Xiaogang Hu

List of Publications by Year in descending order

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93 papers	1,844 citations	257357 24 h-index	330025 37 g-index
94 all docs	94 docs citations	94 times ranked	1329 citing authors

#	Article	IF	Citations
1	Adaptive Real-Time Decomposition of Electromyogram During Sustained Muscle Activation: A Simulation Study. IEEE Transactions on Biomedical Engineering, 2022, 69, 645-653.	2.5	10
2	Object Recognition via Evoked Sensory Feedback during Control of a Prosthetic Hand. IEEE Robotics and Automation Letters, 2022, 7, 207-214.	3.3	13
3	Evoked Tactile Feedback and Control Scheme on Functional Utility of Prosthetic Hand. IEEE Robotics and Automation Letters, 2022, 7, 1308-1315.	3.3	3
4	A generic neural network model to estimate populational neural activity for robust neural decoding. Computers in Biology and Medicine, 2022, 144, 105359.	3.9	3
5	Ultrasoft Porous 3D Conductive Dry Electrodes for Electrophysiological Sensing and Myoelectric Control. Advanced Materials Technologies, 2022, 7, .	3.0	13
6	Automatic Detection of Contracting Muscle Regions via the Deformation Field of Transverse Ultrasound Images: A Feasibility Study. Annals of Biomedical Engineering, 2021, 49, 354-366.	1.3	4
7	Concurrent Prediction of Finger Forces Based on Source Separation and Classification of Neuron Discharge Information. International Journal of Neural Systems, 2021, 31, 2150010.	3.2	17
8	Concurrent Estimation of Finger Flexion and Extension Forces Using Motoneuron Discharge Information. IEEE Transactions on Biomedical Engineering, 2021, 68, 1638-1645.	2.5	12
9	Estimation of Joint Kinematics and Fingertip Forces using Motoneuron Firing Activities: A Preliminary Report. , 2021, , .		5
10	Static and dynamic proprioceptive recognition through vibrotactile stimulation. Journal of Neural Engineering, 2021, 18, 046093.	1.8	8
11	Editorial: Understanding Altered Muscle Activation After Central or Peripheral Neuromuscular Injuries. Frontiers in Neurology, 2021, 12, 642207.	1.1	0
12	Myoelectric control of robotic lower limb prostheses: a review of electromyography interfaces, control paradigms, challenges and future directions. Journal of Neural Engineering, 2021, 18, 041004.	1.8	75
13	Activation of Superficial and Deep Finger Flexors Through Transcutaneous Nerve Stimulation. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 2575-2582.	3.9	3
14	Closed-loop control of a prosthetic finger via evoked proprioceptive information. Journal of Neural Engineering, 2021, 18, 066029.	1.8	7
15	Common Neural Input within and across Lower Limb Muscles: A Preliminary Study. , 2021, 2021, 6683-6686.		0
16	Distribution of M-Wave and H-Reflex in Hand Muscles Evoked via Transcutaneous Nerve Stimulation: A Preliminary Report. , 2021, 2021, 5897-5900.		1
17	Evaluation of Lumbar Muscle Activation Patterns during Trunk Movements using High-Density Electromyography: A Preliminary Report. , 2021, 2021, 6082-6085.		0
18	Virtual Reality for Evaluating Prosthetic Hand Control Strategies: A Preliminary Report. , 2021, 2021, 6263-6266.		3

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19	Object stiffness recognition using haptic feedback delivered through transcutaneous proximal nerve stimulation. Journal of Neural Engineering, 2020, 17, 016002.	1.8	22
20	Finger Joint Angle Estimation Based on Motoneuron Discharge Activities. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 760-767.	3.9	62
21	Muscle activation pattern elicited through transcutaneous stimulation near the cervical spinal cord. Journal of Neural Engineering, 2020, 17, 016064.	1.8	4
22	Dexterous Force Estimation during Finger Flexion and Extension Using Motor Unit Discharge Information. , 2020, 2020, 3130-3133.		4
23	Stiffness Perception using Transcutaneous Electrical Stimulation during Active and Passive Prosthetic Control. , 2020, 2020, 3909-3912.		5
24	Real-time finger force prediction via parallel convolutional neural networks: a preliminary study. , 2020, 2020, 3126-3129.		11
25	Buckle-Delamination-Enabled Stretchable Silver Nanowire Conductors. ACS Applied Materials & Interfaces, 2020, 12, 41696-41703.	4.0	36
26	Evoking haptic sensations in the foot through high-density transcutaneous electrical nerve stimulations. Journal of Neural Engineering, 2020, 17, 036020.	1.8	15
27	Elicited upper limb motions through transcutaneous cervical spinal cord stimulation. Journal of Neural Engineering, 2020, 17, 036001.	1.8	7
28	Object Shape and Surface Topology Recognition Using Tactile Feedback Evoked through Transcutaneous Nerve Stimulation. IEEE Transactions on Haptics, 2020, 13, 152-158.	1.8	24
29	Extracting and Classifying Spatial Muscle Activation Patterns in Forearm Flexor Muscles Using High-Density Electromyogram Recordings. International Journal of Neural Systems, 2019, 29, 1850025.	3.2	37
30	Elicited Finger and Wrist Extension Through Transcutaneous Radial Nerve Stimulation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1875-1882.	2.7	17
31	Multifunctional Electronic Textiles Using Silver Nanowire Composites. ACS Applied Materials & Interfaces, 2019, 11, 31028-31037.	4.0	95
32	Real-time isometric finger extension force estimation based on motor unit discharge information. Journal of Neural Engineering, 2019, 16, 066006.	1.8	45
33	Multichannel Nerve Stimulation for Diverse Activation of Finger Flexors. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 2361-2368.	2.7	7
34	Evoked Haptic Sensation in the Hand With Concurrent Non-Invasive Nerve Stimulation. IEEE Transactions on Biomedical Engineering, 2019, 66, 2761-2767.	2.5	21
35	Independent component analysis based algorithms for high-density electromyogram decomposition: Systematic evaluation through simulation. Computers in Biology and Medicine, 2019, 109, 171-181.	3.9	31
36	Interference Removal From Electromyography Based on Independent Component Analysis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 887-894.	2.7	29

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37	Prolonged time course of population excitatory postsynaptic potentials in motoneurons of chronic stroke survivors. Journal of Neurophysiology, 2019, 122, 176-183.	0.9	1
38	Independent component analysis based algorithms for high-density electromyogram decomposition: Experimental evaluation of upper extremity muscles. Computers in Biology and Medicine, 2019, 108, 42-48.	3.9	29
39	Prediction of Individual Finger Forces Based on Decoded Motoneuron Activities. Annals of Biomedical Engineering, 2019, 47, 1357-1368.	1.3	34
40	Evoked haptic sensations in the hand via non-invasive proximal nerve stimulation. Journal of Neural Engineering, 2018, 15, 046005.	1.8	48
41	A Novel Finger Kinematic Tracking Method Based on Skin-Like Wearable Strain Sensors. IEEE Sensors Journal, 2018, 18, 3010-3015.	2.4	30
42	Improved muscle activation using proximal nerve stimulation with subthreshold current pulses at kilohertz-frequency. Journal of Neural Engineering, 2018, 15, 046001.	1.8	13
43	Relative contribution of different altered motor unit control to muscle weakness in stroke: a simulation study. Journal of Neural Engineering, 2018, 15, 016014.	1.8	5
44	Organization of the motorâ€unit pool for different directions of isometric contraction of the first dorsal interosseous muscle. Muscle and Nerve, 2018, 57, E85-E93.	1.0	5
45	Merged Haptic Sensation in the Hand during Concurrent Non-Invasive Proximal Nerve Stimulation. , 2018, 2018, 2186-2189.		4
46	Muscle Fatigue Post-stroke Elicited From Kilohertz-Frequency Subthreshold Nerve Stimulation. Frontiers in Neurology, 2018, 9, 1061.	1.1	11
47	Variation of Finger Activation Patterns Post-stroke Through Non-invasive Nerve Stimulation. Frontiers in Neurology, 2018, 9, 1101.	1.1	12
48	Flexibility of Finger Activation Patterns Elicited through Non-invasive Multi-Electrode Nerve Stimulation. , 2018, 2018, 1428-1431.		6
49	Characterizing Residual Muscle Properties in Lower Limb Amputees Using High Density EMG Decomposition: A Pilot Study. , 2018, 2018, 5974-5977.		7
50	Editorial: Electromyography (EMG) Techniques for the Assessment and Rehabilitation of Motor Impairment Following Stroke. Frontiers in Neurology, 2018, 9, 1122.	1.1	13
51	Reduced muscle fatigue using kilohertz-frequency subthreshold stimulation of the proximal nerve. Journal of Neural Engineering, 2018, 15, 066010.	1.8	13
52	Delayed fatigue in finger flexion forces through transcutaneous nerve stimulation. Journal of Neural Engineering, 2018, 15, 066005.	1.8	9
53	Estimation of Muscle Force Based on Neural Drive in a Hemispheric Stroke Survivor. Frontiers in Neurology, 2018, 9, 187.	1.1	26
54	Origins of Common Neural Inputs to Different Compartments of the Extensor Digitorum Communis Muscle. Scientific Reports, 2017, 7, 13960.	1.6	15

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55	Exploration of Hand Grasp Patterns Elicitable Through Non-Invasive Proximal Nerve Stimulation. Scientific Reports, 2017, 7, 16595.	1.6	21
56	Assessment of anisotropy using viscoelastic response (VisR) ultrasound in the biceps brachii of healthy older adults and stroke patients. , 2017, , .		0
57	Altered Motor Unit Discharge Coherence in Paretic Muscles of Stroke Survivors. Frontiers in Neurology, 2017, 8, 202.	1.1	18
58	Motor Unit Activity during Fatiguing Isometric Muscle Contraction in Hemispheric Stroke Survivors. Frontiers in Human Neuroscience, 2017, 11, 569.	1.0	18
59	Assessment of anisotropy using viscoelastic response (VisR) ultrasound in the biceps brachii of healthy older adults and stroke patients. , 2017, , .		0
60	Muscle fatigue increases beta-band coherence between the firing times of simultaneously active motor units in the first dorsal interosseous muscle. Journal of Neurophysiology, 2016, 115, 2830-2839.	0.9	47
61	Altered motor unit discharge patterns in paretic muscles of stroke survivors assessed using surface electromyography. Journal of Neural Engineering, 2016, 13, 046025.	1.8	34
62	Fatigue-related alterations to intra-muscular coherence. , 2015, , .		1
63	Estimating the time course of population excitatory postsynaptic potentials in motoneurons of spastic stroke survivors. Journal of Neurophysiology, 2015, 113, 1952-1957.	0.9	7
64	Assessing altered motor unit recruitment patterns in paretic muscles of stroke survivors using surface electromyography. Journal of Neural Engineering, 2015, 12, 066001.	1.8	48
65	Extracting extensor digitorum communis activation patterns using high-density surface electromyography. Frontiers in Physiology, 2015, 6, 279.	1.3	45
66	Contributions of motoneuron hyperexcitability to clinical spasticity in hemispheric stroke survivors. Clinical Neurophysiology, 2015, 126, 1599-1606.	0.7	12
67	Changes in motor unit behavior following isometric fatigue of the first dorsal interosseous muscle. Journal of Neurophysiology, 2015, 113, 3186-3196.	0.9	48
68	Control of motor unit firing during step-like increases in voluntary force. Frontiers in Human Neuroscience, 2014, 8, 721.	1.0	15
69	EMG-force relation in the first dorsal interosseous muscle of patients with amyotrophic lateral sclerosis. NeuroRehabilitation, 2014, 35, 307-314.	0.5	15
70	Accuracy assessment of a surface electromyogram decomposition system in human first dorsal interosseus muscle. Journal of Neural Engineering, 2014, 11, 026007.	1.8	55
71	Statistics of inter-spike intervals as a routine measure of accuracy in automatic decomposition of surface electromyogram. , 2014, 2014, 3541-4.		2
72	Changes in motoneuron afterhyperpolarization duration in stroke survivors. Journal of Neurophysiology, 2014, 112, 1447-1456.	0.9	16

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73	Motor unit firing rate patterns during voluntary muscle force generation: a simulation study. Journal of Neural Engineering, 2014, 11, 026015.	1.8	27
74	Assessment of validity of a high-yield surface electromyogram decomposition. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 99.	2.4	65
75	Reliability of spike triggered averaging of the surface electromyogram for motor unit action potential estimation. Muscle and Nerve, 2013, 48, 557-570.	1.0	40
76	Motor unit structural change post stroke examined via surface electromyography: A preliminary report. , 2013, , .		0
77	Power spectral analysis of surface EMG in stroke: A preliminary study. , 2013, , .		5
78	Motor unit pool organization examined via spike-triggered averaging of the surface electromyogram. Journal of Neurophysiology, 2013, 110, 1205-1220.	0.9	93
79	Examination of afterhyperpolarization duration changes in motoneurons innervating paretic muscles in stroke survivors. , 2012, 2012, 3580-3.		2
80	Asymmetric Interference Associated with Force Amplitude and Hand Dominance in Bimanual Constant Isometric Force. Motor Control, 2012, 16, 297-316.	0.3	6
81	Impaired motor unit control in paretic muscle post stroke assessed using surface electromyography: A preliminary report. , 2012, 2012, 4116-9.		20
82	Force and time gain interact to nonlinearly scale adaptive visual-motor isometric force control. Experimental Brain Research, 2012, 221, 191-203.	0.7	2
83	Time gain influences adaptive visual-motor isometric force control. Experimental Brain Research, 2012, 218, 73-80.	0.7	3
84	Modeling constraints to redundancy in bimanual force coordination. Journal of Neurophysiology, 2011, 105, 2169-2180.	0.9	22
85	Adaptation to bimanual asymmetric weights in isometric force coordination. Neuroscience Letters, 2011, 490, 121-125.	1.0	20
86	Motor-Unit Pool Model of Continuous and Discrete Force Variability. Motor Control, 2011, 15, 439-455.	0.3	1
87	Aging, visual information, and adaptation to task asymmetry in bimanual force coordination. Journal of Applied Physiology, 2011, 111, 1671-1680.	1.2	25
88	Dependence of asymmetrical interference on task demands and hand dominance in bimanual isometric force tasks. Experimental Brain Research, 2011, 208, 533-541.	0.7	16
89	Visual information interacts with neuromuscular factors in the coordination of bimanual isometric force. Experimental Brain Research, 2011, 209, 129-138.	0.7	45
90	Visual information gain and task asymmetry interact in bimanual force coordination and control. Experimental Brain Research, 2011, 212, 497-504.	0.7	24

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91	Neuromotor Noise, Error Tolerance and Velocity-Dependent Costs in Skilled Performance. PLoS Computational Biology, 2011, 7, e1002159.	1.5	81
92	Adaptation to selective visual scaling of short time scale processes in isometric force. Neuroscience Letters, 2010, 469, 131-134.	1.0	13
93	Visual Information in the Coordination and Control of Isometric Force. , 0, , 366-385.		1