Nicola Vitiello

List of Publications by Year
in descending order

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	Review of assistive strategies in powered lower-limb orthoses and exoskeletons. Robotics and Autonomous Systems, 2015, 64, 120-136.	5.1	566
2	NEUROExos: A Powered Elbow Exoskeleton for Physical Rehabilitation. IEEE Transactions on Robotics, 2013, 29, 220-235.	10.3	225
3	A light-weight active orthosis for hip movement assistance. Robotics and Autonomous Systems, 2015, 73, 123-134.	5.1	210
4	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
5	A Wireless Flexible Sensorized Insole for Gait Analysis. Sensors, 2014, 14, 1073-1093.	3.8	180
6	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
7	A Powered Fingerâ€"Thumb Wearable Hand Exoskeleton With Self-Aligning Joint Axes. IEEE/ASME Transactions on Mechatronics, 2015, 20, 705-716.	5.8	136
8	Humanâ€"Robot Synchrony: Flexible Assistance Using Adaptive Oscillators. IEEE Transactions on Biomedical Engineering, 2011, 58, 1001-1012.	4.2	129
9	Synthetic and Bio-Artificial Tactile Sensing: A Review. Sensors, 2013, 13, 1435-1466.	3.8	124
10	Performance Evaluation of Lower Limb Exoskeletons: A Systematic Review. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1573-1583.	4.9	105
11	An oscillator-based smooth real-time estimate of gait phase for wearable robotics. Autonomous Robots, 2017, 41, 759-774.	4.8	95
12	Automated detection of gait initiation and termination using wearable sensors. Medical Engineering and Physics, 2013, 35, 1713-1720.	1.7	92
13	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
14	A Flexible Sensor Technology for the Distributed Measurement of Interaction Pressure. Sensors, 2013, 13, 1021-1045.	3.8	75
15	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
16	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
17	Occupational exoskeletons: A roadmap toward large-scale adoption. Methodology and challenges of bringing exoskeletons to workplaces. Wearable Technologies, 2021, 2, .	3.1	67
18	Enhancing brain-machine interface (BMI) control of a hand exoskeleton using electrooculography (EOG). Journal of NeuroEngineering and Rehabilitation, 2014, 11, 165.	4.6	65

#	Article	IF	Citations
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	Real-Time Hybrid Locomotion Mode Recognition for Lower Limb Wearable Robots. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2480-2491.	5.8	63
21	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
22	Gait Phase Estimation Based on Noncontact Capacitive Sensing and Adaptive Oscillators. IEEE Transactions on Biomedical Engineering, 2017, 64, 2419-2430.	4.2	60
23	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
24	A Real-Time Lift Detection Strategy for a Hip Exoskeleton. Frontiers in Neurorobotics, 2018, 12, 17.	2.8	59
25	Gait training using a robotic hip exoskeleton improves metabolic gait efficiency in the elderly. Scientific Reports, 2019, 9, 7157.	3.3	53
26	Pressure-Sensitive Insoles for Real-Time Gait-Related Applications. Sensors, 2020, 20, 1448.	3.8	52
27	A novel hand exoskeleton with series elastic actuation for modulated torque transfer. Mechatronics, 2019, 61, 69-82.	3.3	49
28	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
29	Learning by Demonstration for Motion Planning of Upper-Limb Exoskeletons. Frontiers in Neurorobotics, 2018, 12, 5.	2.8	45
30	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
31	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
32	Gait segmentation using bipedal foot pressure patterns. , 2012, , .		28
33	Controlling a Robotic Hip Exoskeleton With Noncontact Capacitive Sensors. IEEE/ASME Transactions on Mechatronics, 2019, 24, 2227-2235.	5.8	25
34	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
35	Underactuated Soft Hip Exosuit Based on Adaptive Oscillators to Assist Human Locomotion. IEEE Robotics and Automation Letters, 2022, 7, 936-943.	5.1	21
36	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

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37	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
38	Controlling Assistive Machines in Paralysis Using Brain Waves and Other Biosignals. Advances in Human-Computer Interaction, 2013, 2013, 1-9.	2.8	17
39	A Novel Generation of Ergonomic Upper-Limb Wearable Robots: Design Challenges and Solutions. Robotica, 2019, 37, 2056-2072.	1.9	17
40	NESM-<i>Î³</i>: An Upper-Limb Exoskeleton With Compliant Actuators for Clinical Deployment. IEEE Robotics and Automation Letters, 2022, 7, 7708-7715.	5.1	15
41	Exoskeletons for workers: A case series study in an enclosures production line. Applied Ergonomics, 2022, 101, 103679.	3.1	14
42	Towards methodology and metrics for assessing lumbar exoskeletons in industrial applications. , 2019, , .		13
43	A Low-Back Exoskeleton can Reduce the Erector Spinae Muscles Activity During Freestyle Symmetrical Load Lifting Tasks. , 2018, , .		12
44	A Novel Wavelet-Based Gait Segmentation Method for a Portable Hip Exoskeleton. IEEE Transactions on Robotics, 2022, 38, 1503-1517.	10.3	12
45	Design and validation of a miniaturized SEA transmission system. Mechatronics, 2018, 49, 149-156.	3.3	11
46	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
47	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
48	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
49	Capacitive Sensing-Based Continuous Gait Phase Estimation in Robotic Transtibial Prostheses. , 2020, , .		6
50	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
51	Assessment of Intuitiveness and Comfort of Wearable Haptic Feedback Strategies for Assisting Level and Stair Walking. Electronics (Switzerland), 2020, 9, 1676.	3.1	5
52	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
53	Motor Activity in Aging: An Integrated Approach for Better Quality of Life. International Scholarly Research Notices, 2014, 2014, 1-9.	0.9	3
54	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

#	Article	IF	Citations
55	Introduction to the Special Section on Wearable Robots. IEEE Transactions on Robotics, 2022, 38, 1338-1342.	10.3	2