrial Informatics</i> , 2019, 15, 1211-1218.	7.2	55
9	Complexity Analysis of EMG Signals for Patients After Stroke During Robot-Aided Rehabilitation Training Using Fuzzy Approximate Entropy. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2014, 22, 1013-1019.	2.7	52
10	Adaptive control with a fuzzy tuner for cable-based rehabilitation robot. <i>International Journal of Control, Automation and Systems</i> , 2016, 14, 865-875.	1.6	49
11	Rewiring the Lesioned Brain: Electrical Stimulation for Post-Stroke Motor Restoration. <i>Journal of Stroke</i> , 2020, 22, 47-63.	1.4	48
12	Mediator-free electron-transfer on patternable hierarchical meso/macro porous bienzyme interface for highly-sensitive sweat glucose and surface electromyography monitoring. <i>Sensors and Actuators B: Chemical</i> , 2020, 312, 127962.	4.0	47
13	Characterization of Stroke- and Aging-Related Changes in the Complexity of EMG Signals During Tracking Tasks. <i>Annals of Biomedical Engineering</i> , 2015, 43, 990-1002.	1.3	33
14	Voluntary Control of an Ankle Joint Exoskeleton by Able-Bodied Individuals and Stroke Survivors Using EMG-Based Admittance Control Scheme. <i>IEEE Transactions on Biomedical Engineering</i> , 2021, 68, 695-705.	2.5	30
15	Human-Robot Cooperation Control Based on Trajectory Deformation Algorithm for a Lower Limb Rehabilitation Robot. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021, 26, 3128-3138.	3.7	30
16	A sparsity-based stochastic pooling mechanism for deep convolutional neural networks. <i>Neural Networks</i> , 2018, 105, 340-345.	3.3	28
17	Performance-Based Hybrid Control of a Cable-Driven Upper-Limb Rehabilitation Robot. <i>IEEE Transactions on Biomedical Engineering</i> , 2021, 68, 1351-1359.	2.5	28
18	Brain-Machine Interfacing-Based Teleoperation of Multiple Coordinated Mobile Robots. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 5161-5170.	5.2	27

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19	A Hybrid Fuzzy Cognitive Map/Support Vector Machine Approach for EEG-Based Emotion Classification Using Compressed Sensing. <i>International Journal of Fuzzy Systems</i> , 2019, 21, 263-273.	2.3	27
20	Sliding Mode Tracking Control of a Wire-Driven Upper-Limb Rehabilitation Robot with Nonlinear Disturbance Observer. <i>Frontiers in Neurology</i> , 2017, 8, 646.	1.1	25
21	Design and Test of Admittance Control with Inner Adaptive Robust Position Control for a Lower Limb Rehabilitation Robot. <i>International Journal of Control, Automation and Systems</i> , 2020, 18, 134-142.	1.6	25
22	Sensorimotor Control of Tracking Movements at Various Speeds for Stroke Patients as Well as Age-Matched and Young Healthy Subjects. <i>PLoS ONE</i> , 2015, 10, e0128328.	1.1	24
23	Alterations of Muscle Activation Pattern in Stroke Survivors during Obstacle Crossing. <i>Frontiers in Neurology</i> , 2017, 8, 70.	1.1	23
24	A Hybrid Arm-Hand Rehabilitation Robot With EMG-Based Admittance Controller. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2021, 15, 1332-1342.	2.7	22
25	Kinetic measurements of hand motor impairments after mild to moderate stroke using grip control tasks. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2014, 11, 84.	2.4	20
26	Reduced Complexity in Stroke with Motor Deficits: A Resting-State fMRI Study. <i>Neuroscience</i> , 2020, 434, 35-43.	1.1	18
27	EMG and kinematic analysis of sensorimotor control for patients after stroke using cyclic voluntary movement with visual feedback. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2013, 10, 18.	2.4	15
28	Stroke-Related Changes in the Complexity of Muscle Activation during Obstacle Crossing Using Fuzzy Approximate Entropy Analysis. <i>Frontiers in Neurology</i> , 2018, 9, 131.	1.1	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. <i>BioMedical Engineering OnLine</i> , 2016, 15, 90.	1.3	12
31	Investigating Aging-Related Changes in the Coordination of Agonist and Antagonist Muscles Using Fuzzy Entropy and Mutual Information. <i>Entropy</i> , 2016, 18, 229.	1.1	11
32	Iterative Adjustment of Stimulation Timing and Intensity During FES-Assisted Treadmill Walking for Patients After Stroke. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 1292-1298.	2.7	11
33	Effects of Task Demands on Kinematics and EMG Signals during Tracking Tasks Using Multiscale Entropy. <i>Entropy</i> , 2017, 19, 307.	1.1	10
34	A Robust Electrode Configuration for Bioimpedance Measurement of Respiration. <i>Journal of Healthcare Engineering</i> , 2014, 5, 313-328.	1.1	9
35	Kinematic Outcome Measures using Target-Reaching Arm Movement in Stroke. <i>Annals of Biomedical Engineering</i> , 2017, 45, 2794-2803.	1.3	9
36	Speed-adaptive control of functional electrical stimulation for dropfoot correction. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2018, 15, 98.	2.4	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. <i>Frontiers in Neurology</i> , 2019, 10, 813.	1.1	9
38	Hybrid Active Control With Human Intention Detection of an Upper-Limb Cable-Driven Rehabilitation Robot. <i>IEEE Access</i> , 2020, 8, 195206-195215.	2.6	9
39	Modulating and restoring inter-muscular coordination in stroke patients using two-dimensional myoelectric computer interface: a cross-sectional and longitudinal study. <i>Journal of Neural Engineering</i> , 2021, 18, 036005.	1.8	9
40	Arm-eye coordination test to objectively quantify motor performance and muscles activation in persons after stroke undergoing robot-aided rehabilitation training: a pilot study. <i>Experimental Brain Research</i> , 2013, 229, 373-382.	0.7	7
41	Multiparameter Electromyography Analysis of the Masticatory Muscle Activities in Patients with Brainstem Stroke at Different Head Positions. <i>Frontiers in Neurology</i> , 2017, 8, 221.	1.1	7
42	Characterizing Patients with Unilateral Vestibular Hypofunction Using Kinematic Variability and Local Dynamic Stability during Treadmill Walking. <i>Behavioural Neurology</i> , 2017, 2017, 1-7.	1.1	7
43	Continuous Description of Human 3D Motion Intent Through Switching Mechanism. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 277-286.	2.7	7
44	Stroke-induced alteration in multi-layer information transmission of cortico-motor system during elbow isometric contraction modulated by myoelectric-controlled interfaces. <i>Journal of Neural Engineering</i> , 2021, 18, 0460e1.	1.8	7
45	Evaluation of Velocity-Dependent Performance of the Spastic Elbow During Voluntary Movements. <i>Archives of Physical Medicine and Rehabilitation</i> , 2008, 89, 1140-1145.	0.5	6
46	Effect of different terrains on onset timing, duration and amplitude of tibialis anterior activation. <i>Biomedical Signal Processing and Control</i> , 2015, 19, 115-121.	3.5	6
47	Assessment of Motor Control during Three-Dimensional Movements Tracking with Position-Varying Gravity Compensation. <i>Frontiers in Neuroscience</i> , 2017, 11, 253.	1.4	6
48	Age-Related Differences in Complexity During Handgrip Control Using Multiscale Entropy. <i>IEEE Access</i> , 2018, 6, 45552-45561.	2.6	6
49	Increased Muscle Activity Accompanying With Decreased Complexity as Spasticity Appears: High-Density EMG-Based Case Studies on Stroke Patients. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 589321.	2.0	6
50	Wavelet coherence analysis of muscle coupling during reaching movement in stroke. <i>Computers in Biology and Medicine</i> , 2021, 131, 104263.	3.9	6
51	Characterization of alternating current impedance properties of biomedical electrodes. <i>Journal of Central South University</i> , 2013, 20, 1254-1258.	1.2	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. <i>Journal of Neural Engineering</i> , 2018, 15, 056015.	1.8	5
54	Kinematic Analysis of Trajectory Dimension-Dependent Sensorimotor Control in Arm Tracking. <i>IEEE Access</i> , 2019, 7, 8890-8900.	2.6	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.	2.7	5
57	Detection of functional connectivity in the brain during visuo-guided grip force tracking tasks: A functional near-infrared spectroscopy study. Journal of Neuroscience Research, 2021, 99, 1108-1119.	1.3	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, , .	1.8	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.	1.1	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.	2.7	4
61	Design and Validation of a Wearable Hand Exoskeleton System. , 2020, , .		4
62	Neuromuscular Control of the Agonist-Antagonist Muscle Coordination Affected by Visual Dimension: An EMG-fNIRS Study. IEEE Access, 2020, 8, 100768-100777.	2.6	4
63	Developing a Low-Cost Force Treadmill via Dynamic Modeling. Journal of Healthcare Engineering, 2017, 2017, 1-9.	1.1	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.	1.1	3
67	Effects of Different Interventions on Cardiac Regulation Using Fuzzy Entropy. IEEE Access, 2019, 7, 75949-75956.	2.6	3
68	Nonparametric Model Prediction for Intelligent Regulation of Human Cardiorespiratory System to Prescribed Exercise Medicine. IEEE Access, 2020, 8, 224621-224630.	2.6	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.	2.7	3
71	Fast finite-time tracking control for a 3-DOF cable-driven parallel robot by adding a power integrator. Mechatronics, 2022, 84, 102782.	2.0	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.	1.0	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.	1.6	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.	1.1	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.	2.7	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.	1.1	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.	1.4	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.	2.6	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

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91	Variable Impedance Control Based on Target Position and Tracking Error for Rehabilitation Robots During a Reaching Task. <i>Frontiers in Neurobotics</i> , 2022, 16, 850692.	1.6	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. <i>Biomedical Signal Processing and Control</i> , 2018, 40, 149-155.	3.5	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. <i>Journal of Biomechanics</i> , 2020, 104, 109712.	0.9	0