Juan C Moreno

List of Publications by Year in descending order

131 papers	3,861 citations	159573 30 h-index	144002 57 g-index
144 all docs	144 docs citations	144 times ranked	3531 citing authors

#	Article	IF	Citations
1	Rehabilitation of gait after stroke: a review towards a top-down approach. Journal of NeuroEngineering and Rehabilitation, 2011, 8, 66.	4.6	396
2	Lower Limb Wearable Robots for Assistance and Rehabilitation: A State of the Art. IEEE Systems Journal, 2016, 10, 1068-1081.	4.6	304
3	Design and Validation of a Rehabilitation Robotic Exoskeleton for Tremor Assessment and Suppression. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2007, 15, 367-378.	4.9	292
4	The H2 robotic exoskeleton for gait rehabilitation after stroke: early findings from a clinical study. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 54.	4.6	271
5	Review of hybrid exoskeletons to restore gait following spinal cord injury. Journal of Rehabilitation Research and Development, 2012, 49, 497.	1.6	137
6	A Closed-Loop Brainâ€“Computer Interface Triggering an Active Ankleâ€“Foot Orthosis for Inducing Cortical Neural Plasticity. IEEE Transactions on Biomedical Engineering, 2014, 61, 2092-2101.	4.2	137
7	Hybrid FES-robot cooperative control of ambulatory gait rehabilitation exoskeleton. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 27.	4.6	136
8	Shared muscle synergies in human walking and cycling. Journal of Neurophysiology, 2014, 112, 1984-1998.	1.8	119
9	Compliant lower limb exoskeletons: a comprehensive review on mechanical design principles. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 55.	4.6	117
10	Automatic recognition of gait patterns in human motor disorders using machine learning: A review. Medical Engineering and Physics, 2018, 53, 1-12.	1.7	116
11	Performance Evaluation of Lower Limb Exoskeletons: A Systematic Review. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1573-1583.	4.9	105
12	Real-Time Estimation of Pathological Tremor Parameters from Gyroscope Data. Sensors, 2010, 10, 2129-2149.	3.8	90
13	Voluntary control of wearable robotic exoskeletons by patients with paresis via neuromechanical modeling. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 91.	4.6	76
14	Design and implementation of an inertial measurement unit for control of artificial limbs: Application on leg orthoses. Sensors and Actuators B: Chemical, 2006, 118, 333-337.	7.8	70
15	Biologically based design of an actuator system for a kneeâ€“ankleâ€“foot orthosis. Mechanism and Machine Theory, 2009, 44, 860-872.	4.5	66
16	Effects of robotic guidance on the coordination of locomotion. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 79.	4.6	66
17	Study of the motion artefacts of skin-mounted inertial sensors under different attachment conditions. Physiological Measurement, 2008, 29, N21-N31.	2.1	64
18	Combining muscle synergies and biomechanical analysis to assess gait in stroke patients. Journal of Biomechanics, 2017, 63, 98-103.	2.1	57

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19	Benchmarking Bipedal Locomotion: A Unified Scheme for Humanoids, Wearable Robots, and Humans. IEEE Robotics and Automation Magazine, 2015, 22, 103-115.	2.0	53
20	A robotic exoskeleton for overground gait rehabilitation. , 2013, , .		49
21	Gait Event Detection in Controlled and Real-Life Situations: Repeated Measures From Healthy Subjects. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1945-1956.	4.9	42
22	Neurorobotic and hybrid management of lower limb motor disorders: a review. Medical and Biological Engineering and Computing, 2011, 49, 1119-1130.	2.8	41
23	Advances in neuroprosthetic management of foot drop: a review. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 46.	4.6	41
24	Assessing the Involvement of Users During Development of Lower Limb Wearable Robotic Exoskeletons: A Survey Study. Human Factors, 2020, 62, 351-364.	3.5	41
25	Immediate effects of a controllable knee ankle foot orthosis for functional compensation of gait in patients with proximal leg weakness. Medical and Biological Engineering and Computing, 2008, 46, 43-53.	2.8	40
26	Motor modules in robot-aided walking. Journal of NeuroEngineering and Rehabilitation, 2012, 9, 76.	4.6	39
27	Influences of the biofeedback content on robotic post-stroke gait rehabilitation: electromyographic vs joint torque biofeedback. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 95.	4.6	39
28	Hybrid gait training with an overground robot for people with incomplete spinal cord injury: a pilot study. Frontiers in Human Neuroscience, 2014, 8, 298.	2.0	36
29	Advances in selective activation of muscles for non-invasive motor neuroprostheses. Journal of NeuroEngineering and Rehabilitation, 2016, 13, 56.	4.6	35
30	Online Assessment of Human-Robot Interaction for Hybrid Control of Walking. Sensors, 2012, 12, 215-225.	3.8	32
31	Hybrid therapy of walking with Kinesis overground robot for persons with incomplete spinal cord injury: A feasibility study. Robotics and Autonomous Systems, 2015, 73, 44-58.	5.1	32
32	Muscle Synergies in Cycling after Incomplete Spinal Cord Injury: Correlation with Clinical Measures of Motor Function and Spasticity. Frontiers in Human Neuroscience, 2015, 9, 706.	2.0	29
33	Biped Locomotion Control through a Biomimetic CPG-based Controller. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 85, 47-70.	3.4	28
34	A Subject-Specific Kinematic Model to Predict Human Motion in Exoskeleton-Assisted Gait. Frontiers in Neurorobotics, 2018, 12, 18.	2.8	27
35	Intramuscular Stimulation of Muscle Afferents Attains Prolonged Tremor Reduction in EssentialÂTremor Patients. IEEE Transactions on Biomedical Engineering, 2021, 68, 1768-1776.	4.2	22
36	Characterization and Evaluation of Humanâ€“Exoskeleton Interaction Dynamics: A Review. Sensors, 2022, 22, 3993.	3.8	22

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37	Analysis of the human interaction with a wearable lower-limb exoskeleton. Applied Bionics and Biomechanics, 2009, 6, 245-256.	1.1	20
38	Daily Locomotion Recognition and Prediction: A Kinematic Data-Based Machine Learning Approach. IEEE Access, 2020, 8, 33250-33262.	4.2	20
39	Enhancing functional electrical stimulation for emerging rehabilitation robotics in the framework of hyper project. , 2011, 2011, 5975370.		19
40	Haptic Adaptive Feedback to Promote Motor Learning With a Robotic Ankle Exoskeleton Integrated With a Video Game. Frontiers in Bioengineering and Biotechnology, 2020, 8, 113.	4.1	19
41	Humanâ€“Robot Cognitive Interaction. , 0, , 87-125.		17
42	Transcranial direct current stimulation combined with robotic therapy for upper and lower limb function after stroke: a systematic review and meta-analysis of randomized control trials. Journal of NeuroEngineering and Rehabilitation, 2021, 18, 148.	4.6	17
43	Analysis of the Human Interaction with a Wearable Lower-Limb Exoskeleton. Applied Bionics and Biomechanics, 2009, 6, 245-256.	1.1	16
44	Benchmarking lower limb wearable robots. , 2015, , .		16
45	Adaptive multichannel FES neuroprosthesis with learning control and automatic gait assessment. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 36.	4.6	16
46	Similarity of muscle synergies in human walking and cycling: Preliminary results. , 2013, 2013, 6933-6.		15
47	Intramuscular EMG-Driven Musculoskeletal Modelling: Towards Implanted Muscle Interfacing in Spinal Cord Injury Patients. IEEE Transactions on Biomedical Engineering, 2022, 69, 63-74.	4.2	15
48	Self-tuned driving of piezoelectric actuators. Journal of the European Ceramic Society, 2007, 27, 4163-4167.	5.7	14
49	Towards human-knee orthosis interaction based on adaptive impedance control through stiffness adjustment. , 2017, 2017, 406-411.		14
50	Exoskeletons for lower-limb rehabilitation. , 2018, , 89-99.		14
51	A new platform based on IEEE802.15.4 wireless inertial sensors for motion caption and assessment. , 2006, Suppl, 6497-500.		13
52	Boosting the traditional physiotherapist approach for stroke spasticity using a sensorized ankle foot orthosis: a pilot study. Topics in Stroke Rehabilitation, 2017, 24, 447-456.	1.9	13
53	Global Kalman filter approaches to estimate absolute angles of lower limb segments. BioMedical Engineering OnLine, 2017, 16, 58.	2.7	12
54	BioMot exoskeleton â€" Towards a smart wearable robot for symbiotic human-robot interaction. , 2017, 2017, 1666-1671.		12

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55	Application of inertial sensors in rehabilitation robotics. , 2007, , .		11
56	Principles of human locomotion: A review. , 2013, 2013, 6941-4.		11
57	Wearable Inertial Sensor System towards Daily Human Kinematic Gait Analysis: Benchmarking Analysis to MVN BIOMECH. Sensors, 2020, 20, 2185.	3.8	11
58	Motor Control System for Adaptation of Healthy Individuals and Recovery of Poststroke Patients: A Case Study on Muscle Synergies. Neural Plasticity, 2019, 2019, 1-13.	2.2	10
59	Coordination Between Partial Robotic Exoskeletons and Human Gait: A Comprehensive Review on Control Strategies. Frontiers in Bioengineering and Biotechnology, 2022, 10, .	4.1	10
60	Rationale for Multiple Compensation of Muscle Weakness Walking with a Wearable Robotic Orthosis. , 0, , .		9
61	Analysis of biomechanical data to determine the degree of users participation during robotic-assisted gait rehabilitation. , 2012, 2012, 4855-8.		9
62	On the use of inertial measurement units for real-time quantification of pathological tremor amplitude and frequency. Procedia Chemistry, 2009, 1, 1219-1222.	0.7	8
63	Symbiotic Wearable Robotic Exoskeletons: The Concept of the BioMot Project. Lecture Notes in Computer Science, 2014, , 72-83.	1.3	8
64	A flexible architecture to enhance wearable robots: Integration of EMG-informed models. , 2015, , .		8
65	Electronic design and validation of Powered Knee Orthosis system embedded with wearable sensors. , 2017, , .		8
66	Comparison of Intramuscular and Surface Electromyography Recordings Towards the Control of Wearable Robots for Incomplete Spinal Cord Injury Rehabilitation. , 2020, , .		8
67	Realtime EMG analysis for transcutaneous electrical stimulation assisted gait training in stroke patients**The work was conducted within the research project BeMobil, which is supported by the German Federal Ministry of Education and Research (BMBF) (FKZ16SV7069K).. IFAC-PapersOnLine, 2016, 49, 183-187.	0.9	7
68	Real-Time Gait Events Detection during Walking of Biped Model and Humanoid Robot through Adaptive Thresholds. , 2016, , .		7
69	Evaluation of IMU ZigBee Sensors for Upper Limb Rehabilitation. Biosystems and Biorobotics, 2013, , 461-465.	0.3	7
70	EMG-based Motion Intention Recognition for Controlling a Powered Knee Orthosis. , 2019, , .		6
71	EMG-driven models of human-machine interaction in individuals wearing the H2 exoskeleton**This work was supported by the ERC Advanced Grant DEMOVE [267888]. IFAC-PapersOnLine, 2016, 49, 200-203.	0.9	5
72	Powered knee orthosis for human gait rehabilitation: First advances. , 2017, , .		5

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73	Attention Level Measurement During Exoskeleton Rehabilitation Through a BMI System. Biosystems and Biorobotics, 2017, , 243-247.	0.3	5
74	Simultaneous estimation of human and exoskeleton motion: A simplified protocol. , 2017, 2017, 1431-1436.		5
75	Noninvasive Modalities Used in Spinal Cord Injury Rehabilitation. , 0, , .		5
76	Outcome measures and motion capture systems for assessing lower limb orthosis-based interventions after stroke: a systematic review. Disability and Rehabilitation: Assistive Technology, 2021, 16, 674-683.	2.2	5
77	Assessment of gait symmetry, torque interaction and muscular response due to the unilateral assistance provided by an active knee orthosis in healthy subjects. , 2020, , .		5
78	Joint Stiffness Tuning of Exoskeleton Robot H2 by Tacit Learning. Lecture Notes in Computer Science, 2015, , 138-144.	1.3	5
79	Hybrid FES-Robot Cooperative Control of Ambulatory Gait Rehabilitation Exoskeleton for Spinal Cord Injured Users. Biosystems and Biorobotics, 2013, , 155-159.	0.3	5
80	ADAPTIVE REAL-TIME TOOL FOR HUMAN GAIT EVENT DETECTION USING A WEARABLE GYROSCOPE. , 2017, , .		5
81	Influence of the robotic exoskeleton Lokomat on the control of human gait: An electromyographic and kinematic analysis. , 2013, , .		4
82	Towards an ankle neuroprosthesis for hybrid robotics: Concepts and current sources for functional electrical stimulation. , 2017, 2017, 1660-1665.		4
83	Instrumented insole system for ambulatory and robotic walking assistance: First advances. , 2017, , .		4
84	Detection of Subjectâ€™s Intention to Trigger Transitions Between Sit, Stand and Walk with a Lower Limb Exoskeleton. Biosystems and Biorobotics, 2017, , 249-253.	0.3	4
85	Effect of posture and body weight loading on spinal posterior root reflex responses. European Journal of Neuroscience, 2021, 54, 6575-6586.	2.6	4
86	An EMG Pattern Comparison of Exoskeleton vs. End-Effector Robotic Device for Assisted Walking Training. Biosystems and Biorobotics, 2014, , 563-567.	0.3	4
87	A Robot-Assisted Therapy to Increase Muscle Strength in Hemiplegic Gait Rehabilitation. Frontiers in Neurorobotics, 2022, 16, 837494.	2.8	4
88	The Gait Orthosis. A Robotic System for Functional Compensation and Biomechanical Evaluation. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	3
89	Biomedical instrumentation based on piezoelectric ceramics. Journal of the European Ceramic Society, 2007, 27, 4191-4194.	5.7	3
90	A dynamically consistent model of a motorized ankle-foot orthosis. , 2013, , .		3

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91	Wearable robotics for motion assistance and rehabilitation. Robotics and Autonomous Systems, 2015, 73, 1-3.	5.1	3
92	Assistive locomotion strategies for active lower limb devices. , 2017, , .		3
93	Guest Editorial Wearable Robotics for Motion Assistance and Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 103-106.	4.9	3
94	The New Generation of Compliant Actuators for Use in Controllable Bio-Inspired Wearable Robots. Biosystems and Biorobotics, 2017, , 255-259.	0.3	3
95	Theoretical approach for designing the rehabilitation robot controller. Advanced Robotics, 2019, 33, 674-686.	1.8	3
96	Hybrid Wearable Robotic Exoskeletons for Human Walking. , 2020, , 347-364.		3
97	Physiological Evaluation of Different Control Modes of Lower Limb Robotic Exoskeleton H2 in Patients with Incomplete Spinal Cord Injury. Biosystems and Biorobotics, 2017, , 343-348.	0.3	3
98	Mechatronics and bioinspiration in actuator design and control. Applied Bionics and Biomechanics, 2008, 5, 127-133.	1.1	2
99	Continuous assessment of gait stability in limit cycle walkers. , 2010, , .		2
100	Flexible and large area pressure sensors for human-neuroprostheses and human-neurorobotic interface assessment. Microsystem Technologies, 2012, 18, 1155-1161.	2.0	2
101	Implementation of feature extraction methods and support vector machine for classification of partial body weight supports in overground robot-aided walking. , 2015, , .		2
102	Emerging Techniques for Assessment of Sensorimotor Impairments after Spinal Cord Injury. , 2016, , .		2
103	VALIDATION OF GAIT EVENTS DETECTOR USING ADAPTIVE THRESHOLDS IN HUMANOID ROBOT. , 2016, , 9-17.		2
104	Joint stiffness modulation of compliant actuators for lower limb exoskeletons. , 2017, 2017, 1287-1292.		2
105	Wearable Robotics for Motion Assistance and Rehabilitation [TC Spotlight]. IEEE Robotics and Automation Magazine, 2018, 25, 19-28.	2.0	2
106	Analysis of muscle activation patterns during walking in patients with foot drop: insights for the design of an advanced FES controller. , 2019, , .		2
107	Knee Muscle Fatigue Estimation during Isometric Artificially Elicited Contractions in Incomplete Spinal Cord Injured Subjects. Biosystems and Biorobotics, 2013, , 327-332.	0.3	2
108	Analysis of the Effect of Two Different Feedbacks on the Biomechanical Patterns of Stroke Patients during Robotic-Assisted Gait Rehabilitation. Biosystems and Biorobotics, 2013, , 821-825.	0.3	2

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109	Feedback-Error Learning Control for Powered Assistive Devices. IFMBE Proceedings, 2020, , 1998-2013.	0.3	2
110	Wearable Lower Limb and Full-Body Robots. , 0, , 283-321.		1
111	Assistance and rehabilitation of gait disorders using active lower limb orthoses. , 2015, , .		1
112	Design and Implementation of a Novel Semi-Active Hybrid Unilateral Stance Control Knee Ankle Foot Orthosis. , 2018, , .		1
113	Tacit adaptability on submaximal force control for ankle robotic training. , 2019, , .		1
114	Feedback-Error Learning for Gait Rehabilitation Using a Powered Knee Orthosis: First Advances. , 2019, , .		1
115	Pseudo-online Muscle Onset Detection Algorithm with Threshold Auto-Adjustment for Lower Limb Exoskeleton Control. Biosystems and Biorobotics, 2022, , 275-279.	0.3	1
116	Feasibility of Submaximal Force Control Training for Robotâ€“Mediated Therapy After Stroke. Biosystems and Biorobotics, 2019, , 256-260.	0.3	1
117	User Involvement, Device Safety, and Outcome Measures During Development of Walking Exoskeletons: Current Practices. Biosystems and Biorobotics, 2020, , 157-163.	0.3	1
118	Effect of Gait Speed on Dynamic Postural Stability, Harmony and Upper Body Attenuation. Biosystems and Biorobotics, 2013, , 753-757.	0.3	1
119	Robotic Platform with Visual Paradigm to Induce Motor Learning in Healthy Subjects. Advances in Intelligent Systems and Computing, 2018, , 569-579.	0.6	1
120	Adaptation Strategies for Personalized Gait Neuroprosthetics. Frontiers in Neurorobotics, 2021, 15, 750519.	2.8	1
121	Characterization of a Dual PID-ILC FES Controller for FES-Robot Control of Swing Phase of Walking. Biosystems and Biorobotics, 2014, , 341-349.	0.3	0
122	Experimental architecture for synchronized recordings of cerebral, muscular and biomechanical data during lower limb activities. , 2015, , .		0
123	Erratum to â€œGait Event Detection in Controlled and Real-Life Situations: Repeated Measures From Healthy Subjectsâ€• IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 105-105.	4.9	0
124	Lower Limb Exoskeletons in Latin-America. Biosystems and Biorobotics, 2019, , 206-209.	0.3	0
125	Estrategias para la asistencia a la marcha de sujetos con hemiparesia a travÃ©s de una Ã³rtesis activa de rodilla. , 2021, , 91-98.		0
126	Exploiting VR and AR Technologies in Education and Training to Inclusive Robotics. Studies in Computational Intelligence, 2021, , 115-126.	0.9	0

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127	Neuromuscular Control of Dynamic Joint Stabilization with a Knee Brace: Implications to Improve Muscle and Balance Control. Biosystems and Biorobotics, 2013, , 167-171.	0.3	0
128	Proposal for Clinical Validation of Lower Limb Robotic Exoskeleton in Patients with Incomplete Spinal Cord Injury. Biosystems and Biorobotics, 2017, , 1439-1443.	0.3	0
129	AUTOMATIC AND REAL-TIME LOCOMOTION MODE RECOGNITION OF A HUMANOID ROBOT. , 2017, , .		0
130	Testing FES of Ankle Plantarflexor and Dorsiflexor Muscles to Support Unilateral Gait Disorders. Biosystems and Biorobotics, 2019, , 434-438.	0.3	0
131	Control bio-inspirado para un actuador elaìstico por medio del algoritmo de aprendizaje por retroalimentacioìn del error. TecnologÃa En Marcha, 0, , .	0.1	0