Nicola Vitiello

List of Publications by Year
in descending order

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55 papers	3,630 citations	159585 30 h-index	182427 51 g-index
56 all docs	56 docs citations	56 times ranked	3052 citing authors

#	Article	IF	Citations
1	A Novel Torque-Controlled Hand Exoskeleton to Decode Hand Movements Combining Semg and Fingers Kinematics: A Feasibility Study. IEEE Robotics and Automation Letters, 2022, 7, 239-246.	5.1	8
2	A Novel Wavelet-Based Gait Segmentation Method for a Portable Hip Exoskeleton. IEEE Transactions on Robotics, 2022, 38, 1503-1517.	10.3	12
3	Underactuated Soft Hip Exosuit Based on Adaptive Oscillators to Assist Human Locomotion. IEEE Robotics and Automation Letters, 2022, 7, 936-943.	5.1	21
4	Rigid, Soft, Passive, and Active: A Hybrid Occupational Exoskeleton for Bimanual Multijoint Assistance. IEEE Robotics and Automation Letters, 2022, 7, 2557-2564.	5.1	18
5	Exoskeletons for workers: A case series study in an enclosures production line. Applied Ergonomics, 2022, 101, 103679.	3.1	14
6	NESM-Î³: An Upper-Limb Exoskeleton With Compliant Actuators for Clinical Deployment. IEEE Robotics and Automation Letters, 2022, 7, 7708-7715.	5.1	15
7	Real-Time Locomotion Recognition Algorithm for an Active Pelvis Orthosis to Assist Lower-Limb Amputees. IEEE Robotics and Automation Letters, 2022, 7, 7487-7494.	5.1	4
8	Introduction to the Special Section on Wearable Robots. IEEE Transactions on Robotics, 2022, 38, 1338-1342.	10.3	2
9	Kinematics-Based Adaptive Assistance of a Semi-Passive Upper-Limb Exoskeleton for Workers in Static and Dynamic Tasks. IEEE Robotics and Automation Letters, 2022, 7, 8675-8682.	5.1	6
10	Increased Symmetry of Lower-Limb Amputees Walking With Concurrent Bilateral Vibrotactile Feedback. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 74-84.	4.9	20
11	Adaptive Control Method for Dynamic Synchronization of Wearable Robotic Assistance to Discrete Movements: Validation for Use Case of Lifting Tasks. IEEE Transactions on Robotics, 2021, 37, 2193-2209.	10.3	24
12	A Classification Approach Based on Directed Acyclic Graph to Predict Locomotion Activities With One Inertial Sensor on the Thigh. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 436-445.	3.2	8
13	Occupational exoskeletons: A roadmap toward large-scale adoption. Methodology and challenges of bringing exoskeletons to workplaces. Wearable Technologies, 2021, 2, .	3.1	67
14	Capacitive Sensing-Based Continuous Gait Phase Estimation in Robotic Transtibial Prostheses. , 2020, , .		6
15	Design and Experimental Evaluation of a Semi-Passive Upper-Limb Exoskeleton for Workers With Motorized Tuning of Assistance. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2276-2285.	4.9	60
16	Assessment of Intuitiveness and Comfort of Wearable Haptic Feedback Strategies for Assisting Level and Stair Walking. Electronics (Switzerland), 2020, 9, 1676.	3.1	5
17	Performance Evaluation of Lower Limb Exoskeletons: A Systematic Review. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1573-1583.	4.9	105
18	Pressure-Sensitive Insoles for Real-Time Gait-Related Applications. Sensors, 2020, 20, 1448.	3.8	52

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19	An Experimental Evaluation of the Proto-MATE: A Novel Ergonomic Upper-Limb Exoskeleton to Reduce Workers' Physical Strain. IEEE Robotics and Automation Magazine, 2020, 27, 54-65.	2.0	65
20	Perception of Time-Discrete Haptic Feedback on the Waist is Invariant With Gait Events. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1595-1604.	4.9	9
21	Controlling a Robotic Hip Exoskeleton With Noncontact Capacitive Sensors. IEEE/ASME Transactions on Mechatronics, 2019, 24, 2227-2235.	5.8	25
22	Towards methodology and metrics for assessing lumbar exoskeletons in industrial applications. , 2019, , .		13
23	Design and Experimental Characterization of a Shoulder-Elbow Exoskeleton With Compliant Joints for Post-Stroke Rehabilitation. IEEE/ASME Transactions on Mechatronics, 2019, 24, 1485-1496.	5.8	69
24	A novel hand exoskeleton with series elastic actuation for modulated torque transfer. Mechatronics, 2019, 61, 69-82.	3.3	49
25	Gait training using a robotic hip exoskeleton improves metabolic gait efficiency in the elderly. Scientific Reports, 2019, 9, 7157.	3.3	53
26	A Novel Generation of Ergonomic Upper-Limb Wearable Robots: Design Challenges and Solutions. Robotica, 2019, 37, 2056-2072.	1.9	17
27	Design and validation of a miniaturized SEA transmission system. Mechatronics, 2018, 49, 149-156.	3.3	11
28	A Low-Back Exoskeleton can Reduce the Erector Spinae Muscles Activity During Freestyle Symmetrical Load Lifting Tasks. , 2018, , .		12
29	Learning by Demonstration for Motion Planning of Upper-Limb Exoskeletons. Frontiers in Neurorobotics, 2018, 12, 5.	2.8	45
30	A Real-Time Lift Detection Strategy for a Hip Exoskeleton. Frontiers in Neurorobotics, 2018, 12, 17.	2.8	59
31	Feasibility and safety of shared EEG/EOG and vision-guided autonomous whole-arm exoskeleton control to perform activities of daily living. Scientific Reports, 2018, 8, 10823.	3.3	61
32	An oscillator-based smooth real-time estimate of gait phase for wearable robotics. Autonomous Robots, 2017, 41, 759-774.	4.8	95
33	Gait Phase Estimation Based on Noncontact Capacitive Sensing and Adaptive Oscillators. IEEE Transactions on Biomedical Engineering, 2017, 64, 2419-2430.	4.2	60
34	Real-Time Hybrid Locomotion Mode Recognition for Lower Limb Wearable Robots. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2480-2491.	5.8	63
35	Physical human-robot interaction of an active pelvis orthosis: toward ergonomic assessment of wearable robots. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 29.	4.6	30
36	Time-Discrete Vibrotactile Feedback Contributes to Improved Gait Symmetry in Patients With Lower Limb Amputations: Case Series. Physical Therapy, 2017, 97, 198-207.	2.4	76

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37	Walking Assistance Using Artificial Primitives: A Novel Bioinspired Framework Using Motor Primitives for Locomotion Assistance Through a Wearable Cooperative Exoskeleton. IEEE Robotics and Automation Magazine, 2016, 23, 83-95.	2.0	45
38	Feedforward Neural Network for Force Coding of an MRI-Compatible Tactile Sensor Array Based on Fiber Bragg Grating. Journal of Sensors, 2015, 2015, 1-9.	1.1	33
39	Providing Time-Discrete Gait Information by Wearable Feedback Apparatus for Lower-Limb Amputees: Usability and Functional Validation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 250-257.	4.9	74
40	A Powered Fingerâ€“Thumb Wearable Hand Exoskeleton With Self-Aligning Joint Axes. IEEE/ASME Transactions on Mechatronics, 2015, 20, 705-716.	5.8	136
41	Review of assistive strategies in powered lower-limb orthoses and exoskeletons. Robotics and Autonomous Systems, 2015, 64, 120-136.	5.1	566
42	A light-weight active orthosis for hip movement assistance. Robotics and Autonomous Systems, 2015, 73, 123-134.	5.1	210
43	Effects of Lower Limb Length and Body Proportions on the Energy Cost of Overground Walking in Older Persons. Scientific World Journal, The, 2014, 2014, 1-6.	2.1	2
44	Enhancing brain-machine interface (BMI) control of a hand exoskeleton using electrooculography (EOG). Journal of NeuroEngineering and Rehabilitation, 2014, 11, 165.	4.6	65
45	Motor Activity in Aging: An Integrated Approach for Better Quality of Life. International Scholarly Research Notices, 2014, 2014, 1-9.	0.9	3
46	A Wireless Flexible Sensorized Insole for Gait Analysis. Sensors, 2014, 14, 1073-1093.	3.8	180
47	Automated detection of gait initiation and termination using wearable sensors. Medical Engineering and Physics, 2013, 35, 1713-1720.	1.7	92
48	NEUROExos: A Powered Elbow Exoskeleton for Physical Rehabilitation. IEEE Transactions on Robotics, 2013, 29, 220-235.	10.3	225
49	A Flexible Sensor Technology for the Distributed Measurement of Interaction Pressure. Sensors, 2013, 13, 1021-1045.	3.8	75
50	Synthetic and Bio-Artificial Tactile Sensing: A Review. Sensors, 2013, 13, 1435-1466.	3.8	124
51	Controlling Assistive Machines in Paralysis Using Brain Waves and Other Biosignals. Advances in Human-Computer Interaction, 2013, 2013, 1-9.	2.8	17
52	Gait segmentation using bipedal foot pressure patterns. , 2012, , .		28
53	Mechatronic Design and Characterization of the Index Finger Module of a Hand Exoskeleton for Post-Stroke Rehabilitation. IEEE/ASME Transactions on Mechatronics, 2012, 17, 884-894.	5.8	208
54	Humanâ€“Robot Synchrony: Flexible Assistance Using Adaptive Oscillators. IEEE Transactions on Biomedical Engineering, 2011, 58, 1001-1012.	4.2	129

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55	Oscillator-based assistance of cyclical movements: model-based and model-free approaches. Medical and Biological Engineering and Computing, 2011, 49, 1173-1185.	2.8	159