Laura Marchal-Crespo

List of Publications by Year
in descending order

61 papers	2,593 citations	394390 19 h-index	289230 40 g-index
68 all docs	68 docs citations	68 times ranked	2480 citing authors

#	Article	IF	Citations
1	Effect of immersive visualization technologies on cognitive load, motivation, usability, and embodiment. Virtual Reality, 2023, 27, 307-331.	6.1	32
2	Hiding Assistive Robots During Training in Immersive VR Does Not Affect Usersâ€™ Motivation, Presence, Embodiment, Performance, Nor Visual Attention. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2022, 30, 390-399.	4.9	7
3	Towards functional robotic training: motor learning of dynamic tasks is enhanced by haptic rendering but hampered by arm weight support. Journal of NeuroEngineering and Rehabilitation, 2022, 19, 19.	4.6	14
4	Haptic Training: Which Types Facilitate (re)Learning of Which Motor Task and for Whom? Answers by a Review. IEEE Transactions on Haptics, 2021, 14, 722-739.	2.7	32
5	Development of an Active Cable-Driven, Force-Controlled Robotic System for Walking Rehabilitation. Frontiers in Neurorobotics, 2021, 15, 651177.	2.8	4
6	Towards Functional Robotic Rehabilitation: Clinical-Driven Development of a Novel Device for Sensorimotor Hand Training. , 2021, , .		0
7	Congruency of Information Rather Than Body Ownership Enhances Motor Performance in Highly Embodied Virtual Reality. Frontiers in Neuroscience, 2021, 15, 678909.	2.8	10
8	Assessing Touch Sensibility with a Robotic System for Sensory Rehabilitation. , 2021, , .		1
9	â€œTricking the Brainâ€•Using Immersive Virtual Reality: Modifying the Self-Perception Over Embodied Avatar Influences Motor Cortical Excitability and Action Initiation. Frontiers in Human Neuroscience, 2021, 15, 787487.	2.0	9
10	A Novel Clinical-Driven Design for Robotic Hand Rehabilitation: Combining Sensory Training, Effortless Setup, and Large Range of Motion in a Palmar Device. Frontiers in Neurorobotics, 2021, 15, 748196.	2.8	11
11	Providing Task Instructions During Motor Training Enhances Performance and Modulates Attentional Brain Networks. Frontiers in Neuroscience, 2021, 15, 755721.	2.8	3
12	Haptic Rendering Modulates Task Performance, Physical Effort and Movement Strategy during Robot-Assisted Training. , 2020, , .		6
13	Promoting Motor Variability During Robotic Assistance Enhances Motor Learning of Dynamic Tasks. Frontiers in Neuroscience, 2020, 14, 600059.	2.8	12
14	Do we need complex rehabilitation robots for training complex tasks?. , 2019, 2019, 1085-1090.		3
15	Virtual Reality Environments and Haptic Strategies to Enhance Implicit Learning and Motivation in Robot-Assisted Training. , 2019, 2019, 760-765.		18
16	Validity of pervasive computing based continuous physical activity assessment in community-dwelling old and oldest-old. Scientific Reports, 2019, 9, 9662.	3.3	25
17	Multi-purpose Robotic Training Strategies for Neurorehabilitation with Model Predictive Controllers. , 2019, 2019, 754-759.		5
18	Reaching in Several Realities: Motor and Cognitive Benefits of Different Visualization Technologies. , 2019, 2019, 1037-1042.		12

#	Article	IF	Citations
19	Haptic Error Modulation Outperforms Visual Error Amplification When Learning a Modified Gait Pattern. Frontiers in Neuroscience, 2019, 13, 61.	2.8	28
20	Rowing Simulator Modulates Water Density to Foster Motor Learning. Frontiers in Robotics and AI, 2019, 6, 74.	3.2	9
21	Therapist-Guided Tablet-Based Telerehabilitation for Patients With Aphasia: Proof-of-Concept and Usability Study. JMIR Rehabilitation and Assistive Technologies, 2019, 6, e13163.	2.2	26
22	Comparing the Relaxing Effects of Different Virtual Reality Environments in the Intensive Care Unit: Observational Study. JMIR Perioperative Medicine, 2019, 2, e15579.	1.0	22
23	Visual and Haptic Error Modulating Controllers for Robotic Gait Training. , 2018, , .		9
24	Robot-assisted gait training. , 2018, , 227-240.		12
25	Neural circuits activated by error amplification and haptic guidance training techniques during performance of a timing-based motor task by healthy individuals. Experimental Brain Research, 2018, 236, 3085-3099.	1.5	14
26	Experimental Evaluation of a Mixed Controller That Amplifies Spatial Errors and Reduces Timing Errors. Frontiers in Robotics and AI, 2017, 4, .	3.2	13
27	Effect of Error Augmentation on Brain Activation and Motor Learning of a Complex Locomotor Task. Frontiers in Neuroscience, 2017, 11, 526.	2.8	50
28	The effectiveness of robotic training depends on motor task characteristics. Experimental Brain Research, 2017, 235, 3799-3816.	1.5	26
29	Evaluation of a mixed controller that amplifies spatial errors while reducing timing errors. , 2016, 2016, 5136-5139.		3
30	Towards more efficient robotic gait training: A novel controller to modulate movement errors. , 2016, , .		15
31	On the Modulation of Brain Activation During Simulated Weight Bearing in Supine Gait-Like Stepping. Brain Topography, 2016, 29, 193-205.	1.8	13
32	Test-retest reliability of fMRI experiments during robot-assisted active and passive stepping. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 102.	4.6	17
33	Detecting motion intention in stroke survivors using autonomic nervous system responses. , 2015, , .		1
34	The role of skill level and motor task characteristics on the effectiveness of robotic training: first results. , 2015, , .		25
35	The Effect of Haptic Guidance on Learning a Hybrid Rhythmic-Discrete Motor Task. IEEE Transactions on Haptics, 2015, 8, 222-234.	2.7	29
36	Sonification and haptic feedback in addition to visual feedback enhances complex motor task learning. Experimental Brain Research, 2015, 233, 909-925.	1.5	129

#	Article	IF	Citations
37	Brain activation associated with active and passive lower limb stepping. Frontiers in Human Neuroscience, 2014, 8, 828.	2.0	56
38	Physiological noise cancellation in fNIRS using an adaptive filter based on mutual information. , 2014, , .		3
39	Optimizing learning of a locomotor task: Amplifying errors as needed. , 2014, 2014, 5304-7.		30
40	The Learning Benefits of Haptic Guidance Are Age-Dependent. Biosystems and Biorobotics, 2014, , 65-73.	0.3	2
41	Learning a locomotor task: with or without errors?. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 25.	4.6	48
42	Detection of motor execution using a hybrid fNIRS-biosignal BCI: a feasibility study. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 4.	4.6	65
43	Non-linear adaptive controllers for an over-actuated pneumatic MR-compatible stepper. Medical and Biological Engineering and Computing, 2013, 51, 799-809.	2.8	12
44	Whatâ€™s Your Next Move? Detecting Movement Intention for Stroke Rehabilitation. Springer Briefs in Electrical and Computer Engineering, 2013, , 23-37.	0.5	1
45	The effect of haptic guidance and visual feedback on learning a complex tennis task. Experimental Brain Research, 2013, 231, 277-291.	1.5	76
46	Motor execution detection based on autonomic nervous system responses. Physiological Measurement, 2013, 34, 35-51.	2.1	16
47	A reconfigurable, tendon-based haptic interface for research into human-environment interactions. Robotica, 2013, 31, 441-453.	1.9	9
48	Balancing objects on the feet — An fMRI experiment using the MR-compatible stepper MARCOS. , 2012, , .		0
49	Synthesis and control of an assistive robotic tennis trainer. , 2012, , .		14
50	An fMRI pilot study to evaluate brain activation associated with locomotion adaptation. , 2011, 2011, 5975371.		14
51	Assistance or challenge? Filling a gap in user-cooperative control. , 2011, , .		1
52	Towards a BCI for sensorimotor training: Initial results from simultaneous fNIRS and biosignal recordings. , 2011, 2011, 6339-43.		10
53	Assistance or challenge? Filling a gap in user-cooperative control. , 2011, , .		22
54	Comparison of error-amplification and haptic-guidance training techniques for learning of a timing-based motor task by healthy individuals. Experimental Brain Research, 2010, 201, 119-131.	1.5	122

#	Article	IF	Citations
55	The effect of haptic guidance, aging, and initial skill level on motor learning of a steering task. Experimental Brain Research, 2010, 201, 209-220.	1.5	118
56	A robotic wheelchair trainer: design overview and a feasibility study. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 40.	4.6	60
57	BDNF Val66Met Polymorphism Influences Motor System Function in the Human Brain. Cerebral Cortex, 2010, 20, 1254-1262.	2.9	191
58	Review of control strategies for robotic movement training after neurologic injury. Journal of NeuroEngineering and Rehabilitation, 2009, 6, 20.	4.6	887
59	Effect of robotic guidance on motor learning of a timing task. , 2008, , .		26
60	Haptic Guidance Can Enhance Motor Learning of a Steering Task. Journal of Motor Behavior, 2008, 40, 545-557.	0.9	133
61	Some Key Problems for Robot-Assisted Movement Therapy Research: A Perspective from the University of California at Irvine. , 2007, , .		22