Dario Farina

List of Publications by Citations

423 papers	19,453 citations	79 h-index	120 g-index
465 ext. papers	24,230 ext. citations	4.1 avg, IF	7.33 L-index

#	Paper	IF	Citations
423	The extraction of neural strategies from the surface EMG. *Journal of Applied Physiology*, **2004**, 96, 1486-95	3.7	988
422	The extraction of neural information from the surface EMG for the control of upper-limb prostheses: emerging avenues and challenges. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 797-809	4.8	506
421	Influence of amplitude cancellation on the simulated surface electromyogram. *Journal of Applied Physiology*, **2005**, 98, 120-31	3.7	287
420	The extraction of neural strategies from the surface EMG: an update. *Journal of Applied Physiology*, **2014**, 117, 1215-30	3.7	252
419	Influence of anatomical, physical, and detection-system parameters on surface EMG. *Biological Cybernetics*, **2002**, 86, 445-56	2.8	246
418	Comparison of algorithms for estimation of EMG variables during voluntary isometric contractions. *Journal of Electromyography and Kinesiology*, **2000**, 10, 337-49	2.5	234
417	Linear and nonlinear regression techniques for simultaneous and proportional myoelectric control. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 269-79	4.8	229
416	Decoding the neural drive to muscles from the surface electromyogram. *Clinical Neurophysiology*, **2010**, 121, 1616-23	4.3	216
415	Multi-channel intramuscular and surface EMG decomposition by convolutive blind source separation. *Journal of Neural Engineering*, **2016**, 13, 026027	5	208
414	Motor unit recruitment strategies investigated by surface EMG variables. *Journal of Applied Physiology*, **2002**, 92, 235-47	3.7	206
413	The linear electrode array: a useful tool with many applications. *Journal of Electromyography and Kinesiology*, **2003**, 13, 37-47	2.5	204
412	Myoelectric Control of Artificial Limbs—Is There a Need to Change Focus? [In the Spotlight]. *IEEE Signal Processing Magazine*, **2012**, 29, 152-150	9.4	196
411	Analysis of motor units with high-density surface electromyography. *Journal of Electromyography and Kinesiology*, **2008**, 18, 879-90	2.5	191
410	A novel approach for precise simulation of the EMG signal detected by surface electrodes. *IEEE Transactions on Biomedical Engineering*, **2001**, 48, 637-46	5	189
409	Surface electromyography for noninvasive characterization of muscle. *Exercise and Sport Sciences Reviews*, **2001**, 29, 20-5	6.7	188
408	Simultaneous and proportional estimation of hand kinematics from EMG during mirrored movements at multiple degrees-of-freedom. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2012**, 20, 371-8	4.8	187
407	Precise temporal association between cortical potentials evoked by motor imagination and afference induces cortical plasticity. *Journal of Physiology*, **2012**, 590, 1669-82	3.9	181

406	Intuitive, online, simultaneous, and proportional myoelectric control over two degrees-of-freedom in upper limb amputees. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 501-10	4.8	179
405	Fluctuations in isometric muscle force can be described by one linear projection of low-frequency components of motor unit discharge rates. *Journal of Physiology*, **2009**, 587, 5925-38	3.9	177
404	Simultaneous and proportional force estimation for multifunction myoelectric prostheses using mirrored bilateral training. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 681-8	5	172
403	Estimating motor unit discharge patterns from high-density surface electromyogram. *Clinical Neurophysiology*, **2009**, 120, 551-62	4.3	171
402	EMG-driven forward-dynamic estimation of muscle force and joint moment about multiple degrees of freedom in the human lower extremity. *PLoS ONE*, **2012**, 7, e52618	3.7	169
401	Detection of movement intention from single-trial movement-related cortical potentials. *Journal of Neural Engineering*, **2011**, 8, 066009	5	168
400	Accurate identification of motor unit discharge patterns from high-density surface EMG and validation with a novel signal-based performance metric. *Journal of Neural Engineering*, **2014**, 11, 016008	5	163
399	Effect of experimental muscle pain on motor unit firing rate and conduction velocity. *Journal of Neurophysiology*, **2004**, 91, 1250-9	3.2	157
398	A surface EMG generation model with multilayer cylindrical description of the volume conductor. *IEEE Transactions on Biomedical Engineering*, **2004**, 51, 415-26	5	154
397	Man/machine interface based on the discharge timings of spinal motor neurons after targeted muscle reinnervation. *Nature Biomedical Engineering*, **2017**, 1,	19	150
396	Estimation of single motor unit conduction velocity from surface electromyogram signals detected with linear electrode arrays. *Medical and Biological Engineering and Computing*, **2001**, 39, 225-36	3.1	145
395	Nonlinear surface EMG analysis to detect changes of motor unit conduction velocity and synchronization. *Journal of Applied Physiology*, **2002**, 93, 1753-63	3.7	145
394	Surface EMG crosstalk between knee extensor muscles: experimental and model results. *Muscle and Nerve*, **2002**, 26, 681-95	3.4	141
393	Geometrical factors in surface EMG of the vastus medialis and lateralis muscles. *Journal of Electromyography and Kinesiology*, **2000**, 10, 327-36	2.5	138
392	Is accurate mapping of EMG signals on kinematics needed for precise online myoelectric control?. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 549-58	4.8	135
391	Prosthetic Myoelectric Control Strategies: A Clinical Perspective. *Current Surgery Reports*, **2014**, 2, 1	0.5	134
390	Enhanced low-latency detection of motor intention from EEG for closed-loop brain-computer interface applications. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 288-96	5	132
389	Experimental analysis of accuracy in the identification of motor unit spike trains from high-density surface EMG. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2010**, 18, 221-9	4.8	132

388	Efficient neuroplasticity induction in chronic stroke patients by an associative brain-computer interface. *Journal of Neurophysiology*, **2016**, 115, 1410-21	3.2	131
387	Self-correcting pattern recognition system of surface EMG signals for upper limb prosthesis control. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 1167-76	5	129
386	Common synaptic input to motor neurons, motor unit synchronization, and force control. *Exercise and Sport Sciences Reviews*, **2015**, 43, 23-33	6.7	126
385	EMG-based simultaneous and proportional estimation of wrist/hand kinematics in uni-lateral trans-radial amputees. *Journal of NeuroEngineering and Rehabilitation*, **2012**, 9, 42	5.3	124
384	Identifying representative synergy matrices for describing muscular activation patterns during multidirectional reaching in the horizontal plane. *Journal of Neurophysiology*, **2010**, 103, 1532-42	3.2	120
383	Noninvasive estimation of motor unit conduction velocity distribution using linear electrode arrays. *IEEE Transactions on Biomedical Engineering*, **2000**, 47, 380-8	5	119
382	Standardising surface electromyogram recordings for assessment of activity and fatigue in the human upper trapezius muscle. *European Journal of Applied Physiology*, **2002**, 86, 469-78	3.4	118
381	Methods for estimating muscle fibre conduction velocity from surface electromyographic signals. *Medical and Biological Engineering and Computing*, **2004**, 42, 432-45	3.1	117
380	Extracting signals robust to electrode number and shift for online simultaneous and proportional myoelectric control by factorization algorithms. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 623-33	4.8	114
379	Motor modules of human locomotion: influence of EMG averaging, concatenation, and number of step cycles. *Frontiers in Human Neuroscience*, **2014**, 8, 335	3.3	113
378	Assessment of single motor unit conduction velocity during sustained contractions of the tibialis anterior muscle with advanced spike triggered averaging. *Journal of Neuroscience Methods*, **2002**, 115, 1-12	3	113
377	A closed-loop brain-computer interface triggering an active ankle-foot orthosis for inducing cortical neural plasticity. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 2092-101	5	112
376	Motor unit behavior during submaximal contractions following six weeks of either endurance or strength training. *Journal of Applied Physiology*, **2010**, 109, 1455-66	3.7	109
375	Peripheral electrical stimulation triggered by self-paced detection of motor intention enhances motor evoked potentials. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2012**, 20, 595-604	4.8	108
374	Hybrid neuromusculoskeletal modeling to best track joint moments using a balance between muscle excitations derived from electromyograms and optimization. *Journal of Biomechanics*, **2014**, 47, 3613-21	2.9	105
373	Influence of the training set on the accuracy of surface EMG classification in dynamic contractions for the control of multifunction prostheses. *Journal of NeuroEngineering and Rehabilitation*, **2011**, 8, 25	5.3	103
372	Motor unit recruitment strategies and muscle properties determine the influence of synaptic noise on force steadiness. *Journal of Neurophysiology*, **2012**, 107, 3357-69	3.2	100
371	Assessment of average muscle fiber conduction velocity from surface EMG signals during fatiguing dynamic contractions. *IEEE Transactions on Biomedical Engineering*, **2004**, 51, 1383-93	5	100

370	You are as fast as your motor neurons: speed of recruitment and maximal discharge of motor neurons determine the maximal rate of force development in humans. *Journal of Physiology*, **2019**, 597, 2445-2456	3.9	99
369	Simultaneous control of multiple functions of bionic hand prostheses: Performance and robustness in end users. *Science Robotics*, **2018**, 3,	18.6	98
368	The effective neural drive to muscles is the common synaptic input to motor neurons. *Journal of Physiology*, **2014**, 592, 3427-41	3.9	98
367	User adaptation in long-term, open-loop myoelectric training: implications for EMG pattern recognition in prosthesis control. *Journal of Neural Engineering*, **2015**, 12, 046005	5	95
366	Spatial correlation of high density EMG signals provides features robust to electrode number and shift in pattern recognition for myocontrol. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2015**, 23, 189-98	4.8	95
365	Compensation of the effect of sub-cutaneous tissue layers on surface EMG: a simulation study. *Medical Engineering and Physics*, **1999**, 21, 487-97	2.4	95
364	Neuromuscular adaptation in experimental and clinical neck pain. *Journal of Electromyography and Kinesiology*, **2008**, 18, 255-61	2.5	94
363	Detecting the unique representation of motor-unit action potentials in the surface electromyogram. *Journal of Neurophysiology*, **2008**, 100, 1223-33	3.2	94
362	Principles of Motor Unit Physiology Evolve With Advances in Technology. *Physiology*, **2016**, 31, 83-94	9.8	92
361	A brain-computer interface for single-trial detection of gait initiation from movement related cortical potentials. *Clinical Neurophysiology*, **2015**, 126, 154-9	4.3	91
360	The increase in muscle force after 4 weeks of strength training is mediated by adaptations in motor unit recruitment and rate coding. *Journal of Physiology*, **2019**, 597, 1873-1887	3.9	90
359	Linear transmission of cortical oscillations to the neural drive to muscles is mediated by common projections to populations of motoneurons in humans. *Journal of Physiology*, **2011**, 589, 629-37	3.9	90
358	Bionic reconstruction to restore hand function after brachial plexus injury: a case series of three patients. *Lancet, The*, **2015**, 385, 2183-9	40	85
357	. *Proceedings of the IEEE*, **2016**, 104, 353-373	14.3	85
356	Multiday EMG-Based Classification of Hand Motions with Deep Learning Techniques. *Sensors*, **2018**, 18,	3.8	85
355	Amplitude cancellation reduces the size of motor unit potentials averaged from the surface EMG. *Journal of Applied Physiology*, **2006**, 100, 1928-37	3.7	85
354	Closed-loop control of grasping with a myoelectric hand prosthesis: which are the relevant feedback variables for force control?. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 1041-52	4.8	84
353	Improving the Robustness of Myoelectric Pattern Recognition for Upper Limb Prostheses by Covariate Shift Adaptation. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2016**, 24, 961-970	4.8	83

352	Postural activation of the human medial gastrocnemius muscle: are the muscle units spatially localised?. *Journal of Physiology*, **2011**, 589, 431-43	3.9	83
351	Neural Data-Driven Musculoskeletal Modeling for Personalized Neurorehabilitation Technologies. *IEEE Transactions on Biomedical Engineering*, **2016**, 63, 879-893	5	83
350	Motor Neuron Pools of Synergistic Thigh Muscles Share Most of Their Synaptic Input. *Journal of Neuroscience*, **2015**, 35, 12207-16	6.6	82
349	Bionic limbs: clinical reality and academic promises. *Science Translational Medicine*, **2014**, 6, 257ps12	17.5	82
348	A musculoskeletal model of human locomotion driven by a low dimensional set of impulsive excitation primitives. *Frontiers in Computational Neuroscience*, **2013**, 7, 79	3.5	82
347	New developments in prosthetic arm systems. *Orthopedic Research and Reviews*, **2016**, 8, 31-39	2.1	80
346	Assessment of low back muscle fatigue by surface EMG signal analysis: methodological aspects. *Journal of Electromyography and Kinesiology*, **2003**, 13, 319-32	2.5	79
345	Identification of common synaptic inputs to motor neurons from the rectified electromyogram. *Journal of Physiology*, **2013**, 591, 2403-18	3.9	78
344	Optimization of wavelets for classification of movement-related cortical potentials generated by variation of force-related parameters. *Journal of Neuroscience Methods*, **2007**, 162, 357-63	3	78
343	Effect of arm position on the prediction of kinematics from EMG in amputees. *Medical and Biological Engineering and Computing*, **2013**, 51, 143-51	3.1	77
342	Associations between motor unit action potential parameters and surface EMG features. *Journal of Applied Physiology*, **2017**, 123, 835-843	3.7	75
341	Concentric-ring electrode systems for noninvasive detection of single motor unit activity. *IEEE Transactions on Biomedical Engineering*, **2001**, 48, 1326-34	5	75
340	Changes in H reflex and V wave following short-term endurance and strength training. *Journal of Applied Physiology*, **2012**, 112, 54-63	3.7	74
339	High-Density Electromyography and Motor Skill Learning for Robust Long-Term Control of a 7-DoF Robot Arm. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2016**, 24, 424-33	4.8	73
338	Accessing the neural drive to muscle and translation to neurorehabilitation technologies. *IEEE Reviews in Biomedical Engineering*, **2012**, 5, 3-14	6.4	72
337	Tracking motor units longitudinally across experimental sessions with high-density surface electromyography. *Journal of Physiology*, **2017**, 595, 1479-1496	3.9	71
336	Blind source identification from the multichannel surface electromyogram. *Physiological Measurement*, **2014**, 35, R143-65	2.9	71
335	Analysis of intramuscular electromyogram signals. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2009**, 367, 357-68	3	71

334	Stereovision and augmented reality for closed-loop control of grasping in hand prostheses. *Journal of Neural Engineering*, **2014**, 11, 046001	5	70
333	User adaptation in Myoelectric Man-Machine Interfaces. *Scientific Reports*, **2017**, 7, 4437	4.9	69
332	Modeling and simulating the neuromuscular mechanisms regulating ankle and knee joint stiffness during human locomotion. *Journal of Neurophysiology*, **2015**, 114, 2509-27	3.2	69
331	Effect of power, pedal rate, and force on average muscle fiber conduction velocity during cycling. *Journal of Applied Physiology*, **2004**, 97, 2035-41	3.7	68
330	Neuromuscular adjustments that constrain submaximal EMG amplitude at task failure of sustained isometric contractions. *Journal of Applied Physiology*, **2011**, 111, 485-94	3.7	67
329	Context-Dependent Upper Limb Prosthesis Control for Natural and Robust Use. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2016**, 24, 744-53	4.8	66
328	Experimental muscle pain changes motor control strategies in dynamic contractions. *Experimental Brain Research*, **2005**, 164, 215-24	2.3	66
327	Multichannel Electrotactile Feedback With Spatial and Mixed Coding for Closed-Loop Control of Grasping Force in Hand Prostheses. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2017**, 25, 183-195	4.8	65
326	Surface EMG Crosstalk Evaluated from Experimental Recordings and Simulated Signals. *Methods of Information in Medicine*, **2004**, 43, 30-35	1.5	65
325	Consensus for experimental design in electromyography (CEDE) project: Amplitude normalization matrix. *Journal of Electromyography and Kinesiology*, **2020**, 53, 102438	2.5	64
324	Detection of movement-related cortical potentials based on subject-independent training. *Medical and Biological Engineering and Computing*, **2013**, 51, 507-12	3.1	63
323	Sensor fusion and computer vision for context-aware control of a multi degree-of-freedom prosthesis. *Journal of Neural Engineering*, **2015**, 12, 066022	5	61
322	Surface electromyographic amplitude does not identify differences in neural drive to synergistic muscles. *Journal of Applied Physiology*, **2018**, 124, 1071-1079	3.7	61
321	Experimental muscle pain reduces initial motor unit discharge rates during sustained submaximal contractions. *Journal of Applied Physiology*, **2005**, 98, 999-1005	3.7	60
320	Robust simultaneous myoelectric control of multiple degrees of freedom in wrist-hand prostheses by real-time neuromusculoskeletal modeling. *Journal of Neural Engineering*, **2018**, 15, 066026	5	60
319	Accurate and representative decoding of the neural drive to muscles in humans with multi-channel intramuscular thin-film electrodes. *Journal of Physiology*, **2015**, 593, 3789-804	3.9	59
318	High-density surface electromyography provides reliable estimates of motor unit behavior. *Clinical Neurophysiology*, **2016**, 127, 2534-41	4.3	57
317	Non-invasive characterization of motor unit behaviour in pathological tremor. *Journal of Neural Engineering*, **2012**, 9, 056011	5	57

316	Integrated and flexible multichannel interface for electrotactile stimulation. *Journal of Neural Engineering*, **2016**, 13, 046014	5	57
315	Online tremor suppression using electromyography and low-level electrical stimulation. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2015**, 23, 385-95	4.8	56
314	Translating Research on Myoelectric Control into Clinics-Are the Performance Assessment Methods Adequate?. *Frontiers in Neurorobotics*, **2017**, 11, 7	3.4	56
313	Factors influencing the estimates of correlation between motor unit activities in humans. *PLoS ONE* , **2012**, 7, e44894	3.7	56
312	The proportion of common synaptic input to motor neurons increases with an increase in net excitatory input. *Journal of Applied Physiology*, **2015**, 119, 1337-46	3.7	55
311	Robust and accurate decoding of motoneuron behaviour and prediction of the resulting force output. *Journal of Physiology*, **2018**, 596, 2643-2659	3.9	54
310	Robust Real-Time Musculoskeletal Modeling Driven by Electromyograms. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 556-564	5	54
309	Axonal components of nerves innervating the human arm. *Annals of Neurology*, **2017**, 82, 396-408	9.4	54
308	Multichannel thin-film electrode for intramuscular electromyographic recordings. *Journal of Applied Physiology*, **2008**, 104, 821-7	3.7	54
307	A Multi-Class Proportional Myocontrol Algorithm for Upper Limb Prosthesis Control: Validation in Real-Life Scenarios on Amputees. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2015**, 23, 827-36	4.8	53
306	Detecting and classifying movement-related cortical potentials associated with hand movements in healthy subjects and stroke patients from single-electrode, single-trial EEG. *Journal of Neural Engineering*, **2015**, 12, 056013	5	53
305	Effect of pain on the modulation in discharge rate of sternocleidomastoid motor units with force direction. *Clinical Neurophysiology*, **2010**, 121, 744-53	4.3	53
304	Electrotactile EMG feedback improves the control of prosthesis grasping force. *Journal of Neural Engineering*, **2016**, 13, 056010	5	52
303	Relationship between grasping force and features of single-channel intramuscular EMG signals. *Journal of Neuroscience Methods*, **2009**, 185, 143-50	3	51
302	Adjustments differ among low-threshold motor units during intermittent, isometric contractions. *Journal of Neurophysiology*, **2009**, 101, 350-9	3.2	51
301	Amplitude cancellation of motor-unit action potentials in the surface electromyogram can be estimated with spike-triggered averaging. *Journal of Neurophysiology*, **2008**, 100, 431-40	3.2	51
300	Evaluation of intra-muscular EMG signal decomposition algorithms. *Journal of Electromyography and Kinesiology*, **2001**, 11, 175-87	2.5	51
299	The clinical relevance of advanced artificial feedback in the control of a multi-functional myoelectric prosthesis. *Journal of NeuroEngineering and Rehabilitation*, **2018**, 15, 28	5.3	50

298	Estimation of grasping force from features of intramuscular EMG signals with mirrored bilateral training. *Annals of Biomedical Engineering*, **2012**, 40, 648-56	4.7	50
297	Selectivity of spatial filters for surface EMG detection from the tibialis anterior muscle. *IEEE Transactions on Biomedical Engineering*, **2003**, 50, 354-64	5	49
296	Decorrelation of cortical inputs and motoneuron output. *Journal of Neurophysiology*, **2011**, 106, 2688-97	3.2	48
295	HyVE: hybrid vibro-electrotactile stimulation for sensory feedback and substitution in rehabilitation. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 290-301	4.8	47
294	Estimation of average muscle fiber conduction velocity from two-dimensional surface EMG recordings. *Journal of Neuroscience Methods*, **2004**, 134, 199-208	3	47
293	A model for the generation of synthetic intramuscular EMG signals to test decomposition algorithms. *IEEE Transactions on Biomedical Engineering*, **2001**, 48, 66-77	5	47
292	The human motor neuron pools receive a dominant slow-varying common synaptic input. *Journal of Physiology*, **2016**, 594, 5491-505	3.9	46
291	Tutorial: Analysis of motor unit discharge characteristics from high-density surface EMG signals. *Journal of Electromyography and Kinesiology*, **2020**, 53, 102426	2.5	45
290	Counterpoint: spectral properties of the surface EMG do not provide information about motor unit recruitment and muscle fiber type. *Journal of Applied Physiology*, **2008**, 105, 1673-4	3.7	45
289	A finite element model for describing the effect of muscle shortening on surface EMG. *IEEE Transactions on Biomedical Engineering*, **2006**, 53, 593-600	5	45
288	The phase difference between neural drives to antagonist muscles in essential tremor is associated with the relative strength of supraspinal and afferent input. *Journal of Neuroscience*, **2015**, 35, 8925-37	6.6	44
287	Surface EMG decomposition requires an appropriate validation. *Journal of Neurophysiology*, **2011**, 105, 981-2; author reply 983-4	3.2	44
286	Recruitment of motor units in the medial gastrocnemius muscle during human quiet standing: is recruitment intermittent? What triggers recruitment?. *Journal of Neurophysiology*, **2012**, 107, 666-76	3.2	44
285	M-wave properties during progressive motor unit activation by transcutaneous stimulation. *Journal of Applied Physiology*, **2004**, 97, 545-55	3.7	44
284	Effect of temperature on spike-triggered average torque and electrophysiological properties of low-threshold motor units. *Journal of Applied Physiology*, **2005**, 99, 197-203	3.7	44
283	Consensus for experimental design in electromyography (CEDE) project: Electrode selection matrix. *Journal of Electromyography and Kinesiology*, **2019**, 48, 128-144	2.5	43
282	Differential Motor Unit Changes after Endurance or High-Intensity Interval Training. *Medicine and Science in Sports and Exercise*, **2017**, 49, 1126-1136	1.2	42
281	EMG Biofeedback for online predictive control of grasping force in a myoelectric prosthesis. *Journal of NeuroEngineering and Rehabilitation*, **2015**, 12, 55	5.3	42

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279	Short- and Long-Term Learning of Feedforward Control of a Myoelectric Prosthesis with Sensory Feedback by Amputees. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2017**, 25, 2133-2145	4.8	40
278	Influence of common synaptic input to motor neurons on the neural drive to muscle in essential tremor. *Journal of Neurophysiology*, **2015**, 113, 182-91	3.2	40
277	Online mapping of EMG signals into kinematics by autoencoding. *Journal of NeuroEngineering and Rehabilitation*, **2018**, 15, 21	5.3	40
276	Voluntary control of wearable robotic exoskeletons by patients with paresis via neuromechanical modeling. *Journal of NeuroEngineering and Rehabilitation*, **2019**, 16, 91	5.3	40
275	A System for Electrotactile Feedback Using Electronic Skin and Flexible Matrix Electrodes: Experimental Evaluation. *IEEE Transactions on Haptics*, **2017**, 10, 162-172	2.7	40
274	Simulation of surface EMG signals generated by muscle tissues with inhomogeneity due to fiber pinnation. *IEEE Transactions on Biomedical Engineering*, **2004**, 51, 1521-9	5	40
273	Decoding Motor Unit Activity From Forearm Muscles: Perspectives for Myoelectric Control. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2018**, 26, 244-251	4.8	39
272	Sympathetic-induced changes in discharge rate and spike-triggered average twitch torque of low-threshold motor units in humans. *Journal of Physiology*, **2008**, 586, 5561-74	3.9	39
271	Reflections on the present and future of upper limb prostheses. *Expert Review of Medical Devices*, **2016**, 13, 321-4	3.5	38
270	Correlation of average muscle fiber conduction velocity measured during cycling exercise with myosin heavy chain composition, lactate threshold, and VO2max. *Journal of Electromyography and Kinesiology*, **2007**, 17, 393-400	2.5	38
269	Distribution of muscle fibre conduction velocity for representative samples of motor units in the full recruitment range of the tibialis anterior muscle. *Acta Physiologica*, **2018**, 222, e12930	5.6	38
268	Reduced force steadiness in women with neck pain and the effect of short term vibration. *Journal of Electromyography and Kinesiology*, **2011**, 21, 283-90	2.5	37
267	Long-term implant of intramuscular sensors and nerve transfers for wireless control of robotic arms in above-elbow amputees. *Science Robotics*, **2019**, 4,	18.6	36
266	Virtual grasping: closed-loop force control using electrotactile feedback. *Computational and Mathematical Methods in Medicine*, **2014**, 2014, 120357	2.8	36
265	Identification of task parameters from movement-related cortical potentials. *Medical and Biological Engineering and Computing*, **2009**, 47, 1257-64	3.1	36
264	Proportional estimation of finger movements from high-density surface electromyography. *Journal of NeuroEngineering and Rehabilitation*, **2016**, 13, 73	5.3	35
263	Reproducibility of muscle-fiber conduction velocity estimates using multichannel surface EMG techniques. *Muscle and Nerve*, **2004**, 29, 282-91	3.4	35

262	Predicting wrist kinematics from motor unit discharge timings for the control of active prostheses. *Journal of NeuroEngineering and Rehabilitation*, **2019**, 16, 47	5.3	34
261	Muscle-fiber conduction velocity estimated from surface EMG signals during explosive dynamic contractions. *Muscle and Nerve*, **2004**, 29, 823-33	3.4	34
260	Power spectrum of the rectified EMG: when and why is rectification beneficial for identifying neural connectivity?. *Journal of Neural Engineering*, **2015**, 12, 036008	5	33
259	Adjustments in motor unit properties during fatiguing contractions after training. *Medicine and Science in Sports and Exercise*, **2012**, 44, 616-24	1.2	33
258	Classification of EEG signals to identify variations in attention during motor task execution. *Journal of Neuroscience Methods*, **2017**, 284, 27-34	3	32
257	Central nervous system modulates the neuromechanical delay in a broad range for the control of muscle force. *Journal of Applied Physiology*, **2018**, 125, 1404-1410	3.7	32
256	Modular Control of Treadmill vs Overground Running. *PLoS ONE*, **2016**, 11, e0153307	3.7	32
255	Motor Unit Characteristics after Targeted Muscle Reinnervation. *PLoS ONE*, **2016**, 11, e0149772	3.7	32
254	Time-division multiplexing for myoelectric closed-loop control using electrotactile feedback. *Journal of NeuroEngineering and Rehabilitation*, **2014**, 11, 138	5.3	31
253	The pain-induced decrease in low-threshold motor unit discharge rate is not associated with the amount of increase in spike-triggered average torque. *Clinical Neurophysiology*, **2008**, 119, 43-51	4.3	31
252	Advances in surface electromyographic signal simulation with analytical and numerical descriptions of the volume conductor. *Medical and Biological Engineering and Computing*, **2004**, 42, 467-76	3.1	31
251	Hand gesture recognition based on motor unit spike trains decoded from high-density electromyography. *Biomedical Signal Processing and Control*, **2020**, 55, 101637	4.9	31
250	In Vivo Neuromechanics: Decoding Causal Motor Neuron Behavior with Resulting Musculoskeletal Function. *Scientific Reports*, **2017**, 7, 13465	4.9	30
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248	Estimating reflex responses in large populations of motor units by decomposition of the high-density surface electromyogram. *Journal of Physiology*, **2015**, 593, 4305-18	3.9	30
247	EMG-based characterization of pathological tremor using the iterated Hilbert transform. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 2911-21	5	30
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245	Building an internal model of a myoelectric prosthesis via closed-loop control for consistent and routine grasping. *Experimental Brain Research*, **2015**, 233, 1855-65	2.3	29

244	HyVE-hybrid vibro-electrotactile stimulation-is an efficient approach to multi-channel sensory feedback. *IEEE Transactions on Haptics*, **2014**, 7, 181-90	2.7	29
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10	Direct translation of findings in isolated animal preparations to in vivo human motoneuron behaviour is challenging. *Journal of Physiology*, **2020**, 598, 1111-1112	3.9
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