

Seyed Farokh Atashzar

List of Publications by Year in descending order

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Version: 2024-02-01

114
papers

1,624
citations

331259

21
h-index

433756

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123
all docs

123
docs citations

123
times ranked

1182
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of Antagonistic Tensions on Distributed Friction Forces of Multisegment Tendon-Driven Continuum Manipulators With Irregular Geometry. IEEE/ASME Transactions on Mechatronics, 2022, 27, 2418-2428.	3.7	6
2	Video Context Improves Performance in Identifying Operative Planes on Static Surgical Images. Journal of Surgical Education, 2022, 79, 492-499.	1.2	0
3	Deep Heterogeneous Dilation of LSTM for Transient-Phase Gesture Prediction Through High-Density Electromyography: Towards Application in Neurorobotics. IEEE Robotics and Automation Letters, 2022, 7, 2851-2858.	3.3	8
4	Synergistic Upper-Limb Functional Muscle Connectivity Using Acoustic Mechanomyography. IEEE Transactions on Biomedical Engineering, 2022, 69, 2569-2580.	2.5	4
5	Gamma-band enhancement of functional brain connectivity following transcutaneous electrical nerve stimulation. Journal of Neural Engineering, 2022, 19, 026020.	1.8	7
6	Adaptive Wave Reconstruction Through Regulated-BMFLC for Transparency-Enhanced Telerobotics Over Delayed Networks. IEEE Transactions on Robotics, 2022, 38, 2928-2942.	7.3	6
7	A machine learning approach for the identification of kinematic biomarkers of chronic neck pain during single- and dual-task gait. Gait and Posture, 2022, 96, 81-86.	0.6	3
8	Hand Gesture Recognition Using Temporal Convolutions and Attention Mechanism. , 2022, , .		12
9	Haptic Feedback and Force-Based Teleoperation in Surgical Robotics. Proceedings of the IEEE, 2022, 110, 1012-1027.	16.4	27
10	Hand Gesture Recognition via Transient sEMG Using Transfer Learning of Dilated Efficient CapsNet: Towards Generalization for Neurorobotics. IEEE Robotics and Automation Letters, 2022, 7, 9216-9223.	3.3	5
11	Autonomous Data-Driven Manipulation of an Unknown Deformable Tissue Within Constrained Environments: A Pilot Study. , 2022, , .		1
12	Deep Learning for Robust Decomposition of High-Density Surface EMG Signals. IEEE Transactions on Biomedical Engineering, 2021, 68, 526-534.	2.5	52
13	Wearable MMG-Plus-One Armband: Evaluation of Normal Force on Mechanomyography (MMG) to Enhance Human-Machine Interfacing. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 196-205.	2.7	18
14	FS-HGR: Few-Shot Learning for Hand Gesture Recognition via Electromyography. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1004-1015.	2.7	65
15	Kinematic biomarkers of chronic neck pain measured during gait: A data-driven classification approach. Journal of Biomechanics, 2021, 118, 110190.	0.9	12
16	Perspective: Wearable Internet of Medical Things for Remote Tracking of Symptoms, Prediction of Health Anomalies, Implementation of Preventative Measures, and Control of Virus Spread During the Era of COVID-19. Frontiers in Robotics and AI, 2021, 8, 610653.	2.0	13
17	Discrete Windowed-Energy Variable Structure Passivity Signature Control for Physical Human-(Tele)Robot Interaction. IEEE Robotics and Automation Letters, 2021, 6, 3647-3654.	3.3	7
18	Robotics and AI for Teleoperation, Tele-Assessment, and Tele-Training for Surgery in the Era of COVID-19: Existing Challenges, and Future Vision. Frontiers in Robotics and AI, 2021, 8, 610677.	2.0	41

#	ARTICLE	IF	CITATIONS
19	Review: How Can Intelligent Robots and Smart Mechatronic Modules Facilitate Remote Assessment, Assistance, and Rehabilitation for Isolated Adults With Neuro-Musculoskeletal Conditions?. <i>Frontiers in Robotics and AI</i> , 2021, 8, 610529.	2.0	24
20	Toward Deep Generalization of Peripheral EMG-Based Human-Robot Interfacing: A Hybrid Explainable Solution for NeuroRobotic Systems. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 2650-2657.	3.3	32
21	A deep explainable artificial intelligent framework for neurological disorders discrimination. <i>Scientific Reports</i> , 2021, 11, 9630.	1.6	15
22	COVID-FACT: A Fully-Automated Capsule Network-Based Framework for Identification of COVID-19 Cases from Chest CT Scans. <i>Frontiers in Artificial Intelligence</i> , 2021, 4, 598932.	2.0	75
23	Altered evoked low-frequency connectivity from SI to ACC following nerve injury in rats. <i>Journal of Neural Engineering</i> , 2021, 18, 046063.	1.8	1
24	Muscle network topology analysis for the classification of chronic neck pain based on EMG biomarkers extracted during walking. <i>PLoS ONE</i> , 2021, 16, e0252657.	1.1	11
25	Few-Shot Learning for Decoding Surface Electromyography for Hand Gesture Recognition. , 2021, , .		14
26	Abnormal Vision-Based Displacement Perception in Parkinsonâ€™s Disease. <i>Frontiers in Neuroscience</i> , 2021, 15, 676469.	1.4	1
27	Design, Fabrication, and Validation of a New Family of 3D-Printable Structurally-Programmable Actuators for Soft Robotics. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 7941-7948.	3.3	3
28	Temporal Dilation of Deep LSTM for Agile Decoding of sEMG: Application in Prediction of Upper-Limb Motor Intention in NeuroRobotics. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 6212-6219.	3.3	19
29	Review of Advanced Medical Telerobots. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 209.	1.3	27
30	Time-Domain Passivity-based Controller with an Optimal Two-channel Lawrence Telerobotic Architecture. , 2021, , .		2
31	Trustworthy Adaptation with Few-Shot Learning for Hand Gesture Recognition. , 2021, , .		5
32	Wearable multichannel haptic device for encoding proprioception in the upper limb. <i>Journal of Neural Engineering</i> , 2020, 17, 056035.	1.8	12
33	Energetic Passivity Decoding of Human Hip Joint for Physical Human-Robot Interaction. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 5953-5960.	3.3	10
34	Editorial: Autonomy and Intelligence in Neurorehabilitation Robotic and Prosthetic Technologies. <i>Journal of Medical Robotics Research</i> , 2020, 05, 2002001.	1.0	0
35	Kinematic Biomarkers of Chronic Neck Pain During Curvilinear Walking: A Data-driven Differential Diagnosis Approach. , 2020, 2020, 5162-5166.		2
36	Vibration Analysis in Robot-Driven Glenoid Reaming Procedure. , 2020, , .		3

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37	3D-Mechanomyography: Accessing Deeper Muscle Information Non-Invasively for Human-Machine Interfacing. , 2020, , .		3
38	Parallel Haptic Rendering for Orthopedic Surgery Simulators. IEEE Robotics and Automation Letters, 2020, 5, 6388-6395.	3.3	6
39	Toward Universal Neural Interfaces for Daily Use: Decoding the Neural Drive to Muscles Generalises Highly Accurate Finger Task Identification Across Humans. IEEE Access, 2020, 8, 149025-149035.	2.6	15
40	A Multi-Functional Lower- and Upper-Limb Stroke Rehabilitation Robot. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 549-552.	2.1	25
41	A Multimodal Intention Detection Sensor Suite for Shared Autonomy of Upper-Limb Robotic Prostheses. Sensors, 2020, 20, 6097.	2.1	16
42	XceptionTime: Independent Time-Window Xceptiontime Architecture for Hand Gesture Classification. , 2020, , .		30
43	Surface EMG-Based Hand Gesture Recognition via Hybrid and Dilated Deep Neural Network Architectures for Neurobotic Prostheses. Journal of Medical Robotics Research, 2020, 05, 2041001.	1.0	17
44	Wearable Dual-Frequency Vibrotactile System for Restoring Force and Stiffness Perception. IEEE Transactions on Haptics, 2020, 13, 191-196.	1.8	11
45	Adaptive Spatial Filtering of High-Density EMG for Reducing the Influence of Noise and Artefacts in Myoelectric Control. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1511-1517.	2.7	26
46	Intraoperative Localization of STN During DBS Surgery Using a Data-Driven Model. IEEE Journal of Translational Engineering in Health and Medicine, 2020, 8, 1-9.	2.2	13
47	PHTNet: Characterization and Deep Mining of Involuntary Pathological Hand Tremor using Recurrent Neural Network Models. Scientific Reports, 2020, 10, 2195.	1.6	21
48	Predicting Improvement in Writerâ€™s Cramp Symptoms following Botulinum Neurotoxin Injection Therapy. Tremor and Other Hyperkinetic Movements, 2020, 6, 410.	1.1	5
49	Nerve Injury Decreases Hyperacute Resting-State Connectivity Between the Anterior Cingulate and Primary Somatosensory Cortex in Anesthetized Rats. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2691-2698.	2.7	3
50	Design and Implementation of a Two-DOF Robotic System with an Adjustable Force Limiting Mechanism for Ankle Rehabilitation. , 2019, , .		3
51	An Online Spectral Information-Enhanced Approach for Artifact Detection and Fault Attenuation in Myoelectric Control*. , 2019, 2019, 671-675.		0
52	Multiclass Detection and Tracking of Transient Motor Activation based on Decomposed Myoelectric Signals. , 2019, , .		9
53	Visual Temporal Perception in Parkinsonâ€™s Disease Analyzed Using a Computer-Generated Graphical Tool. , 2019, , .		1
54	HMFP-DBRNN: Real-Time Hand Motion Filtering and Prediction via Deep Bidirectional RNN. IEEE Robotics and Automation Letters, 2019, 4, 1061-1068.	3.3	11

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55	Training of Deep Bidirectional Rnns for Hand Motion Filtering Via Multimodal Data Fusion. , 2019, , .		1
56	Semg-Based Hand Gesture Recognition Via Dilated Convolutional Neural Networks. , 2019, , .		22
57	Semi-autonomous Robot-assisted Cooperative Therapy Exercises for a Therapistâ€™s Interaction with a Patient. , 2019, , .		1
58	Differential Temporal Perception Abilities in Parkinsonâ€™s Disease Patients Based on Timing Magnitude. Scientific Reports, 2019, 9, 19638.	1.6	13
59	Unsupervised Clustering of Micro-Electrophysiological Signals for localization of Subthalamic Nucleus during DBS Surgery. , 2019, , .		2
60	WAKE: Wavelet decomposition coupled with adaptive Kalman filtering for pathological tremor extraction. Biomedical Signal Processing and Control, 2019, 48, 179-188.	3.5	19
61	Haptics-enabled Interactive NeuroRehabilitation Mechatronics: Classification, Functionality, Challenges and Ongoing Research. Mechatronics, 2019, 57, 1-19.	2.0	30
62	A Computational-Model-Based Study of Supervised Haptics-Enabled Therapist-in-the-Loop Training for Upper-Limb Poststroke Robotic Rehabilitation. IEEE/ASME Transactions on Mechatronics, 2018, 23, 563-574.	3.7	26
63	Position-Force Domain Passivity of the Human Arm in Telerobotic Systems. IEEE/ASME Transactions on Mechatronics, 2018, 23, 552-562.	3.7	32
64	A Systematic Review of Multilateral Teleoperation Systems. IEEE Transactions on Haptics, 2018, 11, 338-356.	1.8	76
65	Video Context Improves Performance in Identifying Operative Planes on Static Surgical Images. Journal of the American College of Surgeons, 2018, 227, e212.	0.2	0
66	ELECTROPHYSIOLOGICAL SIGNAL PROCESSING FOR INTRAOPERATIVE LOCALIZATION OF SUBTHALAMIC NUCLEUS DURING DEEP BRAIN STIMULATION SURGERY. , 2018, , .		3
67	Visual Displacement Perception in Parkinson's Disease Analyzed Using a Computer-Generated Graphical Tool. , 2018, 2018, 2748-2751.		3
68	Multiple-Model and Reduced-Order Kalman Filtering for Pathological Hand Tremor Extraction. , 2018, , .		0
69	Multimodal Sensorimotor Integration for Expert-in-the-Loop Telerobotic Surgical Training. IEEE Transactions on Robotics, 2018, 34, 1549-1564.	7.3	21
70	TELEOPERATION FOR MINIMALLY INVASIVE ROBOTICS-ASSISTED SURGERY. , 2018, , 341-372.		3
71	Active Sensorimotor Augmentation in Robotics-Assisted Surgical Systems. , 2018, , 61-81.		5
72	A grasp-based passivity signature for haptics-enabled human-robot interaction: Application to design of a new safety mechanism for robotic rehabilitation. International Journal of Robotics Research, 2017, 36, 778-799.	5.8	33

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73	A Small-Gain Approach for Nonpassive Bilateral Telerobotic Rehabilitation: Stability Analysis and Controller Synthesis. IEEE Transactions on Robotics, 2017, 33, 49-66.	7.3	46
74	Telerobotics-Assisted Platform for Enhancing Interaction with Physical Environments for People Living with Cerebral Palsy. Journal of Medical Robotics Research, 2017, 02, 1740001.	1.0	9
75	A Passivity-Based Approach for Stable Patient-Robot Interaction in Haptics-Enabled Rehabilitation Systems: Modulated Time-Domain Passivity Control. IEEE Transactions on Control Systems Technology, 2017, 25, 991-1006.	3.2	57
76	A multi-rate and auto-adjustable wavelet decomposition framework for pathological hand tremor extraction. , 2017, , .		2
77	Dynamic estimation strategy for E-BMFLC filters in analyzing pathological hand tremors. , 2017, , .		5
78	Characterization of Upper-Limb Pathological Tremors: Application to Design of an Augmented Haptic Rehabilitation System. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 888-903.	7.3	30
79	Robotics-Assisted Mirror Rehabilitation Therapy: A Therapist-in-the-Loop Assist-as-Needed Architecture. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1954-1965.	3.7	53
80	Haptic Feedback Manipulation During Botulinum Toxin Injection Therapy for Focal Hand Dystonia Patients: A Possible New Assistive Strategy. IEEE Transactions on Haptics, 2016, 9, 523-535.	1.8	4
81	Kinematic and kinetic assessment of upper limb movements in patients with writer's cramp. Journal of NeuroEngineering and Rehabilitation, 2016, 13, 15.	2.4	6
82	Robust Motion Control of Ultrasonic Motors Under Temperature Disturbance. IEEE Transactions on Industrial Electronics, 2016, 63, 2360-2368.	5.2	37
83	Predicting Improvement in Writer's Cramp Symptoms following Botulinum Neurotoxin Injection Therapy. Tremor and Other Hyperkinetic Movements, 2016, 6, 410.	1.1	4
84	A six-degree-of-freedom robotic system for lower extremity rehabilitation. , 2015, , .		4
85	A new passivity-based control technique for safe patient-robot interaction in haptics-enabled rehabilitation systems. , 2015, , .		11
86	Therapist-in-the-Loop robotics-assisted mirror rehabilitation therapy: An Assist-as-Needed framework. , 2015, , .		3
87	Novel Cooperative Teleoperation Framework: Multi-Master/Single-Slave System. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1668-1679.	3.7	36
88	Real-time trajectory tracking for externally loaded concentric-tube robots. , 2014, , .		9
89	A framework for supervised robotics-assisted mirror rehabilitation therapy. , 2014, , .		9
90	Simultaneous arm joint angles and force changes in writer's cramp. , 2014, , .		0

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91	An expertise-oriented training framework for robotics-assisted surgery. , 2014, , .		16
92	Kinematic instability in concentric-tube robots: Modeling and analysis. , 2014, , .		22
93	Involuntary movement during haptics-enabled robotic rehabilitation: Analysis and control design. , 2014, , .		5
94	Effect of kinesthetic force feedback and visual sensory input on writer's cramp. , 2013, , .		1
95	Sensory manipulation in writer's cramp: Possibilities for rehabilitation. , 2013, , .		2
96	Projection-based force reflection algorithms for teleoperated rehabilitation therapy. , 2013, , .		15
97	Robot-assisted lung motion compensation during needle insertion. , 2013, , .		10
98	A sliding-mode controller for dual-user teleoperation with unknown constant time delays. Robotica, 2013, 31, 589-598.	1.3	12
99	A dual-user teleoperated system with Virtual Fixtures for robotic surgical training. , 2013, , .		28
100	A force observation method for tracking control of flexible-link manipulators. Robotica, 2013, 31, 669-677.	1.3	2
101	A Multi-Master / Single-Slave Teleoperation System. , 2012, , .		5
102	Robust trajectory modification for tip position tracking of flexible-link manipulators. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2012, 226, 523-536.	0.7	5
103	Networked teleoperation with non-passive environment: Application to tele-rehabilitation. , 2012, , .		34
104	Control of time-delayed telerobotic systems with flexible-link slave manipulators. , 2012, , .		15
105	Robust solution to three-dimensional pose estimation using composite extended Kalman observer and Kalman filter. IET Computer Vision, 2012, 6, 140.	1.3	13
106	A new set of desired objectives for dual-user systems in the presence of unknown communication delay. , 2011, , .		7
107	A novel shared structure for dual user systems with unknown time-delay utilizing adaptive impedance control. , 2011, , .		16
108	Control challenges in non-minimum phase tele-robotics systems. , 2011, , .		5

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109	Time delayed non-minimum phase slave tele-robotics. , 2011, , .		1
110	A robust feedback linearization approach for tracking control of flexible-link manipulators using an EKF disturbance estimator. , 2010, , .		8
111	Tracking control of flexible-link manipulators based on environmental force disturbance observer. , 2010, , .		17
112	Tip position tracking of flexible-link manipulators based on online robust trajectory modification. , 2010, , .		3
113	The Alternating Electrostatic Force Needed to Optimize Growth of a Carbon Nanotube. Journal of Computational and Theoretical Nanoscience, 2008, 5, 2170-2175.	0.4	0
114	Simulation of carbon nanotube growth at optimized temperature. Chemical Physics Letters, 2006, 419, 154-157.	1.2	7