Monica Malvezzi

List of Publications by Year
in descending order

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49 papers	1,303 citations	394421 19 h-index	414414 32 g-index
49 all docs	49 docs citations	49 times ranked	945 citing authors

#	Article	IF	Citations
1	Mapping Synergies From Human to Robotic Hands With Dissimilar Kinematics: An Approach in the Object Domain. IEEE Transactions on Robotics, 2013, 29, 825-837.	10.3	115
2	On Motion and Force Controllability of Precision Grasps with Hands Actuated by Soft Synergies. IEEE Transactions on Robotics, 2013, 29, 1440-1456.	10.3	80
3	On the manipulability ellipsoids of underactuated robotic hands with compliance. Robotics and Autonomous Systems, 2012, 60, 337-346.	5.1	75
4	SynGrasp: A MATLAB Toolbox for Underactuated and Compliant Hands. IEEE Robotics and Automation Magazine, 2015, 22, 52-68.	2.0	69
5	The Sixth-Finger: A modular extra-finger to enhance human hand capabilities. , 2014, , .		66
6	Design and development of a 3RRS wearable fingertip cutaneous device. , 2015, , .		62
7	A Three Revolute-Revolute-Spherical Wearable Fingertip Cutaneous Device for Stiffness Rendering. IEEE Transactions on Haptics, 2018, 11, 39-50.	2.7	56
8	Design and preliminary validation of a tool for the simulation of train braking performance. Journal of Modern Transportation, 2013, 21, 247-257.	2.5	46
9	Design and prototyping softâ€“rigid tendon-driven modular grippers using interpenetrating phase composites materials. International Journal of Robotics Research, 2020, 39, 1635-1646.	8.5	45
10	Modeling and Prototyping of an Underactuated Gripper Exploiting Joint Compliance and Modularity. IEEE Robotics and Automation Letters, 2018, 3, 2854-2861.	5.1	43
11	Design of the Passive Joints of Underactuated Modular Soft Hands for Fingertip Trajectory Tracking. IEEE Robotics and Automation Letters, 2017, 2, 2008-2015.	5.1	42
12	The hBracelet: A Wearable Haptic Device for the Distributed Mechanotactile Stimulation of the Upper Limb. IEEE Robotics and Automation Letters, 2018, 3, 2198-2205.	5.1	42
13	A Modular Wearable Finger Interface for Cutaneous and Kinesthetic Interaction: Control and Evaluation. IEEE Transactions on Industrial Electronics, 2020, 67, 706-716.	7.9	39
14	A soft supernumerary robotic finger and mobile arm support for grasping compensation and hemiparetic upper limb rehabilitation. Robotics and Autonomous Systems, 2017, 93, 1-12.	5.1	35
15	Human augmentation by wearable supernumerary robotic limbs: review and perspectives. Progress in Biomedical Engineering, 2021, 3, 042005.	4.9	31
16	Odometric estimation for automatic train protection and control systems. Vehicle System Dynamics, 2011, 49, 723-739.	3.7	29
17	On Grasp Quality Measures: Grasp Robustness and Contact Force Distribution in Underactuated and Compliant Robotic Hands. IEEE Robotics and Automation Letters, 2017, 2, 329-336.	5.1	27
18	Identification of a wheelâ€“rail adhesion coefficient from experimental data during braking tests. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2013, 227, 128-139.	2.0	24

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19	Soft finger tactile rendering for wearable haptics. , 2015, , .		24
20	Compliant gripper design, prototyping, and modeling using screw theory formulation. International Journal of Robotics Research, 2021, 40, 55-71.	8.5	23
21	The Closure Signature: A Functional Approach to Model Underactuated Compliant Robotic Hands. IEEE Robotics and Automation Letters, 2018, 3, 2206-2213.	5.1	21
22	Design, Development, and Control of a Hand/Wrist Exoskeleton for Rehabilitation and Training. IEEE Transactions on Robotics, 2022, 38, 1472-1488.	10.3	21
23	Design of Multiple Wearable Robotic Extra Fingers for Human Hand Augmentation. Robotics, 2019, 8, 102.	3.5	20
24	Simulation of braking performance: The AnsaldoBreda EMU V250 application. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2015, 229, 160-172.	2.0	19
25	Hand closure model for planning top grasps with soft robotic hands. International Journal of Robotics Research, 2020, 39, 1706-1723.	8.5	19
26	Design of Soft Grippers with Modular Actuated Embedded Constraints. Robotics, 2020, 9, 105.	3.5	19
27	Multicontact Bilateral Telemanipulation With Kinematic Asymmetries. IEEE/ASME Transactions on Mechatronics, 2017, 22, 445-456.	5.8	18
28	Design and Prototype of Supernumerary Robotic Finger (SRF) Inspired by Fin RayÂ® Effect for Patients Suffering from Sensorimotor Hand Impairment. , 2019, , .		18
29	Evaluation of grasp stiffness in underactuated compliant hands. , 2013, , .		17
30	The Role of Closed-Loop Hand Control in Handshaking Interactions. IEEE Robotics and Automation Letters, 2019, 4, 878-885.	5.1	16
31	Accessible Educational Resources for Teaching and Learning Robotics. Robotics, 2021, 10, 38.	3.5	16
32	Modeling and Prototyping of a Soft Prosthetic Hand Exploiting Joint Compliance and Modularity. , 2018, , .		13
33	Exploiting Robot Hand Compliance and Environmental Constraints for Edge Grasps. Frontiers in Robotics and AI, 2019, 6, 135.	3.2	13
34	A numerical model of a HIL scaled roller rig for simulation of wheelâ€"rail degraded adhesion condition. Vehicle System Dynamics, 2012, 50, 775-804.	3.7	12
35	On the role of stiffness design for fingertip trajectories of underactuated modular soft hands. , 2017, , .		12
36	Modelling the human touch: A basic study for haptic technology. Tribology International, 2022, 166, 107352.	5.9	11

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37	Design, Development, and Control of a Tendon-actuated Exoskeleton for Wrist Rehabilitation and Training. , 2020, , .		10
38	Modeling compliant grasps exploiting environmental constraints. , 2015, , .		9
39	Design of Personalized Wearable Haptic Interfaces to Account for Fingertip Size and shape. IEEE Transactions on Haptics, 2021, 14, 266-272.	2.7	8
40	Design and Prototyping of an Underactuated Hand Exoskeleton With Fingers Coupled by a Gear-Based Differential. Frontiers in Robotics and AI, 2022, 9, 862340.	3.2	7
41	The Wavejoints: A Novel Methodology to Design Soft-Rigid Grippers Made by Monolithic 3D Printed Fingers with Adjustable Joint Stiffness. , 2022, , .		7
42	Grasping With the SoftPad, a Soft Sensorized Surface for Exploiting Environmental Constraints With Rigid Grippers. IEEE Robotics and Automation Letters, 2020, 5, 3884-3891.	5.1	6
43	Modeling a Sensorized Soft Layer for Adding Compliance to the Environment in Robotic Manipulation. Mechanisms and Machine Science, 2021, , 370-377.	0.5	4
44	A Numerical Procedure Based on Orowanâ€™s Theory for Predicting the Behavior of the Cold Rolling Mill Process in Full Film Lubrication. Lubricants, 2020, 8, 2.	2.9	3
45	Design of a Wearable Haptic Device for Hand Palm Cutaneous Feedback. Frontiers in Robotics and AI, 2021, 8, 706627.	3.2	3
46	Evaluation of Grasp Stiffness inÂUnderactuated Compliant Hands Exploiting Environment Constraints. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2019, , 409-416.	0.6	3
47	A methodology to evaluate contact areas and indentations of human fingertips based on 3D techniques for haptic purposes. MethodsX, 2022, 9, 101781.	1.6	3
48	Cooperative Human-Robot Grasping With Extended Contact Patches. IEEE Robotics and Automation Letters, 2020, 5, 3121-3128.	5.1	2
49	Exploiting VR and AR Technologies in Education and Training to Inclusive Robotics. Studies in Computational Intelligence, 2021, , 115-126.	0.9	0