Thomas C Bulea

List of Publications by Year
in descending order

48 papers	1,223 citations	471509 17 h-index	414414 32 g-index
49 all docs	49 docs citations	49 times ranked	1253 citing authors

#	Article	IF	Citations
1	EMG median frequency shifts without change in muscle oxygenation following novel locomotor training in individuals with incomplete spinal cord injury. Disability and Rehabilitation, 2022, 44, 52-58.	1.8	4
2	Increasing motor cortex activation during grasping via novel robotic mirror hand therapy: a pilot fNIRS study. Journal of NeuroEngineering and Rehabilitation, 2022, 19, 8.	4.6	12
3	Simple and economical HandClench Relaxometer device for reliable and sensitive measurement of grip myotonia in myotonic dystrophy. Neuromuscular Disorders, 2022, , .	0.6	1
4	Modeling and Stiffness-Based Continuous Torque Control of Lightweight Quasi-Direct-Drive Knee Exoskeletons for Versatile Walking Assistance. IEEE Transactions on Robotics, 2022, 38, 1442-1459.	10.3	23
5	Mu Rhythm during Standing and Walking Is Altered in Children with Unilateral Cerebral Palsy Compared to Children with Typical Development. Developmental Neurorehabilitation, 2021, 24, 8-17.	1.1	5
6	High-performance soft wearable robots for human augmentation and gait rehabilitation. , 2021, , 1-38.		2
7	Greater Reliance on Cerebral Palsy-Specific Muscle Synergies During Gait Relates to Poorer Temporal-Spatial Performance Measures. Frontiers in Physiology, 2021, 12, 630627.	2.8	4
8	A Pediatric Knee Exoskeleton With Real-Time Adaptive Control for Overground Walking in Ambulatory Individuals With Cerebral Palsy. Frontiers in Robotics and AI, 2021, 8, 702137.	3.2	19
9	Exoskeleton Assistance Improves Crouch during Overground Walking with Forearm Crutches: A Case Study. , 2020, , .		4
10	Toward a hybrid exoskeleton for crouch gait in children with cerebral palsy: neuromuscular electrical stimulation for improved knee extension. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 121.	4.6	8
11	An open source graphical user interface for wireless communication and operation of wearable robotic technology. Journal of Rehabilitation and Assistive Technologies Engineering, 2020, 7, 205566832096405.	0.9	2
12	Algorithmic localization of high-density EEG electrode positions using motion capture. Journal of Neuroscience Methods, 2020, 346, 108919.	2.5	4
13	Children With Unilateral Cerebral Palsy Utilize More Cortical Resources for Similar Motor Output During Treadmill Gait. Frontiers in Human Neuroscience, 2020, 14, 36.	2.0	22
14	Validating Model-Based Prediction Of Biological Knee Moment During Walking With An Exoskeleton in Crouch Gait: Potential Application for Exoskeleton Control. , 2019, 2019, 778-783.		6
15	Transcutaneous high-frequency alternating current for rapid reversible muscle force reduction below pain threshold. Journal of Neural Engineering, 2019, 16, 066013.	3.5	1
16	Computational modeling of neuromuscular response to swing-phase robotic knee extension assistance in cerebral palsy. Journal of Biomechanics, 2019, 87, 142-149.	2.1	9
17	Repeatability of EMG activity during exoskeleton assisted walking in children with cerebral palsy: implications for real time adaptable control. , 2018, 2018, 2801-2804.		7
18	Design Advancements Toward a Wearable Pediatric Robotic Knee Exoskeleton for Overground Gait Rehabilitation. , 2018, , .		9

#	Article	IF	Citations
19	Children With Cerebral Palsy Have Greater Stride-to-Stride Variability of Muscle Synergies During Gait Than Typically Developing Children: Implications for Motor Control Complexity. Neurorehabilitation and Neural Repair, 2018, 32, 834-844.	2.9	46
20	Effectiveness of surgical and non-surgical management of crouch gait in cerebral palsy: A systematic review. Gait and Posture, 2017, 54, 93-105.	1.4	51
21	Skeletal muscle water T2 as a biomarker of disease status and exercise effects in patients with Duchenne muscular dystrophy. Neuromuscular Disorders, 2017, 27, 705-714.	0.6	22
22	Exergaming with a pediatric exoskeleton: Facilitating rehabilitation and research in children with cerebral palsy. , 2017, 2017, 1087-1093.		13
23	The Effects of Exoskeleton Assisted Knee Extension on Lower-Extremity Gait Kinematics, Kinetics, and Muscle Activity in Children with Cerebral Palsy. Scientific Reports, 2017, 7, 13512.	3.3	50
24	A lower-extremity exoskeleton improves knee extension in children with crouch gait from cerebral palsy. Science Translational Medicine, 2017, 9, .	12.4	110
25	A Robotic Exoskeleton for Treatment of Crouch Gait in Children With Cerebral Palsy: Design and Initial Application. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 650-659.	4.9	89
26	Relationship between assistive torque and knee biomechanics during exoskeleton walking in individuals with crouch gait. , 2017, 2017, 491-497.		12
27	Motor Learning Abilities Are Similar in Hemiplegic Cerebral Palsy Compared to Controls as Assessed by Adaptation to Unilateral Leg-Weighting during Gait: Part I. Frontiers in Human Neuroscience, 2017, 11, 49.	2.0	14
28	Part 2: Adaptation of Gait Kinematics in Unilateral Cerebral Palsy Demonstrates Preserved Independent Neural Control of Each Limb. Frontiers in Human Neuroscience, 2017, 11, 50.	2.0	34
29	Novel Methods to Enhance Precision and Reliability in Muscle Synergy Identification during Walking. Frontiers in Human Neuroscience, 2016, 10, 455.	2.0	33
30	Estimating the Mechanical Behavior of the Knee Joint During Crouch Gait: Implications for Real-Time Motor Control of Robotic Knee Orthoses. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 621-629.	4.9	13
31	A robotic exoskeleton to treat crouch gait from cerebral palsy: Initial kinematic and neuromuscular evaluation. , 2016, 2016, 2214-2217.		17
32	Feasibility of a Hydraulic Power Assist System for Use in Hybrid Neuroprostheses. Applied Bionics and Biomechanics, 2015, 2015, 1-8.	1.1	5
33	Prefrontal, posterior parietal and sensorimotor network activity underlying speed control during walking. Frontiers in Human Neuroscience, 2015, 9, 247.	2.0	112
34	Sitting and standing intention can be decoded from scalp EEG recorded prior to movement execution. Frontiers in Neuroscience, 2014, 8, 376.	2.8	99
35	Forward stair descent with hybrid neuroprosthesis after paralysis: Single case study demonstrating feasibility. Journal of Rehabilitation Research and Development, 2014, 51, 1077-1094.	1.6	13
36	Sensor-based hip control with hybrid neuroprosthesis for walking in paraplegia. Journal of Rehabilitation Research and Development, 2014, 51, 229-244.	1.6	17

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37	User-driven control increases cortical activity during treadmill walking: An EEG study. , 2014, 2014, 2111-4.		18
38	Stance controlled knee flexion improves stimulation driven walking after spinal cord injury. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 68.	4.6	14
39	Finite State Control of a Variable Impedance Hybrid Neuroprosthesis for Locomotion After Paralysis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2013, 21, 141-151.	4.9	24
40	Classification of stand-to-sit and sit-to-stand movement from low frequency EEG with locality preserving dimensionality reduction. , 2013, 2013, 6341-4.		4
41	Simultaneous Scalp Electroencephalography (EEG), Electromyography (EMG), and Whole-body Segmental Inertial Recording for Multi-modal Neural Decoding. Journal of Visualized Experiments, 2013, , .	0.3	19
42	Sensor-Based Stance Control With Orthosis and Functional Neuromuscular Stimulation for Walking After Spinal Cord Injury. Journal of Prosthetics and Orthotics, 2012, 24, 124-132.	0.4	6
43	Design and Experimental Evaluation of a Vertical Lift Walker for Sit-to-Stand Transition Assistance. Journal of Medical Devices, Transactions of the ASME, 2012, 6, 14504-NaN.	0.7	17
44	A Variable Impedance Knee Mechanism for Controlled Stance Flexion During Pathological Gait. IEEE/ASME Transactions on Mechatronics, 2012, 17, 822-832.	5.8	42
45	Restoration of stance phase knee flexion during walking after spinal cord injury using a variable impedance orthosis. , 2011, 2011, 608-11.		5
46	Stance control knee mechanism for lower-limb support in hybrid neuroprosthesis. Journal of Rehabilitation Research and Development, 2011, 48, 839.	1.6	20
47	Title is missing!. Journal of Rehabilitation Research and Development, 2009, 46, 447.	1.6	124
48	Development of hybrid orthosis for standing, walking, and stair climbing after spinal cord injury. Journal of Rehabilitation Research and Development, 2009, 46, 447-62.	1.6	35