Abbas Erfanian

List of Publications by Year
in descending order

58 papers	1,302 citations	516215 16 h-index	377514 34 g-index
58 all docs	58 docs citations	58 times ranked	1317 citing authors

#	Article	IF	Citations
1	Decoding Bilateral Hindlimb Kinematics From Cat Spinal Signals Using Three-Dimensional Convolutional Neural Network. Frontiers in Neuroscience, 2022, 16, 801818.	1.4	4
2	A Distributed Automatic Control Framework for Simultaneous Control of Torque and Cadence in Functional Electrical Stimulation Cycling. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2022, 30, 1908-1919.	2.7	0
3	A general framework for automatic closed-loop control of bladder voiding induced by intraspinal microstimulation in rats. Scientific Reports, 2021, 11, 3424.	1.6	3
4	Decoding hindlimb kinematics from descending and ascending neural signals during cat locomotion. Journal of Neural Engineering, 2021, 18, 026015.	1.8	4
5	Automatic tuning of the Class E power amplifier applied in inductive links during coil separation variations. AEU - International Journal of Electronics and Communications, 2020, 124, 153337.	1.7	2
6	A state-based probabilistic method for decoding hand position during movement from ECoG signals in non-human primate. Journal of Neural Engineering, 2020, 17, 026042.	1.8	6
7	A framework for seizure detection using effective connectivity, graph theory, and multi-level modular network. Biomedical Signal Processing and Control, 2020, 59, 101878.	3.5	33
8	A Systematic Methodology for Optimal Design of Wireless Power Transfer System Using Genetic Algorithm. Energies, 2020, 13, 383.	1.6	8
9	On the Design of Low Power CMOS Schmitt Trigger for Biomedical Application. , 2019, , .		5
10	A DPSK demodulator for biomedical application. International Journal of Circuit Theory and Applications, 2019, 47, 2032-2041.	1.3	2
11	A probabilistic recurrent neural network for decoding hind limb kinematics from multi-segment recordings of the dorsal horn neurons. Journal of Neural Engineering, 2019, 16, 036023.	1.8	5
12	Estimation of Bladder Pressure and Volume from the Neural Activity of Lumbosacral Dorsal Horn Using a Long-Short-Term-Memory-based Deep Neural Network. Scientific Reports, 2019, 9, 18128.	1.6	5
13	A piecewise probabilistic regression model to decode hand movement trajectories from epidural and subdural ECoG signals. Journal of Neural Engineering, 2018, 15, 036020.	1.8	11
14	Decoding hind limb kinematics from neuronal activity of the dorsal horn neurons using multiple level learning algorithm. Scientific Reports, 2018, 8, 577.	1.6	15
15	Automatic Seizure Detection Based on Nonlinear Dynamical Analysis of EEG Signals and Mutual Information. Basic and Clinical Neuroscience, 2018, 9, 227-240.	0.3	18
16	A fully digital BPSK demodulator for biomedical application. Microelectronics Journal, 2018, 81, 76-83.	1.1	9
17	Block-based robust control of stepping using intraspinal microstimulation. Journal of Neural Engineering, 2018, 15, 046026.	1.8	4
18	A Finite-time Adaptive Fuzzy Terminal Sliding Mode Control for Uncertain Nonlinear Systems. International Journal of Control, Automation and Systems, 2018, 16, 1938-1950.	1.6	21

#	Article	IF	Citations
19	Automatic detection of PTZ-induced seizures based on functional brain connectivity network in rats. , 2017, , .		2
20	Stacked recurrent neural network for decoding of reaching movement using local field potentials and single-unit spikes. , 2017, , .		0
21	A VCO-free low-power fully digital BPSK demodulator for implantable biomedical microsystems. , 2017, , .		5
22	A modular robust control framework for control of movement elicited by multi-electrode intraspinal microstimulation. Journal of Neural Engineering, 2016, 13, 046024.	1.8	4
23	The Effects of Stimulation Strategy on Joint Movement Elicited by Intraspinal Microstimulation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 794-805.	2.7	4
24	Fully Automatic Control of Paraplegic FES Pedaling Using Higher-Order Sliding Mode and Fuzzy Logic Control. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 533-542.	2.7	48
25	Improving the performance of P300-based brain–computer interface through subspace-based filtering. Neurocomputing, 2013, 121, 434-441.	3.5	16
26	Dynamic optimization of walker-assisted FES-activated paraplegic walking: Simulation and experimental studies. Medical Engineering and Physics, 2013, 35, 1659-1668.	0.8	6
27	Classification of brain signals associated with imagination of hand grasping, opening and reaching by means of wavelet-based common spatial pattern and mutual information. , 2013, 2013, 2224-7.		10
28	Fuzzy logic control of ankle movement using multi-electrode intraspinal microstimulation. , 2013, 2013, 5642-5.		5
29	Restoring Motor Functions in Paralyzed Limbs through Intraspinal Multielectrode Microstimulation Using Fuzzy Logic Control and Lag Compensator. Basic and Clinical Neuroscience, 2013, 4, 232-43.	0.3	4
30	A Decentralized Modular Control Framework for Robust Control of FES-Activated Walker-Assisted Paraplegic Walking Using Terminal Sliding Mode and Fuzzy Logic Control. IEEE Transactions on Biomedical Engineering, 2012, 59, 2818-2827.	2.5	53
31	Adaptive Neuro-Fuzzy Sliding Mode Control of Multi-Joint Movement Using Intraspinal Microstimulation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 499-509.	2.7	21
32	A decentralized adaptive fuzzy robust strategy for control of upright standing posture in paraplegia using functional electrical stimulation. Medical Engineering and Physics, 2012, 34, 28-37.	0.8	32
33	Tree-Structured Feature Extraction Using Mutual Information. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 127-137.	7.2	31
34	Control of rhythmic locomotor-like activity through intraspinal microstimulation with high frequency resolution. , 2011, , .		1
35	A mutual information based channel selection scheme for P300-based brain computer interface. , 2011, , .		8
36	An adaptive fuzzy sliding-mode controller design for walking control with functional electrical stimulation: A computer simulation study. International Journal of Control, Automation and Systems, 2011, 9, 1124-1135.	1.6	10

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37	Adaptive fuzzy terminal sliding mode control for a class of MIMO uncertain nonlinear systems. Fuzzy Sets and Systems, 2011, 179, 34-49.	1.6	312
38	A fully automatic ocular artifact suppression from EEG data using higher order statistics: Improved performance by wavelet analysis. Medical Engineering and Physics, 2010, 32, 720-729.	0.8	89
39	An online EEG-based brain–computer interface for controlling hand grasp using an adaptive probabilistic neural network. Medical Engineering and Physics, 2010, 32, 730-739.	0.8	97
40	Higher-order sliding mode control of leg power in paraplegic FES-Cycling. , 2010, 2010, 5891-4.		12
41	Adaptive terminal sliding mode control of ankle movement using functional electrical stimulation of agonist-antagonist muscles. , 2010, 2010, 5448-51.		9
42	Mutual information-based Fisher discriminant analysis for feature extraction and recognition with applications to medical diagnosis. , 2010, 2010, 5811-4.		1
43	A Neuro-Sliding-Mode Control With Adaptive Modeling of Uncertainty for Control of Movement in Paralyzed Limbs Using Functional Electrical Stimulation. IEEE Transactions on Biomedical Engineering, 2009, 56, 1771-1780.	2.5	81
44	A decentralized adaptive robust method for chaos control. Chaos, 2009, 19, 033111.	1.0	9
45	Decentralized adaptive robust control based on sliding mode and nonlinear compensator for the control of ankle movement using functional electrical stimulation of agonist–antagonist muscles. Journal of Neural Engineering, 2009, 6, 046007.	1.8	58
46	An on-line BCI system for hand movement control using real-time recurrent probabilistic neural network. , 2009, , .		5
47	Comments on "Sliding Mode Closed-Loop Control of FES: Controlling the Shank Movement. IEEE Transactions on Biomedical Engineering, 2008, 55, 2842-2843.	2.5	11
48	Improving the performance of brain-computer interface through meditation practicing. , 2008, 2008, 662-5.		31
49	An on-line BCI for control of hand grasp sequence and holding using adaptive probabilistic neural network. , 2008, 2008, 1009-12.		8
50	Neuro-Sliding Mode Control with Modular Models for Control of Knee-joint Angle Using Quadriceps Electrical Stimulation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 2424-7.	0.5	5
51	A Tree-Structure Mutual Information-Based Feature Extraction and Its Application to EEG-Based Brain-Computer Interfacing. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5075-8.	0.5	3
52	Electro-encephalogram based brain–computer interface: improved performance by mental practice and concentration skills. Medical and Biological Engineering and Computing, 2006, 44, 959-969.	1.6	39
53	A Fully Automatic Method for Ocular Artifact Suppression from EEG Data Using Wavelet Transform and Independent Component Analysis. , 2006, 2006, 5265-8.		4
54	Real-Time Ocular Artifacts Suppression from EEG Signals Using an Unsupervised Adaptive Blind Source Separation. , 2006, 2006, 5269-72.		6

#	ARTICLE	IF	CITATIONS
55	Real-time ocular artifact suppression using recurrent neural network for electro-encephalogram based brain-computer interface. Medical and Biological Engineering and Computing, 2005, 43, 296-305.	1.6	51
56	The effects of mental practice and concentration skills on EEG brain dynamics during motor imagery using independent component analysis. , 2004, 2006, 239-42.		10
57	ICA-based classification scheme for EEG-based brain-computer interface: the role of mental practice and concentration skills. , 2004, 2006, 235-8.		16
58	Using evoked EMG as a synthetic force sensor of isometric electrically stimulated muscle. IEEE Transactions on Biomedical Engineering, 1998, 45, 188-202.	2.5	30