Raffaella Carloni

List of Publications by Year
in descending order

50 papers	1,338 citations	759233 12 h-index	752698 20 g-index
50 all docs	50 docs citations	50 times ranked	1200 citing authors

#	Article	IF	Citations
1	Variable Stiffness Actuators: Review on Design and Components. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2418-2430.	5.8	293
2	Energy-Efficient Variable Stiffness Actuators. IEEE Transactions on Robotics, 2011, 27, 865-875.	10.3	200
3	Developing an Aerial Manipulator Prototype: Physical Interaction with the Environment. IEEE Robotics and Automation Magazine, 2014, 21, 41-50.	2.0	129
4	The Variable Stiffness Actuator vsaUT-II: Mechanical Design, Modeling, and Identification. IEEE/ASME Transactions on Mechatronics, 2014, 19, 589-597.	5.8	120
5	Interaction control of an UAV endowed with a manipulator. , 2013, , .		67
6	Variable Stiffness Actuators: A Port-Based Power-Flow Analysis. IEEE Transactions on Robotics, 2012, 28, 1-11.	10.3	52
7	Robot Vision: Obstacle-Avoidance Techniques for Unmanned Aerial Vehicles. IEEE Robotics and Automation Magazine, 2013, 20, 22-31.	2.0	34
8	Lending a helping hand: toward novel assistive robotic arms. IEEE Robotics and Automation Magazine, 2013, 20, 20-29.	2.0	33
9	On Bilateral Teleoperation of Aerial Robots. IEEE Transactions on Robotics, 2014, 30, 258-274.	10.3	32
10	The mVSA-UT: A miniaturized differential mechanism for a continuous rotational variable stiffness actuator. , 2012, , .		30
11	Hierarchical fibrous structures for muscleâ€inspired softâ€actuators: A review. Applied Materials Today, 2020, 20, 100772.	4.3	30
12	IMU-Based Deep Neural Networks: Prediction of Locomotor and Transition Intentions of an Osseointegrated Transfemoral Amputee. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1079-1088.	4.9	20
13	An energy efficient knee locking mechanism for a dynamically walking robot. , 2011, , .		19
14	Variable impedance control for aerial interaction. , 2014, , .		19
15	Bilateral teleoperation of underactuated unmanned aerial vehicles: The virtual slave concept. , 2012, , .		18
16	Autonomous Battery Exchange of UAVs with a Mobile Ground Base. , 2018, , .		18
17	Exploiting the dynamics of a robotic manipulator for control of UAVs. , 2014, , .		17
18	Mechatronic design of the Twente humanoid head. Intelligent Service Robotics, 2011, 4, 107-118.	2.6	16

#	Article	IF	Citations
19	Port-based modeling and control of underactuated aerial vehicles. , 2011, , .		16
20	Kinetic scrolling-based position mapping for haptic teleoperation of unmanned aerial vehicles. , 2012, , .		16
21	Deep Reinforcement Learning for Physics-Based Musculoskeletal Simulations of Healthy Subjects and Transfemoral Prostheses â€™ Users During Normal Walking. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 607-618.	4.9	16
22	A modified impedance control for physical interaction of UAVs. , 2013, , .		15
23	Elastic energy storage in leaf springs for a lever-arm based Variable Stiffness Actuator. , 2016, , .		13
24	Robust control of UAVs using the parameter space approach. , 2016, , .		13
25	Modeling Robotic Manipulators Powered by Variable Stiffness Actuators: A Graph-Theoretic and Port-Hamiltonian Formalism. IEEE Transactions on Robotics, 2017, 33, 807-818.	10.3	11
26	A Variable Stiffness Joint With Electrospun P(VDF-TrFE-CTFE) Variable Stiffness Springs. IEEE Robotics and Automation Letters, 2018, 3, 973-978.	5.1	11
27	Switching-based mapping and control for haptic teleoperation of aerial robots. , 2012, , .		9
28	Musculoskeletal Model of an Osseointegrated Transfemoral Amputee in OpenSim. , 2020, , .		8
29	Towards Poly(vinylidene fluoride-trifluoroethylene-chlorotrifluoroethylene)-Based Soft Actuators: Films and Electrospun Aligned Nanofiber Mats. Nanomaterials, 2021, 11, 172.	4.1	7
30	Mechatronic design of a variable stiffness robotic arm. , 2017, , .		5
31	The effect of morphology on poly(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 267 Td (fluoride-trifluoroethylene-chlorotrifl aligned nanofiber mats. Sensors and Actuators A: Physical, 2022, 333, 113255.	4.1	5
32	IMU-based Deep Neural Networks for Locomotor Intention Prediction. , 2020, , .		5
33	A contribution to haptic teleoperation of aerial vehicles. , 2012, , .		4
34	Variable bipedal walking gait with variable leg stiffness. , 2014, , .		4
35	Switching proportional EMG control of a 3D endpoint arm support for people with duchenne muscular dystrophy. , 2015, , .		4
36	The SHERPA gripper: Grasping of small-scale UAVs. , 2016, , .		4

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37	Bipedal walking gait with variable stiffness knees. , 2014, , .		3
38	A 2-DOF Joint With Coupled Variable Output Stiffness. IEEE Robotics and Automation Letters, 2017, 2, 366-372.	5.1	3
39	Conceptual Design of a Fully Passive Transfemoral Prosthesis to Facilitate Energy-Efficient Gait. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 2360-2366.	4.9	3
40	A Comparative Study of Predictive Models for Nafion-117 IPMC Soft Actuators. , 2021, , .		3
41	Compliance analysis of an under-actuated robotic finger. , 2010, , .		2
42	Limit cycles and stiffness control with variable stiffness actuators. , 2012, , .		2
43	Bilateral human-robot control for semi-autonomous UAV navigation. , 2015, , .		2
44	Control of a variable stiffness joint for catching a moving object. , 2017, , .		2
45	Structural FEA-Based Design and Functionality Verification Methodology of Energy-Storing-and-Releasing Prosthetic Feet. Applied Sciences (Switzerland), 2022, 12, 97.	2.5	2
46	An Adaptive Hybrid Control Architecture for an Active Transfemoral Prosthesis. IEEE Access, 2022, 10, 52008-52019.	4.2	2
47	Optimal event handling by multiple unmanned aerial vehicles. , 2016, , .		1
48	Digital elevation map reconstruction for port-based dynamic simulation of contacts on irregular surfaces. , 2009, , .		0
49	A Polyurethane-based Electrospun Nanofiber Bundle Soft Actuator: Fabrication, Modeling, and Control. , 2021, , .		0
50	The Functionality Verification through Pilot Human Subject Testing of MyFlex-Î´: An ESR Foot Prosthesis with Spherical Ankle Joint. Applied Sciences (Switzerland), 2022, 12, 4575.	2.5	0