

Olivier Lambercy

List of Publications by Year in descending order

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Version: 2024-02-01

86
papers

3,253
citations

279701

23
h-index

189801

50
g-index

93
all docs

93
docs citations

93
times ranked

3253
citing authors

#	ARTICLE	IF	CITATIONS
1	Control strategies for active lower extremity prosthetics and orthotics: a review. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 1.	2.4	773
2	Systematic Review on Kinematic Assessments of Upper Limb Movements After Stroke. Stroke, 2019, 50, 718-727.	1.0	172
3	A Haptic Knob for Rehabilitation of Hand Function. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2007, 15, 356-366.	2.7	166
4	An Energy Tank-Based Interactive Control Architecture for Autonomous and Teleoperated Robotic Surgery. IEEE Transactions on Robotics, 2015, 31, 1073-1088.	7.3	142
5	Fully Wearable Actuated Soft Exoskeleton for Grasping Assistance in Everyday Activities. Soft Robotics, 2021, 8, 128-143.	4.6	113
6	Design and Characterization of a Lightweight and Fully Portable Remote Actuation System for Use With a Hand Exoskeleton. IEEE Robotics and Automation Letters, 2016, 1, 976-983.	3.3	106
7	Self-directed arm therapy at home after stroke with a sensor-based virtual reality training system. Journal of NeuroEngineering and Rehabilitation, 2016, 13, 75.	2.4	105
8	A new hand exoskeleton device for rehabilitation using a three-layered sliding spring mechanism. , 2013, , .		98
9	Effects of a robot-assisted training of grasp and pronation/supination in chronic stroke: a pilot study. Journal of NeuroEngineering and Rehabilitation, 2011, 8, 63.	2.4	97
10	Assessment-driven selection and adaptation of exercise difficulty in robot-assisted therapy: a pilot study with a hand rehabilitation robot. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 154.	2.4	73
11	Detection of motor execution using a hybrid fNIRS-biosignal BCI: a feasibility study. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 4.	2.4	65
12	Wearable and modular functional near-infrared spectroscopy instrument with multidistance measurements at four wavelengths. Neurophotonics, 2017, 4, 1.	1.7	57
13	Neurocognitive robot-assisted rehabilitation of hand function: a randomized control trial on motor recovery in subacute stroke. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 115.	2.4	50
14	Short-channel regression in functional near-infrared spectroscopy is more effective when considering heterogeneous scalp hemodynamics. Neurophotonics, 2020, 7, 035011.	1.7	46
15	Assessment-driven arm therapy at home using an IMU-based virtual reality system. , 2015, , .		45
16	Design and Evaluation of a Bowden-Cable-Based Remote Actuation System for Wearable Robotics. IEEE Robotics and Automation Letters, 2018, 3, 2101-2108.	3.3	43
17	Magnetometer-Based Drift Correction During Rest in&#xOD; IMU Arm Motion Tracking. Sensors, 2019, 19, 1312.	2.1	43
18	Development of VariLeg, an exoskeleton with variable stiffness actuation: first results and user evaluation from the CYBATHLON 2016. Journal of NeuroEngineering and Rehabilitation, 2018, 15, 18.	2.4	42

#	ARTICLE	IF	CITATIONS
19	Design and Characterization of an Exoskeleton for Perturbing the Knee During Gait. IEEE Transactions on Biomedical Engineering, 2017, 64, 2331-2343.	2.5	41
20	A penalized time-frequency band feature selection and classification procedure for improved motor intention decoding in multichannel EEG. Journal of Neural Engineering, 2019, 16, 016019.	1.8	41
21	Neurocognitive Robot-Assisted Therapy of Hand Function. IEEE Transactions on Haptics, 2014, 7, 140-149.	1.8	39
22	Development of a Cognitive Robotic System for Simple Surgical Tasks. International Journal of Advanced Robotic Systems, 2015, 12, 37.	1.3	35
23	Fully embedded myoelectric control for a wearable robotic hand orthosis. , 2017, 2017, 615-621.		35
24	Reliable and Rapid Robotic Assessment of Wrist Proprioception Using a Gauge Position Matching Paradigm. Frontiers in Human Neuroscience, 2016, 10, 316.	1.0	31
25	Reliability, validity, and clinical feasibility of a rapid and objective assessment of post-stroke deficits in hand proprioception. Journal of NeuroEngineering and Rehabilitation, 2018, 15, 47.	2.4	31
26	Upper limb assessment using a Virtual Peg Insertion Test. , 2011, 2011, 5975348.		29
27	A data-driven framework for selecting and validating digital health metrics: use-case in neurological sensorimotor impairments. Npj Digital Medicine, 2020, 3, 80.	5.7	29
28	PEXO - A Pediatric Whole Hand Exoskeleton for Grasping Assistance in Task-Oriented Training. , 2019, 2019, 108-114.		28
29	User-centered Design and Evaluation of Physical Interfaces for an Exoskeleton for Paraplegic Users. , 2019, 2019, 1159-1166.		27
30	Characterization and wearability evaluation of a fully portable wrist exoskeleton for unsupervised training after stroke. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 132.	2.4	27
31	Assessment of upper limb motor function in patients with multiple sclerosis using the Virtual Peg Insertion Test: A pilot study. , 2013, 2013, 6650494.		26
32	The Virtual Peg Insertion Test as an assessment of upper limb coordination in ARSACS patients: A pilot study. Journal of the Neurological Sciences, 2014, 347, 341-344.	0.3	24
33	Neurorehabilitation From a Distance: Can Intelligent Technology Support Decentralized Access to Quality Therapy?. Frontiers in Robotics and AI, 2021, 8, 612415.	2.0	24
34	Concurrent validity and test-retest reliability of the Virtual Peg Insertion Test to quantify upper limb function in patients with chronic stroke. Journal of NeuroEngineering and Rehabilitation, 2016, 13, 8.	2.4	23
35	Rehabilitation of grasping and forearm pronation/supination with the Haptic Knob. , 2009, , .		22
36	Age-based model for metacarpophalangeal joint proprioception in elderly. Clinical Interventions in Aging, 2017, Volume 12, 635-643.	1.3	22

#	ARTICLE	IF	CITATIONS
37	Development of a Robot-Assisted Rehabilitation Therapy to train Hand Function for Activities of Daily Living. , 2007, , .		21
38	Design of a robotic device for assessment and rehabilitation of hand sensory function. , 2011, 2011, 5975436.		20
39	Does motivation matter in upper-limb rehabilitation after stroke? ArmeoSenso-Reward: study protocol for a randomized controlled trial. <i>Trials</i> , 2017, 18, 580.	0.7	19
40	Technology-aided assessment of functionally relevant sensorimotor impairments in arm and hand of post-stroke individuals. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2020, 17, 128.	2.4	19
41	An analysis of usability evaluation practices and contexts of use in wearable robotics. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2021, 18, 170.	2.4	19
42	Design and characterization of the ReHapticKnob, a robot for assessment and therapy of hand function. , 2011, , .		18
43	High-fidelity rendering of virtual objects with the ReHapticKnob - novel avenues in robot-assisted rehabilitation of hand function. , 2012, , .		18
44	Transfer Learning Based on Optimal Transport for Motor Imagery Brain-Computer Interfaces. <i>IEEE Transactions on Biomedical Engineering</i> , 2022, 69, 807-817.	2.5	18
45	U-Limb: A multi-modal, multi-center database on arm motion control in healthy and post-stroke conditions. <i>GigaScience</i> , 2021, 10, .	3.3	18
46	Reliable and valid robot-assisted assessments of hand proprioceptive, motor and sensorimotor impairments after stroke. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2021, 18, 115.	2.4	18
47	A Cable Driven Robotic System to Train Finger Function After Stroke. , 2007, , .		17
48	Motor execution detection based on autonomic nervous system responses. <i>Physiological Measurement</i> , 2013, 34, 35-51.	1.2	16
49	Intention Detection Strategies for Robotic Upper-Limb Orthoses: A Scoping Review Considering Usability, Daily Life Application, and User Evaluation. <i>Frontiers in NeuroRobotics</i> , 2022, 16, 815693.	1.6	16
50	A technique to train finger coordination and independence after stroke. <i>Disability and Rehabilitation: Assistive Technology</i> , 2010, 5, 279-287.	1.3	14
51	Remote Actuation Systems for Fully Wearable Assistive Devices: Requirements, Selection, and Optimization for Out-of-the-Lab Application of a Hand Exoskeleton. <i>Frontiers in Robotics and AI</i> , 2020, 7, 596185.	2.0	14
52	Towards a Platform for Robot-Assisted Minimally-Supervised Therapy of Hand Function: Design and Pilot Usability Evaluation. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 652380.	2.0	13
53	Clinical utility of a pediatric hand exoskeleton: identifying users, practicability, and acceptance, and recommendations for design improvement. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2022, 19, 17.	2.4	12
54	ReFlex, a haptic wrist interface for motor learning and rehabilitation. , 2010, , .		11

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55	Post-stroke training of a pick and place activity in a virtual environment. , 2008, , .		10
56	Towards a BCI for sensorimotor training: Initial results from simultaneous fNIRS and biosignal recordings. , 2011, 2011, 6339-43.		10
57	Performance comparison of interaction control strategies on a hand rehabilitation robot. , 2015, , .		10
58	Effect of handle design on movement dynamics and muscle co-activation in a wrist flexion task. International Journal of Industrial Ergonomics, 2016, 56, 170-180.	1.5	10
59	Experimental Validation of a Rapid, Adaptive Robotic Assessment of the MCP Joint Angle Difference Threshold. Lecture Notes in Computer Science, 2014, , 3-10.	1.0	10
60	Method for Muscle Tone Monitoring During Robot-Assisted Therapy of Hand Function: A Proof of Concept. , 2019, 2019, 957-962.		9
61	Characterizing reproducibility of cerebral hemodynamic responses when applying short-channel regression in functional near-infrared spectroscopy. Neurophotonics, 2022, 9, 015004.	1.7	9
62	Design and Evaluation of a Fiber-Optic Grip Force Sensor with Compliant 3D-Printable Structure for (f)MRI Applications. Journal of Sensors, 2016, 2016, 1-11.	0.6	8
63	HandCARE2: A novel cable interface for hand rehabilitation. , 2008, , .		7
64	Algorithm for improving psychophysical threshold estimates by detecting sustained inattention in experiments using PEST. Attention, Perception, and Psychophysics, 2018, 80, 1629-1645.	0.7	7
65	Development and Evaluation of a Sensor Glove to Detect Grasp Intention for a Wearable Robotic Hand Exoskeleton. , 2020, , .		7
66	Using Wearable Inertial Sensors to Estimate Clinical Scores of Upper Limb Movement Quality in Stroke. Frontiers in Physiology, 2022, 13, 877563.	1.3	7
67	Robot-assisted assessment of vibration perception and localization on the hand. Disability and Rehabilitation: Assistive Technology, 2013, 8, 129-135.	1.3	6
68	Knee Compliance Reduces Peak Swing Phase Collision Forces in a Lower-Limb Exoskeleton Leg: A Test Bench Evaluation. IEEE Transactions on Biomedical Engineering, 2021, 68, 535-544.	2.5	6
69	Personalized prediction of rehabilitation outcomes in multiple sclerosis: a proof-of-concept using clinical data, digital health metrics, and machine learning. Medical and Biological Engineering and Computing, 2022, 60, 249-261.	1.6	6
70	Reliability and validity of digital health metrics for assessing arm and hand impairments in an ataxic disorder. Annals of Clinical and Translational Neurology, 2022, 9, 432-443.	1.7	6
71	Effects of 2D/3D visual feedback and visuomotor collocation on motor performance in a Virtual Peg Insertion Test. , 2012, 2012, 4776-9.		5
72	Tremor analysis with wearable sensors correlates with outcome after thalamic deep brain stimulation. Clinical Parkinsonism & Related Disorders, 2020, 3, 100066.	0.5	5

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73	A survey on the influence of CYBATHLON on the development and acceptance of advanced assistive technologies. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2022, 19, 38.	2.4	5
74	Influence of Arm Weight Support on a Robotic Assessment of Upper Limb Function. , 2018, , .		4
75	An Objective Functional Evaluation of Myoelectrically-Controlled Hand Prostheses: A Pilot Study Using the Virtual Peg Insertion Test. , 2019, 2019, 392-397.		4
76	ReGrasp, a robotic tool to investigate fine motor control and track therapy-induced neuroplasticity. , 2010, , .		3
77	Automated and Quantitative Assessment of Tactile Mislocalization After Stroke. <i>Frontiers in Neurology</i> , 2019, 10, 593.	1.1	3
78	A Method to Evaluate and Improve the Usability of a Robotic Hand Orthosis from the Caregiver Perspective. , 2020, , .		3
79	A low-dimensional representation of arm movements and hand grip forces in post-stroke individuals. <i>Scientific Reports</i> , 2022, 12, 7601.	1.6	3
80	A system for robot-assisted neuro-rehabilitation of hand function. , 2009, , .		2
81	Enhancing simulations with intra-subject variability for improved psychophysical assessments. <i>PLoS ONE</i> , 2018, 13, e0209839.	1.1	2
82	Performance metrics for an application-driven selection and optimization of psychophysical sampling procedures. <i>PLoS ONE</i> , 2018, 13, e0207217.	1.1	2
83	Design and Preliminary Evaluation of a Perturbation-based Robot-assisted Assessment of Hand Sensorimotor Impairments. , 2020, , .		2
84	Detecting motion intention in stroke survivors using autonomic nervous system responses. , 2015, , .		1
85	Investigating Motor Skill Learning Processes with a Robotic Manipulandum. <i>Journal of Visualized Experiments</i> , 2017, , .	0.2	1
86	Age-Dependent Asymmetry of Wrist Position Sense Is Not Influenced by Stochastic Tactile Stimulation. <i>Frontiers in Human Neuroscience</i> , 2020, 14, 65.	1.0	1