

Catherine Disselhorst-Klug

List of Publications by Year in descending order

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Version: 2024-02-01

87
papers

7,298
citations

201575

27
h-index

85498

71
g-index

92
all docs

92
docs citations

92
times ranked

6828
citing authors

#	ARTICLE	IF	CITATIONS
1	Consensus for experimental design in electromyography (CEDE) project: High-density surface electromyography matrix. <i>Journal of Electromyography and Kinesiology</i> , 2022, 64, 102656.	0.7	22
2	Detection of Typical Compensatory Movements during Autonomously Performed Exercises Preventing Low Back Pain (LBP). <i>Sensors</i> , 2022, 22, 111.	2.1	5
3	Fundamental Concepts of Bipolar and High-Density Surface EMG Understanding and Teaching for Clinical, Occupational, and Sport Applications: Origin, Detection, and Main Errors. <i>Sensors</i> , 2022, 22, 4150.	2.1	22
4	Editorial: Surface Electromyography: Barriers Limiting Widespread Use of sEMG in Clinical Assessment and Neurorehabilitation. <i>Frontiers in Neurology</i> , 2021, 12, 642257.	1.1	14
5	Consensus for experimental design in electromyography (CEDE) project: Terminology matrix. <i>Journal of Electromyography and Kinesiology</i> , 2021, 59, 102565.	0.7	29
6	Robotische UnterstÃ¼tzung in Therapie und Pflege. , 2021, , 467-476.		0
7	An accelerometer-based guidance device for CT-guided procedures: an improved wireless prototype. <i>Minimally Invasive Therapy and Allied Technologies</i> , 2021, , 1-7.	0.6	0
8	Surface EMG in Clinical Assessment and Neurorehabilitation: Barriers Limiting Its Use. <i>Frontiers in Neurology</i> , 2020, 11, 934.	1.1	100
9	Surface Electromyography Meets Biomechanics: Correct Interpretation of sEMG-Signals in Neuro-Rehabilitation Needs Biomechanical Input. <i>Frontiers in Neurology</i> , 2020, 11, 603550.	1.1	15
10	Non-invasive assessment of motor unit activation in relation to motor neuron level and lesion location in stroke and spinal muscular atrophy. <i>Clinical Biomechanics</i> , 2020, 78, 105053.	0.5	9
11	Consensus for experimental design in electromyography (CEDE) project: Amplitude normalization matrix. <i>Journal of Electromyography and Kinesiology</i> , 2020, 53, 102438.	0.7	170
12	Introduction of a sEMG Sensor System for Autonomous Use by Inexperienced Users. <i>Sensors</i> , 2020, 20, 7348.	2.1	5
13	Consensus for experimental design in electromyography (CEDE) project: Electrode selection matrix. <i>Journal of Electromyography and Kinesiology</i> , 2019, 48, 128-144.	0.7	95
14	Introduction of a procedure to objectively quantify spastic movement impairment during freely performed voluntary movements. <i>Journal of Electromyography and Kinesiology</i> , 2019, 48, 44-52.	0.7	4
15	Influence of Increasing Joint Angle, Angular Velocity and External Load in the Extension Movement of the Elbow in Two Different Group Ages. , 2019, , .		0
16	Muscular Activation during Low Resistance Elbow's Motion of Children with and without Cerebral Palsy. , 2019, , .		0
17	Time-frequency coherence of categorized sEMG data during dynamic contractions of biceps, triceps, and brachioradialis as an approach for spasticity detection. <i>Medical and Biological Engineering and Computing</i> , 2019, 57, 703-713.	1.6	13
18	Comparison of Muscular Activity and Movement Performance in Robot-Assisted and Freely Performed Exercises. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2019, 27, 43-50.	2.7	9

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19	Spontaneous movements in the first four months of life: An accelerometric study in moderate and late preterm infants. <i>Early Human Development</i> , 2019, 130, 1-9.	0.8	6
20	Design Specifications and Usability Issues Considered in the User Centered Design of a Wearable Exoskeleton for Upper Limb of Children with Spastic Cerebral Palsy. <i>Biosystems and Biorobotics</i> , 2019, , 192-195.	0.2	1
21	Surface Electromyography Meets Biomechanics or Bringing sEMG to Clinical Application. <i>Biosystems and Biorobotics</i> , 2019, , 1013-1016.	0.2	0
22	Modelo neurodifuso para el control de un exoesqueleto para rehabilitaci3n de brazo en pacientes con EVC. <i>Research in Computing Science</i> , 2019, 148, 267-275.	0.1	0
23	Joint angle and movement velocity effects on muscle activity of elderly with knee osteoarthritis – Categorized and probabilistic analysis. <i>Journal of Electromyography and Kinesiology</i> , 2018, 41, 50-59.	0.7	6
24	Electromagnetically Navigated In Situ Fenestration of Aortic Stent Grafts: Pilot Animal Study of a Novel Fenestrated EVAR Approach. <i>CardioVascular and Interventional Radiology</i> , 2018, 41, 170-176.	0.9	11
25	Controlling of a ROS-based robotic system in accordance to the assist-as-needed principle in end-effector based rehabilitation systems. <i>Current Directions in Biomedical Engineering</i> , 2018, 4, 199-202.	0.2	0
26	Position-Velocity Categorization of Time-Frequency Coherence for the Analysis of Muscle Coordination Dynamics of Elbow Joint During Low Force Movements in Healthy Children. , 2018, , .		2
27	Increasing the Robustness of the automatic IMU calibration for lower Extremity Motion Analysis. <i>Current Directions in Biomedical Engineering</i> , 2018, 4, 439-442.	0.2	4
28	The relationship between functionality and erector spinae activity in patients with specific low back pain during dynamic and static movements. <i>Gait and Posture</i> , 2018, 66, 208-213.	0.6	18
29	Biocompatibility and biomechanical analysis of elastic <sc>TPU</sc> threads as new suture material. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2017, 105, 99-106.	1.6	26
30	Acceleration sensors in abdominal wall position as a non-invasive approach to detect early breathing alterations induced by intolerance of increased airway resistance. <i>Journal of Cardiothoracic Surgery</i> , 2017, 12, 96.	0.4	2
31	Assessment of upper extremity movement performance of patients with obstetric brachial plexus palsy. <i>Current Directions in Biomedical Engineering</i> , 2017, 3, 1-5.	0.2	1
32	The role of biceps brachii and brachioradialis for the control of elbow flexion and extension movements. <i>Journal of Electromyography and Kinesiology</i> , 2016, 28, 67-75.	0.7	26
33	Track I. Image Based Intervention. <i>Biomedizinische Technik</i> , 2015, 60, s170-81.	0.9	0
34	5. Orthesen, Schienen und Bandagen. , 2015, , 279-338.		2
35	2. Biomechanik des muskuloskelettalen Systems. , 2015, , 53-104.		4
36	Muscular coordination of biceps brachii and brachioradialis in elbow flexion with respect to hand position. <i>Frontiers in Physiology</i> , 2015, 6, 215.	1.3	28

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37	A proposal for patient-tailored supervision of movement performance during end-effector-based robot-assisted rehabilitation of the upper extremities. <i>Biomedizinische Technik</i> , 2015, 60, 193-7.	0.9	5
38	A miniature accelerometer-based guidance device for percutaneous computed tomography-guided punctures. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2015, 10, 629-636.	1.7	1
39	A method for a categorized and probabilistic analysis of the surface electromyogram in dynamic contractions. <i>Frontiers in Physiology</i> , 2015, 6, 30.	1.3	12
40	1. Einführung in die Rehabilitationstechnik. , 2015, , 1-52.		0
41	Effect of contraction force and knee joint angle on the spatial representation of soleus activity using high-density surface EMG. <i>Biomedizinische Technik</i> , 2014, 59, 399-411.	0.9	7
42	Technical concepts for vascular electromagnetic navigated interventions: Aortic in situ fenestration and transjugular intrahepatic porto-systemic shunts. <i>Biomedizinische Technik</i> , 2014, 59, 153-63.	0.9	7
43	Fuzzy MUAP recognition in HSR-EMG detection basing on morphological features. <i>Journal of Electromyography and Kinesiology</i> , 2014, 24, 473-487.	0.7	5
44	A modeling approach to compute modification of net joint forces caused by coping movements in obstetric brachial plexus palsy. <i>Journal of Brachial Plexus and Peripheral Nerve Injury</i> , 2014, 08, e61-e69.	1.0	3
45	Non-Invasive detection of the Influence of Spasticity on Muscular Activation. <i>Biomedizinische Technik</i> , 2013, 58 Suppl 1, .	0.9	0
46	A Novel Portable System for Gait Analysis and Rehabilitation. <i>Biomedizinische Technik</i> , 2013, 58 Suppl 1, .	0.9	1
47	Introduction to an Automated Support to Adapt Therapeutic Exercises to Changing Training Conditions. <i>Biomedizinische Technik</i> , 2012, 57, .	0.9	0
48	Patient Supervision During Endeffector Based Robot Assisted Rehabilitation of Upper Extremities. <i>Biomedizinische Technik</i> , 2012, 57, .	0.9	0
49	Perceiving One's Own Limb Movements with Conflicting Sensory Feedback: The Role of Mode of Movement Control and Age. <i>Frontiers in Psychology</i> , 2012, 3, 289.	1.1	17
50	Respiratory Motion Compensation in Image-Guided Therapies. <i>Biomedizinische Technik</i> , 2012, 57, .	0.9	1
51	In.nrw Hyther: Electromagnetically navigated in situ fenestration of aortic stent grafts. <i>Biomedizinische Technik</i> , 2012, 57, .	0.9	1
52	Technically Assisted Analysis of Large Quantities of Numerical Data in Preclinical Tumor Research. <i>Biomedizinische Technik</i> , 2012, 57, .	0.9	0
53	Introduction of a method for quantitative evaluation of spontaneous motor activity development with age in infants. <i>Experimental Brain Research</i> , 2012, 218, 305-313.	0.7	20
54	Direct Current Combined With Bipolar Radiofrequency Ablation: An Ex Vivo Feasibility Study. <i>CardioVascular and Interventional Radiology</i> , 2011, 34, 631-636.	0.9	0

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55	Tension of knotted surgical sutures shows tissue specific rapid loss in a rodent model. BMC Surgery, 2011, 11, 36.	0.6	30
56	Movement analysis by accelerometry of newborns and infants for the early detection of movement disorders due to infantile cerebral palsy. Medical and Biological Engineering and Computing, 2010, 48, 765-772.	1.6	68
57	Introducing a feedback training system for guided home rehabilitation. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 2.	2.4	16
58	Robot-based methodology for a kinematic and kinetic analysis of unconstrained, but reproducible upper extremity movement. Journal of Biomechanics, 2009, 42, 1570-1573.	0.9	10
59	Surface electromyography and muscle force: Limits in sEMG force relationship and new approaches for applications. Clinical Biomechanics, 2009, 24, 225-235.	0.5	275
60	Obstetric Brachial Plexus Palsy. Deutsches Ärztblatt International, 2009, 106, 83-90.	0.6	28
61	Myoelectric manifestations of fatigue at low contraction levels in subjects with and without chronic pain. Journal of Electromyography and Kinesiology, 2007, 17, 264-274.	0.7	65
62	An upper body model for the kinematical analysis of the joint chain of the human arm. Journal of Biomechanics, 2006, 39, 2419-2429.	0.9	56
63	Upper trapezius muscle conduction velocity during fatigue in subjects with and without work-related muscular disorders: a non-invasive high spatial resolution approach. European Journal of Applied Physiology, 2006, 96, 194-202.	1.2	17
64	Comparison of the electromyographic activity in the upper trapezius and biceps brachii muscle in subjects with muscular disorders: a pilot study. European Journal of Applied Physiology, 2006, 96, 185-193.	1.2	29
65	Movement analysis in the early detection of newborns at risk for developing spasticity due to infantile cerebral palsy. Human Movement Science, 2006, 25, 125-144.	0.6	96
66	Interpretation of surface EMGs in children with cerebral palsy: An initial study using a fuzzy expert system. Journal of Orthopaedic Research, 2006, 24, 438-447.	1.2	16
67	Estimation of the muscle fibre semi-length under varying joint positions on the basis of non-invasively extracted motor unit action potentials. Journal of Electromyography and Kinesiology, 2005, 15, 290-299.	0.7	16
68	The European project "Neuromuscular assessment in the elderly worker" (NEW): Achievements in electromyogram signal acquisition, modelling and processing. Medical and Biological Engineering and Computing, 2004, 42, 429-431.	1.6	8
69	Influence of muscle fibre shortening on estimates of conduction velocity and spectral frequencies from surface electromyographic signals. Medical and Biological Engineering and Computing, 2004, 42, 477-486.	1.6	24
70	From cell to movement: to what answers does EMG really contribute?. Journal of Electromyography and Kinesiology, 2004, 14, 611-617.	0.7	53
71	Experimental muscle pain increases trapezius muscle activity during sustained isometric contractions of arm muscles. Clinical Neurophysiology, 2004, 115, 1767-1778.	0.7	40
72	Single motor unit analysis from spatially filtered surface electromyogram signals. Part I: Spatial selectivity. Medical and Biological Engineering and Computing, 2003, 41, 330-337.	1.6	42

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73	Single motor unit analysis from spatially filtered surface electromyogram signals. Part 2: Conduction velocity estimation. <i>Medical and Biological Engineering and Computing</i> , 2003, 41, 338-345.	1.6	41
74	Breakdown of adenine nucleotide pool in fatiguing skeletal muscle in McArdle's disease: A noninvasive ³¹ P-MRS and EMG study. <i>Muscle and Nerve</i> , 2003, 27, 728-736.	1.0	31
75	Simulation analysis of the ability of different types of multi-electrodes to increase selectivity of detection and to reduce cross-talk. <i>Journal of Electromyography and Kinesiology</i> , 2003, 13, 125-138.	0.7	57
76	High spatial resolution electromyography and video-assisted movement analysis in children with obstetric brachial plexus palsy. <i>Hand Clinics</i> , 2003, 19, 393-399.	0.4	22
77	Movement biomechanics goes upwards: from the leg to the arm. <i>Journal of Biomechanics</i> , 2000, 33, 1207-1216.	0.9	177
78	Non-invasive approach of motor unit recording during muscle contractions in humans. <i>European Journal of Applied Physiology</i> , 2000, 83, 144-150.	1.2	45
79	Development of recommendations for SEMG sensors and sensor placement procedures. <i>Journal of Electromyography and Kinesiology</i> , 2000, 10, 361-374.	0.7	4,650
80	A marker-based measurement procedure for unconstrained wrist and elbow motions. <i>Journal of Biomechanics</i> , 1999, 32, 615-621.	0.9	169
81	Non-invasive detection of the single motor unit action potential by averaging the spatial potential distribution triggered on a spatially filtered motor unit action potential. <i>Journal of Electromyography and Kinesiology</i> , 1999, 9, 67-72.	0.7	35
82	Estimation of the relationship between the noninvasively detected activity of single motor units and their characteristic pathological changes by modelling. <i>Journal of Electromyography and Kinesiology</i> , 1998, 8, 323-335.	0.7	39
83	Principles of high-spatial-resolution surface EMG (HSR-EMG): single motor unit detection and application in the diagnosis of neuromuscular disorders. <i>Journal of Electromyography and Kinesiology</i> , 1997, 7, 233-239.	0.7	86
84	Improvement of spatial resolution in surface-EMG: a theoretical and experimental comparison of different spatial filters. <i>IEEE Transactions on Biomedical Engineering</i> , 1997, 44, 567-574.	2.5	142
85	Diagnostic yield of noninvasive high spatial resolution electromyography in neuromuscular diseases. <i>Journal of Electromyography and Kinesiology</i> , 1997, 20, 1360-1370.		62
86	Noninvasive approach to motor unit characterization: Muscle structure, membrane dynamics and neuronal control. <i>Journal of Biomechanics</i> , 1997, 30, 441-446.	0.9	47
87	Clinical Application of a Noninvasive Multi-Electrode Array EMG for the Recording of Single Motor Unit Activity. <i>Neuropediatrics</i> , 1993, 24, 134-138.	0.3	33