Matteo Laffranchi

List of Publications by Year
in descending order

47	2,031	759233 12	888059 17
papers	citations	h-index	g-index

49	49	49	1539
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design and Testing of a Fully-Integrated Electro-Hydrostatic Actuator for Powered Knee Prostheses. Biosystems and Biorobotics, 2022, , 95-100.	0.3	0
2	Clinical evaluation of Hannes: measuring the usability of a novel polyarticulated prosthetic hand. , 2022, , 205-225.		1
3	Exoskeletons in Elderly Healthcare. Studies in Computational Intelligence, 2022, , 353-374.	0.9	3
4	Neuro-Gerontechnologies: Applications and Opportunities. Studies in Computational Intelligence, 2022, , 123-153.	0.9	5
5	From human to robot grasping: force and kinematic synergies. , 2022, , 133-148.		2
6	A Gravity-Compensated Upper-Limb Exoskeleton for Functional Rehabilitation of the Shoulder Complex. Applied Sciences (Switzerland), 2022, 12, 3364.	2.5	16
7	EMG-driven control in lower limb prostheses: a topic-based systematic review. Journal of NeuroEngineering and Rehabilitation, 2022, 19, 43.	4.6	23
8	Benefits of the Cybathlon 2020 experience for a prosthetic hand user: a case study on the Hannes system. Journal of NeuroEngineering and Rehabilitation, 2022, 19, .	4.6	2
9	Miniature EMG Sensors for Prosthetic Applications. , 2021, , .		8
10	Exploring the Embodiment of a Virtual Hand in a Spatially Augmented Respiratory Biofeedback Setting. Frontiers in Neurorobotics, 2021, 15, 683653.	2.8	9
11	FITFES: A Wearable Myoelectrically Controlled Functional Electrical Stimulator Designed Using a User-Centered Approach. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 2142-2152.	4.9	8
12	User-Centered Design and Development of the Modular TWIN Lower Limb Exoskeleton. Frontiers in Neurorobotics, 2021, 15, 709731.	2.8	18
13	Challenges and solutions for application and wider adoption of wearable robots. Wearable Technologies, 2021, 2, .	3.1	23
14	Hannes Prosthesis Control Based on Regression Machine Learning Algorithms. , 2021, , .		10
15	Hybrid Machine Learning-Neuromusculoskeletal Modeling for Control of Lower Limb Prosthetics. , 2020, , .		13
16	Performance Evaluation of Pattern Recognition Algorithms for Upper Limb Prosthetic Applications. , 2020, , .		10
17	Gait patterns generation based on basis functions interpolation for the TWIN lower-limb exoskeleton. , 2020, , .		14
18	The Hannes hand prosthesis replicates the key biological properties of the human hand. Science Robotics, 2020, 5, .	17.6	102

#	Article	IF	Citations
19	An Integrated, Back-Drivable Electro-Hydrostatic Actuator for a Knee Prosthesis. , 2020, , .		3
20	Analysis, Development and Evaluation of Electro-Hydrostatic Technology for Lower Limb Prostheses Applications. , 2020, , .		4
21	Perspectives and Challenges in Robotic Neurorehabilitation. Applied Sciences (Switzerland), 2019, 9, 3183.	2.5	68
22	Technological Approaches for Neurorehabilitation: From Robotic Devices to Brain Stimulation and Beyond. Frontiers in Neurology, 2018, 9, 212.	2.4	49
23	Dynamics and Control of an Anthropomorphic Compliant Arm Equipped With Friction Clutches. IEEE/ASME Transactions on Mechatronics, 2016, 21, 694-707.	5.8	19
24	Variable stiffness actuators: The userâ€™s point of view. International Journal of Robotics Research, 2015, 34, 727-743.	8.5	160
25	Damping control of variable damping compliant actuators. , 2015, , .		12
26	Real-time damping estimation for variable impedance actuators. , 2014, , .		6
27	Physical interaction detection and control of compliant manipulators equipped with friction clutches. , 2014, , .		13
28	Model-free force tracking control of piezoelectric actuators: Application to variable damping actuator. , 2014, , .		15
29	Development and control of a series elastic actuator equipped with a semi active friction damper for human friendly robots. Robotics and Autonomous Systems, 2014, 62, 1827-1836.	5.1	58
30	Variable impedance actuators: A review. Robotics and Autonomous Systems, 2013, 61, 1601-1614.	5.1	822
31	Analysis and Development of a Semiactive Damper for Compliant Actuation Systems. IEEE/ASME Transactions on Mechatronics, 2013, 18, 744-753.	5.8	33
32	Optimal control for maximizing velocity of the CompAct™ compliant actuator. , 2013, , .		19
33	On the stiffness design of intrinsic compliant manipulators. , 2013, , .		17
34	Dynamic modeling and adaptable control of the CompAct™ arm. , 2013, , .		14
35	Link position control of a compliant actuator with unknown transmission friction torque. , 2013, , .		6
36	Variable physical damping actuators (VPDAs): Facilitating the control and improving the performance of compliant actuation systems. , 2012, , .		1

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37	A novel curve fitting based discrete velocity estimator for high performance motion control. , 2012, , .		3
38	The role of physical damping in compliant actuation systems. , 2012, , .		14
39	Variable impedance actuators: Moving the robots of tomorrow. , 2012, , .		36
40	Improving Safety of Human-Robot Interaction Through Energy Regulation Control and Passive Compliant Design. , 2012, , .		3
41	A compact compliant actuator (CompAct™) with variable physical damping. , 2011, , .		49
42	A variable physical damping actuator (VPDA) for compliant robotic joints. , 2010, , .		52
43	The mechanical design of the new lower body for the child humanoid robot ‘iCub’. , 2009, , .		11
44	Antagonistic and series elastic actuators: a comparative analysis on the energy consumption. , 2009, , .		41
45	A compact soft actuator unit for small scale human friendly robots. , 2009, , .		168
46	Safe human robot interaction via energy regulation control. , 2009, , .		56
47	CompAct Arm: a Compliant Manipulator with Intrinsic Variable Physical Damping. , 0, , .		9