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	Title is missing!. Journal of Rehabilitation Research and Development, 2009, 46, 447.	1.6	124
2	Prefrontal, posterior parietal and sensorimotor network activity underlying speed control during walking. Frontiers in Human Neuroscience, 2015, 9, 247.	2.0	112
3	A lower-extremity exoskeleton improves knee extension in children with crouch gait from cerebral palsy. Science Translational Medicine, 2017, 9, .	12.4	110
4	Sitting and standing intention can be decoded from scalp EEG recorded prior to movement execution. Frontiers in Neuroscience, 2014, 8, 376.	2.8	99
5	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
6	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
7	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
8	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
9	A Variable Impedance Knee Mechanism for Controlled Stance Flexion During Pathological Gait. IEEE/ASME Transactions on Mechatronics, 2012, 17, 822-832.	5.8	42
10	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
11	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
12	Novel Methods to Enhance Precision and Reliability in Muscle Synergy Identification during Walking. Frontiers in Human Neuroscience, 2016, 10, 455.	2.0	33
13	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
14	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
15	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
16	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
17	Stance control knee mechanism for lower-limb support in hybrid neuroprosthesis. Journal of Rehabilitation Research and Development, 2011, 48, 839.	1.6	20
18	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

#	Article	IF	Citations
19	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
20	User-driven control increases cortical activity during treadmill walking: An EEG study. , 2014, 2014, 2111-4.		18
21	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
22	Sensor-based hip control with hybrid neuroprosthesis for walking in paraplegia. Journal of Rehabilitation Research and Development, 2014, 51, 229-244.	1.6	17
23	A robotic exoskeleton to treat crouch gait from cerebral palsy: Initial kinematic and neuromuscular evaluation. , 2016, 2016, 2214-2217.		17
24	Stance controlled knee flexion improves stimulation driven walking after spinal cord injury. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 68.	4.6	14
25	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
26	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
27	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
28	Exergaming with a pediatric exoskeleton: Facilitating rehabilitation and research in children with cerebral palsy. , 2017, 2017, 1087-1093.		13
29	Relationship between assistive torque and knee biomechanics during exoskeleton walking in individuals with crouch gait. , 2017, 2017, 491-497.		12
30	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
31	Design Advancements Toward a Wearable Pediatric Robotic Knee Exoskeleton for Overground Gait Rehabilitation. , 2018, , .		9
32	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
33	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
34	Repeatability of EMG activity during exoskeleton assisted walking in children with cerebral palsy: implications for real time adaptable control. , 2018, 2018, 2801-2804.		7
35	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
36	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

#	Article	IF	Citations
37	Restoration of stance phase knee flexion during walking after spinal cord injury using a variable impedance orthosis. , 2011, 2011, 608-11.		5
38	Feasibility of a Hydraulic Power Assist System for Use in Hybrid Neuroprostheses. Applied Bionics and Biomechanics, 2015, 2015, 1-8.	1.1	5
39	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
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	Exoskeleton Assistance Improves Crouch during Overground Walking with Forearm Crutches: A Case Study. , 2020, , .		4
42	Algorithmic localization of high-density EEG electrode positions using motion capture. Journal of Neuroscience Methods, 2020, 346, 108919.	2.5	4
43	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
44	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
45	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
46	High-performance soft wearable robots for human augmentation and gait rehabilitation. , 2021, , 1-38.		2
47	Transcutaneous high-frequency alternating current for rapid reversible muscle force reduction below pain threshold. Journal of Neural Engineering, 2019, 16, 066013.	3.5	1
48	Simple and economical HandClench Relaxometer device for reliable and sensitive measurement of grip myotonia in myotonic dystrophy. Neuromuscular Disorders, 2022, , .	0.6	1