Cecilia Laschi

List of Publications by Citations

319 papers	8,853 citations	42 h-index	87 g-index
361 ext. papers	11,274 ext. citations	4 avg, IF	6.7 L-index

#	Paper	IF	Citations
319	Soft robotics: a bioinspired evolution in robotics. *Trends in Biotechnology*, **2013**, 31, 287-94	15.1	1140
318	Soft robotics: Technologies and systems pushing the boundaries of robot abilities. *Science Robotics*, **2016**, 1,	18.6	605
317	Soft Robot Arm Inspired by the Octopus. *Advanced Robotics*, **2012**, 26, 709-727	1.7	565
316	Biomedical applications of soft robotics. *Nature Reviews Materials*, **2018**, 3, 143-153	73.3	437
315	An octopus-bioinspired solution to movement and manipulation for soft robots. *Bioinspiration and Biomimetics*, **2011**, 6, 036002	2.6	265
314	Control Strategies for Soft Robotic Manipulators: A Survey. *Soft Robotics*, **2018**, 5, 149-163	9.2	220
313	Dynamic Model of a Multibending Soft Robot Arm Driven by Cables. *IEEE Transactions on Robotics*, **2014**, 30, 1109-1122	6.5	212
312	Soft Robotics: New Perspectives for Robot Bodyware and Control. *Frontiers in Bioengineering and Biotechnology*, **2014**, 2, 3	5.8	208
311	A Bioinspired Soft Robotic Gripper for Adaptable and Effective Grasping. *Soft Robotics*, **2015**, 2, 107-116	9.2	195
310	Soft robot perception using embedded soft sensors and recurrent neural networks. *Science Robotics*, **2019**, 4,	18.6	189
309	Design of a biomimetic robotic octopus arm. *Bioinspiration and Biomimetics*, **2009**, 4, 015006	2.6	165
308	Soft-robotic arm inspired by the octopus: II. From artificial requirements to innovative technological solutions. *Bioinspiration and Biomimetics*, **2012**, 7, 025005	2.6	160
307	Bioinspired locomotion and grasping in water: the soft eight-arm OCTOPUS robot. *Bioinspiration and Biomimetics*, **2015**, 10, 035003	2.6	142
306	STIFF-FLOP surgical manipulator: Mechanical design and experimental characterization of the single module **2013**,		140
305	A 3D steady-state model of a tendon-driven continuum soft manipulator inspired by the octopus arm. *Bioinspiration and Biomimetics*, **2012**, 7, 025006	2.6	127
304	Soft Robotics: Challenges and Perspectives. *Procedia Computer Science*, **2011**, 7, 99-102	1.6	122
303	Fundamentals of soft robot locomotion. *Journal of the Royal Society Interface*, **2017**, 14,	4.1	115

302	Design concept and validation of a robotic arm inspired by the octopus. *Materials Science and Engineering C*, **2011**, 31, 1230-1239	8.3	112
301	. *IEEE Transactions on Robotics*, **2015**, 31, 823-834	6.5	105
300	Model-Based Reinforcement Learning for Closed-Loop Dynamic Control of Soft Robotic Manipulators. *IEEE Transactions on Robotics*, **2019**, 35, 124-134	6.5	93
299	MOVAID: a personal robot in everyday life of disabled and elderly people. *Technology and Disability*, **1999**, 10, 77-93	0.7	85
298	Educational Robotics intervention on Executive Functions in preschool children: A pilot study. *Computers in Human Behavior*, **2017**, 71, 16-23	7.7	79
297	Distinct neural systems involved in agency and animacy detection. *Journal of Cognitive Neuroscience* , **2011**, 23, 1911-20	3.1	75
296	Design for Acceptability: Improving Robots Coexistence in Human Society. *International Journal of Social Robotics*, **2010**, 2, 451-460	4	74
295	Humanoids and personal robots: Design and experiments. *Journal of Field Robotics*, **2001**, 18, 673-690		73
294	Soft robotic arm inspired by the octopus: I. From biological functions to artificial requirements. *Bioinspiration and Biomimetics*, **2012**, 7, 025004	2.6	72
293	A new design methodology of electrostrictive actuators for bio-inspired robotics. *Sensors and Actuators B: Chemical*, **2009**, 142, 288-297	8.5	55
292	A feed-forward neural network learning the inverse kinetics of a soft cable-driven manipulator moving in three-dimensional space **2013**,		53
291	Bioinspired Soft Actuation System Using Shape Memory Alloys. *Actuators*, **2014**, 3, 226-244	2.4	52
290	Learning dynamic models for open loop predictive control of soft robotic manipulators. *Bioinspiration and Biomimetics*, **2017**, 12, 066003	2.6	50
289	Towards the development of a soft manipulator as an assistive robot for personal care of elderly people. *International Journal of Advanced Robotic Systems*, **2017**, 14, 172988141668713	1.4	49
288	Connecting Artificial Brains to Robots in a Comprehensive Simulation Framework: The Neurorobotics Platform. *Frontiers in Neurorobotics*, **2017**, 11, 2	3.4	48
287	Learning Closed Loop Kinematic Controllers for Continuum Manipulators in Unstructured Environments. *Soft Robotics*, **2017**, 4, 285-296	9.2	48
286	A general method for the design and fabrication of shape memory alloy active spring actuators. *Smart Materials and Structures*, **2012**, 21, 115029	3.4	47
285	How safe are service robots in urban environments? Bullying a robot **2010**,		46

284	Robotics as a future and emerging technology: biomimetics, cybernetics, and neuro-robotics in European projects. *IEEE Robotics and Automation Magazine*, **2005**, 12, 29-45	3.4	46
283	Multiobjective Optimization for Stiffness and Position Control in a Soft Robot Arm Module. *IEEE Robotics and Automation Letters*, **2018**, 3, 108-115	4.2	46
282	. *IEEE/ASME Transactions on Mechatronics*, **2007**, 12, 1-11	5.5	45
281	Design and development of a soft robotic gripper for manipulation in minimally invasive surgery: a proof of concept. *Meccanica*, **2015**, 50, 2855-2863	2.1	44
280	Dynamics of underwater legged locomotion: modeling and experiments on an octopus-inspired robot. *Bioinspiration and Biomimetics*, **2015**, 10, 046012	2.6	44
279	An experimental study on compliance control for a redundant personal robot arm. *Robotics and Autonomous Systems*, **2003**, 44, 101-129	3.5	44
278	Biomimetic Vortex Propulsion: Toward the New Paradigm of Soft Unmanned Underwater Vehicles. *IEEE/ASME Transactions on Mechatronics*, **2013**, 18, 484-493	5.5	43
277	Underwater soft-bodied pulsed-jet thrusters: Actuator modeling and performance profiling. *International Journal of Robotics Research*, **2016**, 35, 1308-1329	5.7	39
276	Stable Open Loop Control of Soft Robotic Manipulators. *IEEE Robotics and Automation Letters*, **2018** , 3, 1292-1298	4.2	37
275	. *IEEE Robotics and Automation Magazine*, **2016**, 23, 107-114	3.4	37
274	A two dimensional inverse kinetics model of a cable driven manipulator inspired by the octopus arm **2012**,		37
273	Soft assistive robot for personal care of elderly people **2016**,		36
272	Design and development of a soft robot with crawling and grasping capabilities **2012**,		36
271	A miniaturized and flexible optoelectronic sensing system for tactile skin. *Journal of Micromechanics and Microengineering*, **2007**, 17, 2288-2298	2	35
270	. *IEEE/ASME Transactions on Mechatronics*, **2011**, 16, 201-212	5.5	33
269	Learning the inverse kinetics of an octopus-like manipulator in three-dimensional space. *Bioinspiration and Biomimetics*, **2015**, 10, 035006	2.6	32
268	Bioinspired underwater legged robot for seabed exploration with low environmental disturbance. *Science Robotics*, **2020**, 5,	18.6	31
267	Design and development of a soft robotic octopus arm exploiting embodied intelligence **2012**,		30

266	Non-invasive study of Octopus vulgaris arm morphology using ultrasound. *Journal of Experimental Biology*, **2011**, 214, 3727-31	3	29
265	Hybrid parameter identification of a multi-modal underwater soft robot. *Bioinspiration and Biomimetics*, **2017**, 12, 025007	2.6	28
264	Evolving Soft Locomotion in Aquatic and Terrestrial Environments: Effects of Material Properties and Environmental Transitions. *Soft Robotics*, **2018**, 5, 475-495	9.2	27
263	Modelling cephalopod-inspired pulsed-jet locomotion for underwater soft robots. *Bioinspiration and Biomimetics*, **2015**, 10, 055005	2.6	27
262	The HydroNet ASV, a Small-Sized Autonomous Catamaran for Real-Time Monitoring of Water Quality: From Design to Missions at Sea. *IEEE Journal of Oceanic Engineering*, **2015**, 40, 710-726	3.3	27
261	DustCart, an autonomous robot for door-to-door garbage collection: From DustBot project to the experimentation in the small town of Peccioli **2011**,		26
260	Fast estimation of Gaussian mixture models for image segmentation. *Machine Vision and Applications*, **2012**, 23, 773-789	2.8	25
259	Modelling the nonlinear response of fibre-reinforced bending fluidic actuators. *Smart Materials and Structures*, **2016**, 25, 105020	3.4	24
258	Soft Robotics on the Move: Scientific Networks, Activities, and Future Challenges. *Soft Robotics*, **2014**, 1, 154-158	9.2	24
257	A vision for future bioinspired and biohybrid robots. *Science Robotics*, **2020**, 5,	18.6	23
256	A unified multi-soft-body dynamic model for underwater soft robots. *International Journal of Robotics Research*, **2018**, 37, 648-666	5.7	23
255	A general mechanical model for tendon-driven continuum manipulators **2012**,		23
254	Study and fabrication of bioinspired Octopus arm mockups tested on a multipurpose platform **2010** ,		23
253	Prospects of brain□machine interfaces for space system control. *Acta Astronautica*, **2009**, 64, 448-456	2.9	23
252	Hopping on Uneven Terrains With an Underwater One-Legged Robot. *IEEE Robotics and Automation Letters*, **2016**, 1, 461-468	4.2	22
251	Longitudinal study of unimanual actions and grasping forces during infancy. *Research in Social and Administrative Pharmacy*, **2012**, 35, 205-14	2.9	22
250	Sensorization of continuum soft robots for reconstructing their spatial configuration **2012**,		22
249	The plant as a biomechatronic system. *Plant Signaling and Behavior*, **2010**, 5, 90-3	2.5	21

248	Learning Global Inverse Kinematics Solutions for a Continuum Robot. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2016**, 47-54	0.6	20
247	Design and development of a bio-inspired, under-actuated soft gripper. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 3619-22	0.9	19
246	DESIGN AND DEVELOPMENT OF FIVE-FINGERED HANDS FOR A HUMANOID EMOTION EXPRESSION ROBOT. *International Journal of Humanoid Robotics*, **2007**, 04, 181-206	1.2	19
245	Novelty-Based Evolutionary Design of Morphing Underwater Robots **2015**,		18
244	Learning Global Inverse Statics Solution for a Redundant Soft Robot **2016**,		18
243	A Multiagent Reinforcement Learning approach for inverse kinematics of high dimensional manipulators with precision positioning **2016**,		17
242	Development and characterization of a multilayer matrix textile sensor for interface pressure measurements. *Smart Materials and Structures*, **2017**, 26, 104011	3.4	17
241	Realization of biped walking on soft ground with stabilization control based on gait analysis **2012**,		17
240	Octopus-inspired sensorimotor control of a multi-arm soft robot **2012**,		17
239	A bio-inspired predictive sensory-motor coordination scheme for robot reaching and preshaping. *Autonomous Robots*, **2008**, 25, 85-101	3	17
238	Design and experiments on a personal robotic assistant. *Advanced Robotics*, **1999**, 13, 153-169	1.7	17
237	Model-based open loop control of a multigait legged underwater robot. *Mechatronics*, **2018**, 55, 162-170	3	17
236	Conduction Electrohydrodynamics with Mobile Electrodes: A Novel Actuation System for Untethered Robots. *Advanced Science*, **2017**, 4, 1600495	13.6	16
235	A Digital Hardware Realization for Spiking Model of Cutaneous Mechanoreceptor. *Frontiers in Neuroscience*, **2018**, 12, 322	5.1	16
234	Warp-Knitted Textile as a Strain Sensor: Characterization Procedure and Application in a Comfortable Wearable Goniometer. *IEEE Sensors Journal*, **2017**, 17, 5927-5936	4	16
233	An approach to integrated tactile perception		16
232	I-Support: A robotic platform of an assistive bathing robot for the elderly population. *Robotics and Autonomous Systems*, **2020**, 126, 103451	3.5	15
231	Actuation Technologies for Soft Robot Grippers and Manipulators: A Review. *Current Robotics Reports*, **2021**, 2, 355-369	3.5	15

230	Measurements of octopus arm elongation: Evidence of differences by body size and gender. *Journal of Experimental Marine Biology and Ecology*, **2013**, 447, 160-164	2.1	14
229	An Investigation on Legal Regulations for Robot Deployment in Urban Areas: A Focus on Italian Law. *Advanced Robotics*, **2010**, 24, 1901-1917	1.7	14
228	Bio-inspired grasp control in a robotic hand with massive sensorial input. *Biological Cybernetics*, **2009**, 100, 109-28	2.8	14
227	Design and Development of a Legged Rat Robot for Studying Animal-Robot Interaction		14
226	Expected perception: an anticipation-based perception-action scheme in robots		14
225	Pressure mapping with textile sensors for compression therapy monitoring. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2016**, 230, 795-808	1.7	13
224	Structural Dynamics of a Pulsed-Jet Propulsion System for Underwater Soft Robots. *International Journal of Advanced Robotic Systems*, **2015**, 12, 68	1.4	13
223	Self-adaptive Gaussian mixture models for real-time video segmentation and background subtraction **2010**,		13
222	Adaptable semi-autonomy in personal robots		13
221	Integrating Feedback and Predictive Control in a Bio-Inspired Model of Visual Pursuit Implemented on a Humanoid Robot. *Lecture Notes in Computer Science*, **2015**, 256-267	0.9	13
220	Head stabilization in a humanoid robot: models and implementations. *Autonomous Robots*, **2017**, 41, 349-365	3	12
219	Electrohydrodynamic Conduction Pump with Asymmetrical Electrode Structures in the Microchannels. *Chemistry Letters*, **2017**, 46, 950-952	1.7	12
218	An Under-Actuated and Adaptable Soft Robotic Gripper. *Lecture Notes in Computer Science*, **2015**, 64-74	0.9	12
217	Soft Robotics [TC Spotlight]. *IEEE Robotics and Automation Magazine*, **2013**, 20, 24-95	3.4	12
216	Adaptive visual pursuit involving eye-head coordination and prediction of the target motion **2014**,		12
215	Changes on EMG activation in healthy subjects and incomplete SCI patients following a robot-assisted locomotor training. *IEEE International Conference on Rehabilitation Robotics*, **2011**, 2011, 5975467	1.3	12
214	A comparison between two bio-inspired adaptive models of Vestibulo-Ocular Reflex (VOR) implemented on the iCub robot **2010**,		12
213	Behavior switching using reservoir computing for a soft robotic arm **2012**,		12

212	Development of the functional unit of a completely soft octopus-like robotic arm **2012**,		12
211	An Anthropomorphic Robotic Head for Investigating Gaze Control. *Advanced Robotics*, **2008**, 22, 57-89	1.7	12
210	A mechatronic platform for early diagnosis of neurodevelopmental disorders. *Advanced Robotics*, **2007**, 21, 1131-1150	1.7	12
209	Bipedal Walking of an Octopus-Inspired Robot. *Lecture Notes in Computer Science*, **2014**, 35-46	0.9	12
208	Evolutionary discovery of self-stabilized dynamic gaits for a soft underwater legged robot **2015**,		11
207	. *IEEE Sensors Journal*, **2018**, 18, 6327-6336	4	11
206	A Framework for Coupled Simulations of Robots and Spiking Neuronal Networks. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2017**, 85, 71-91	2.9	11
205	Thrust depletion at high pulsation frequencies in underactuated, soft-bodied, pulsed-jet vehicles **2015**,		11
204	**2011**,		11
203	**2006**,		11
202	. *IEEE Robotics and Automation Magazine*, **2020**, 27, 12-26	3.4	11
201	. *IEEE/ASME Transactions on Mechatronics*, **2019**, 24, 109-119	5.5	11
200	Locomotion and elastodynamics model of an underwater shell-like soft robot **2015**,		10
199	A comprehensive gaze stabilization controller based on cerebellar internal models. *Bioinspiration and Biomimetics*, **2017**, 12, 065001	2.6	10
198	Adhesion Mechanisms Inspired by Octopus Suckers. *Procedia Computer Science*, **2011**, 7, 192-193	1.6	10
197	Do Service Robots Need a Driving License? [Industrial Activities]. *IEEE Robotics and Automation Magazine*, **2011**, 18, 12-13	3.4	10
196	Design of a Sensorized Ball for Ecological Behavioral Analysis of Infants. *Proceedings - IEEE International Conference on Robotics and Automation*, **2007**,		10
195	Soft Robotics Research, Challenges, and Innovation Potential, Through Showcases **2015**, 255-264		9

194	Large deformation of self-oscillating polymer gel. *Physical Review E*, **2016**, 93, 010501	2.4	9
193	CareToy: An Intelligent Baby Gym: Home-Based Intervention for Infants at Risk for Neurodevelopmental Disorders. *IEEE Robotics and Automation Magazine*, **2016**, 23, 63-72	3.4	9
192	Active suction cup actuated by ElectroHydroDynamics phenomenon **2017**,		9
191	Evolutionary Developmental Soft Robotics As a Framework to Study Intelligence and Adaptive Behavior in Animals and Plants. *Frontiers in Robotics and AI*, **2017**, 4,	2.8	9
190	Towards a neuromorphic vestibular system. *IEEE Transactions on Biomedical Circuits and Systems*, **2014**, 8, 669-80	5.1	9
189	An autonomous water monitoring and sampling system for small-sized ASV operations **2012**,		9
188	Sensing device for measuring infants grasping actions. *Sensors and Actuators A: Physical*, **2011**, 165, 155-163	3.9	9
187	Design and development of "biomechatronic gym" for early detection of neurological disorders in infants. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 3414-7	0.9	9
186	Biped walking stabilization on soft ground based on gait analysis **2012**,		9
185	Bioinspired velocity control of fast gaze shifts on a robotic anthropomorphic head. *Autonomous Robots*, **2008**, 25, 37-58	3	9
184			9
183	Contest-Driven Soft-Robotics Boost: The RoboSoft Grand Challenge. *Frontiers in Robotics and AI*, **2016**, 3,	2.8	9
182	Morphologically induced stability on an underwater legged robot with a deformable body. *International Journal of Robotics Research*, **2021**, 40, 435-448	5.7	9
181	Octobot - A robot octopus points the way to soft robotics. *IEEE Spectrum*, **2017**, 54, 38-43	1.7	8
180	Morphological and control criteria for self-stable underwater hopping. *Bioinspiration and Biomimetics*, **2017**, 13, 016001	2.6	8
179	Design and development of a sensorized wireless toy for measuring infants' manual actions. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2013**, 21, 444-53	4.8	8
178	Active-Braid, a Bioinspired Continuum Manipulator. *IEEE Robotics and Automation Letters*, **2017**, 2, 2104-2110	4.1	8
177	An elastic pulsed-jet thruster for Soft Unmanned Underwater Vehicles **2013**,		8

176	A Model of the Smooth Pursuit Eye Movement with Prediction and Learning. *Applied Bionics and Biomechanics*, **2010**, 7, 109-118	1.6	8
175	Towards development of biomechatronic tools for early diagnosis of neurodevelopmental disorders. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 3242-5		8
174	Implementing robotic grasping tasks using a biological approach		8
173	Design and Development of a Soft Actuator for a Robot Inspired by the Octopus Arm. *Springer Tracts in Advanced Robotics*, **2009**, 25-33	0.5	8
172	Biologically-Inspired Microfabricated Force and Position Mechano-Sensors **2003**, 109-125		8
171	Evaluation of the Electroglottographic signal variability by amplitude-speed combined analysis. *Biomedical Signal Processing and Control*, **2017**, 37, 61-68	4.9	7
170	Early Intervention to Improve Sucking in Preterm Newborns: A Systematic Review of Quantitative Studies. *Advances in Neonatal Care*, **2019**, 19, 97-109	2	7
169	Pleasant to the Touch: By Emulating Nature, Scientists Hope to Find Innovative New Uses for Soft Robotics in Health-Care Technology. *IEEE Pulse*, **2016**, 7, 34-7	0.7	7
168	Underwater running on uneven terrain **2015**,		7
167	A novel simulator for mechanical ventilation in newborns: MEchatronic REspiratory System SImulator for Neonatal Applications. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2015**, 229, 581-91	1.7	7
166	Sensorized toys for measuring manipulation capabilities of infants at home. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 7390-3	0.9	7
165	Head stabilization based on a feedback error learning in a humanoid robot **2012**,		7
164	Implementation of a bio-inspired visual tracking model on the iCub robot **2010**,		7
163	Using trunk compensation to model head stabilization during locomotion **2011**,		7
162	Tools and methods for experimental in-vivo measurement and biomechanical characterization of an Octopus vulgaris arm. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 7196-9	0.9	7
161	Predictive tracking across occlusions in the iCub robot **2009**,		7
160	An Anthropomorphic Robotic Platform for Progressive and Adaptive Sensorimotor Learning. *Advanced Robotics*, **2008**, 22, 91-118	1.7	7
159	Compliant control for a cable-actuated anthropomorphic robot arm: an experimental validation of different solutions		7

158	An integrated approach for the design and development of a grasping and manipulation system in humanoid robotics		7
157	Humans and technologies at home: from friendly appliances to robotic interfaces		7
156	Roadmap on soft robotics: multifunctionality, adaptability and growth without borders. *Multifunctional Materials*,	5.2	7
155	A Locomotion Strategy for an Octopus-Bioinspired Robot. *Lecture Notes in Computer Science*, **2012**, 337-338	0.9	7
154	A Cerebellum-Inspired Learning Approach for Adaptive and Anticipatory Control. *International Journal of Neural Systems*, **2020**, 30, 1950028	6.2	7
153	Adaptive gaze stabilization through cerebellar internal models in a humanoid robot **2016**,		7
152	Sensorized pacifier to evaluate non-nutritive sucking in newborns. *Medical Engineering and Physics*, **2016**, 38, 398-402	2.4	7
151	Feasibility study on the assessment of auditory sustained attention through walking motor parameters in mild cognitive impairments and healthy subjects. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 897-900	0.9	6
150	A ROV for supporting the planned maintenance in underwater archaeological sites **2015**,		6
149	A method for the calculation of the effective Center of Mass of humanoid robots **2011**,		6
148	Implementation of a human model for head stabilization on a humanoid platform **2012**,		6
147	Biomechatronic Design and Development of a Legged Rat Robot **2007**,		6
146	Scientific models and ethical issues in hybrid bionic systems research. *AI and Society*, **2008**, 22, 431-448	2.1	6
145	**2004**,		6
144	A novel wearable interface for robotic hand prostheses		6
143	A Robotic Head Neuro-controller Based on Biologically-Inspired Neural Models		6
142	Functional compliance in the control of a personal robot		6
141	Exploiting Morphology of a Soft Manipulator for Assistive Tasks. *Lecture Notes in Computer Science*, **2017**, 291-301	0.9	6

140	Experimental and Computational Study on Motor Control and Recovery After Stroke: Toward a Constructive Loop Between Experimental and Virtual Embodied Neuroscience. *Frontiers in Systems Neuroscience*, **2020**, 14, 31	3.5	6
139	Helping robots blend into the background. *Science*, **2017**, 358, 169	33.3	5
138	Foot Inertial Sensing for Combined Cognitive-Motor Exercise of the Sustained Attention Domain. *IEEE Transactions on Biomedical Engineering*, **2019**, 66, 2413-2420	5	5
137	Evolving Optimal Swimming in Different Fluids: A Study Inspired by batoid Fishes. *Lecture Notes in Computer Science*, **2014**, 23-34	0.9	5
136	A new system for quantitative evaluation of infant gaze capabilities in a wide visual field. *BioMedical Engineering OnLine*, **2015**, 14, 83	4.1	5
135	A visual tracking model implemented on the iCub robot as a use case for a novel neurorobotic toolkit integrating brain and physics simulation **2015**,		5
134	The Robot DustCart. *IEEE Robotics and Automation Magazine*, **2011**, 18, 59-67	3.4	5
133	Development of the hybrid wheel-legged mobile robot WR-3 designed to interact with rats **2010**,		5
132	**2010**,		5
131	RobotCub implementation of real-time least-square fitting of ellipses **2008**,		5
130	Bio-inspired sensory-motor coordination. *Autonomous Robots*, **2008**, 25, 1-2	3	5
129	Extension to End-effector Position and Orientation Control of a Learning-based Neurocontroller for a Humanoid Arm **2006**,		5
128	Biorobotic investigation on the muscle structure of an octopus tentacle. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2007**, 2007, 1471-4		5
127	Sensors and actuators for 'humanoid' robots. *Advanced Robotics*, **1996**, 11, 567-584	1.7	5
126	An Autonomous Water Monitoring and Sampling System for Small-Sized ASVs. *IEEE Journal of Oceanic Engineering*, **2016**, 1-8	3.3	5
125	Surveying and cleaning plastic pollution in the sediment: SILVER+ approach **2019**,		5
124	Combining Evolutionary and Adaptive Control Strategies for Quadruped Robotic Locomotion. *Frontiers in Neurorobotics*, **2019**, 13, 71	3.4	4
123	Emergence of behavior through morphology: a case study on an octopus inspired manipulator. *Bioinspiration and Biomimetics*, **2019**, 14, 034001	2.6	4

122	Locomotory behaviour of the intertidal marble crab (Pachygrapsus marmoratus) supports the underwater spring-loaded inverted pendulum as a fundamental model for punting in animals. *Bioinspiration and Biomimetics*, **2020**, 15, 055004	2.6	4
121	A Multi-soft-body Dynamic Model for Underwater Soft Robots. *Springer Proceedings in Advanced Robotics*, **2018**, 143-160	0.6	4
120	Cerebellum-inspired approach for adaptive kinematic control of soft robots **2019**,		4
119	Early Stage Economic Evaluation of Caretoy System for Early Intervention In Preterm Infants At Risk of Neurodevelopmental Disorders. *Value in Health*, **2015**, 18, A358	3.3	4
118	Real-Time 3D Stereo Tracking and Localizing of Spherical Objects with the iCub Robotic Platform. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2011**, 63, 417-446	2.9	4
117	An Algorithm for the Least Square-Fitting of Ellipses **2010**,		4
116	Design and development of biomimetic quadruped robot for behavior studies of rats and mice. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 7192-5	0.9	4
115	Instrumented toys for studying power and precision grasp forces in infants. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 2017-20	0.9	4
114	A robotic implementation of a bio-inspired head motion stabilization model on a humanoid platform **2012**,		4
113	A modular and distributed supervisory system for a semi-autonomous personal robot for household applications		4
112	A Bio-inspired Neural Sensory-Motor Coordination Scheme for Robot Reaching and Preshaping		4
111			4
110	Biomechanical modeling of semicircular canals for fabricating a biomimetic vestibular system. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 1758-61		4
109	A novel wearable foot interface for controlling robotic hands **2005**,		4
108	Forward speed control of a pulsed-jet soft-bodied underwater vehicle **2013**,		4
107	Development and validation of a sensorized neonatal intubation skill trainer for simulation based education enhancement. *International Journal of Medical Research and Health Sciences*, **2014**, 3, 833		4
106	Retina Color-Opponency Based Pursuit Implemented Through Spiking Neural Networks in the Neurorobotics Platform. *Lecture Notes in Computer Science*, **2016**, 16-27	0.9	4
105	A bistable soft gripper with mechanically embedded sensing and actuation for fast grasping **2020**,		4

104	Point-to-point motion controller for soft robotic manipulators **2016**,		4
103	Can physical and cognitive training based on episodic memory be combined in a new protocol for daily training?. *Aging Clinical and Experimental Research*, **2019**, 31, 1615-1623	4.8	4
102	Comparative performances analysis of neonatal ventilators. *Italian Journal of Pediatrics*, **2015**, 41, 9	3.2	3
101	Eye-Head Stabilization Mechanism for a Humanoid Robot Tested on Human Inertial Data. *Lecture Notes in Computer Science*, **2016**, 341-352	0.9	3
100	An active one-lobe pulmonary simulator with compliance control for medical training in neonatal mechanical ventilation. *Journal of Clinical Monitoring and Computing*, **2014**, 28, 251-60	2	3
99	A rotating polarizing filter approach for image enhancement **2017**,		3
98	An active simulator for neonatal intubation: Design, development and assessment. *Medical Engineering and Physics*, **2017**, 39, 57-65	2.4	3
97	Development and testing of a new cognitive technological tool for episodic memory: A feasibility study. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 893-896	0.9	3
96	A biorobotic model of the human larynx. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 3623-6	0.9	3
95	A Feed Forward Neural Network for Solving the Inverse Kinetics of Non-Constant Curvature Soft Manipulators Driven by Cables **2013**,		3
94	MEchatronic REspiratory System SImulator for Neonatal Applications (MERESSINA) project: a novel bioengineering goal. *Medical Devices: Evidence and Research*, **2013**, 6, 115-21	1.5	3
93	A Biomimetic, Swimming Soft Robot Inspired by the Octopus Vulgaris. *Lecture Notes in Computer Science*, **2012**, 349-351	0.9	3
92	A preliminary study of a robotic probe for soil exploration inspired by plant root apexes **2008**,		3
91	A novel technological approach towards the early diagnosis of neurodevelopmental disorders. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2008**, 2008, 4875-8	0.9	3
90	A Bio-inspired Neuro-Controller for an Anthropomorphic Head-Arm Robotic System		3
89	Bio-inspired control of eye-head coordination in a robotic anthropomorphic head		3
88	Visuo-motor coordination of a humanoid robot head with human-like vision in face tracking		3
87	An impedance-compliance control for a cable-actuated robot		3

86	An anthropomorphic robotic platform for experimental validation of biologically-inspired sensory-motor co-ordination in grasping		3
85	An anthropomorphic model of sensory-motor co-ordination of manipulation for robots. *Lecture Notes in Control and Information Sciences*, **1998**, 659-674	0.5	3
84	Comparison of electroglottographic variability index in euphonic and pathological voice. *Acta Otorhinolaryngologica Italica*, **2019**, 39, 381-388	2.8	3
83	Dynamic Model of a Jet-Propelled Soft Robot Inspired by the Octopus Mantle. *Lecture Notes in Computer Science*, **2014**, 261-272	0.9	3
82	Soft Robotics and Morphological Computation [From the Guest Editors]. *IEEE Robotics and Automation Magazine*, **2016**, 23, 28-29	3.4	3
81	Induced Vibrations of Soft Robotic Manipulators for Controller Design and Stiffness Estimation **2018**,		3
80	Sharpness recognition based on synergy between bio-inspired nociceptors and tactile mechanoreceptors. *Scientific Reports*, **2021**, 11, 2109	4.9	3
79	Dynamic Walking with a Soft Limb Robot. *Lecture Notes in Computer Science*, **2015**, 13-25	0.9	2
78	An improved tracking algorithm for underwater vessels using the passive sonar **2016**,		2
77	Correcting for changes: expected perception-based control for reaching a moving target. *IEEE Robotics and Automation Magazine*, **2016**, 23, 63-70	3.4	2
76	Emotion as an emergent phenomenon of the neurocomputational energy regulation mechanism of a cognitive agent in a decision-making task. *Adaptive Behavior*, **2019**, 105971231988064	1.1	2
75	Swinging paper actuator driven by conduction electrohydrodynamics **2017**,		2
74	Proprioceptive Feedback through a Neuromorphic Muscle Spindle Model. *Frontiers in Neuroscience*, **2017**, 11, 341	5.1	2
73	Cryo-scanning electron microscopy investigation of the Octopus Vulgaris arm structures for the design of an octopus-like arm artefact. *Microscopy Research and Technique*, **2015**, 78, 1133-45	2.8	2
72	A systematic method for dynamic modeling and identification of a small-sized autonomous surface vehicle using simulated annealing techniques **2013**,		2
71	Anticipatory visual perception as a bio-inspired mechanism underlying robot locomotion. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 3206-9	0.9	2
70	Unsupervised Greedy Learning of Finite Mixture Models **2010**,		2
69	Forward models applied in visual servoing for a reaching task in the iCub humanoid robot. *Applied Bionics and Biomechanics*, **2009**, 6, 345-354	1.6	2

68	A comparison of human trajectory planning models for implementation on humanoid robot **2012**,		2
67	Towards the Early Diagnosis of Neurodevelopmental Disorders: a Novel Technological Approach **2008**,		2
66	Forward Model Creation for Visual Servoing in a Six Link Manipulator **2008**,		2
65	Gaze Interface: Utilizing Human Predictive Gaze Movements for Controlling a HBS **2008**,		2
64	A Micro-Optical Transducer for Sensing Applications. *International Journal of Optomechatronics*, **2008**, 2, 361-381	3.5	2
63	Biomechanical study on the sensorial epithelium of otolithic organs for creating a biomimetic sensor. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2007** , 2007, 4667-70		2
62	Guest Editorial Special Issue on Human-Robot Interaction **2007**, 23, 837-839		2
61	A bio-inspired sensory-motor neural model for a neuro-robotic manipulation platform		2
60	Sensory feedback exploitation for robot-assisted exploration of the spinal cord		2
59	Reach and Grasp for an Anthropomorphic Robotic System based on Sensorimotor Learning **2006**,		2
58	From Robotic Tele-Operation to Tele-Presence through Natural Interfaces		2
57	Experimental analysis of the conditions of applicability of a robot sensorimotor coordination scheme based on expected perception		2
56	Design and development of a neurorobotic human-like 'guinea pig'		2
55	Experimental comparative evaluation of compliant control schemes for an anthropomorphic personal robot **2002**,		2
54	Experimental validation of functional compliance in an anthropomorphic personal robot		2
53	A Vestibular Interface for Natural Control of Steering in the Locomotion of Robotic Artifacts: Preliminary Experiments **2007**, 537-551		2
52			2
51	Neural Networks Learning the Inverse Kinetics of an Octopus-Inspired Manipulator in Three-Dimensional Space. *Lecture Notes in Computer Science*, **2013**, 378-380	0.9	2

50	A Digital Hardware System for Spiking Network of Tactile Afferents. *Frontiers in Neuroscience*, **2019**, 13, 1330	5.1	2
49	Modeling the Encoding of Saccade Kinematic Metrics in the Purkinje Cell Layer of the Cerebellar Vermis. *Frontiers in Computational Neuroscience*, **2018**, 12, 108	3.5	2
48	The Challenge of Studying Interaction in Children with Autism Spectrum Disorder during Play Activity with a Robotic Platform. *Journal of Developmental and Physical Disabilities*, **2020**, 32, 113-129	1.5	2
47	Quantitative Measurements of Octopus vulgaris Arms for Bioinspired Soft Robotics. *Cognitive Systems Monographs*, **2020**, 3-14	0.2	2
46	Recurrence quantification analysis of EEG signals for tactile roughness discrimination. *International Journal of Machine Learning and Cybernetics*, **2021**, 12, 1115-1136	3.8	2
45	Structured motor exploration for adaptive learning-based tracking in soft robotic manipulators **2019**,		1
44	The Soft Robotics Week: A New Yearly Event for the Community of Soft Robotics. *Soft Robotics*, **2015**, 2, 88-90	9.2	1
43	Neural dynamics and sliding mode integration for the guidance of unmanned surface vehicles **2015**,		1
42	Soft Robotics: from scientific challenges to technological applications **2016**,		1
41	Effect of base rotation on the controllability of a redundant soft robotic arm **2018**,		1
40	Sense of movement: Simplifying principles for humanoid robots. *Science Robotics*, **2017**, 2,	18.6	1
39	A pressure-sensitive palatograph for speech analysis. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 4431-4434	0.9	1
38	Octopus-inspired robotics. Preface. *Bioinspiration and Biomimetics*, **2015**, 10, 030301	2.6	1
37	A multi-depth sensorised micro sampling system **2015**,		1
36	Sensorized pacifier to quantify the rhythmicity of non-nutritive sucking: A preliminary study on newborns. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 7398-401	0.9	1
35	An in-situ, real-time Device for Hg Monitoring in Deep Waters **2015**,		1
34	**2014**,		1
33	Analysis of a dielectric EAP as smart component for a neonatal respiratory simulator. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2013**, 2013, 457-60	0.9	1

32	Development of a novel quadruped mobile robot for behavior analysis of rats **2010**,		1
31	Methods and tools for the anatomical study and experimental in vivo measurement of the Octopus vulgaris arm for biomimetic design **2010**,		1
30	Inverse and Direct Model of a Continuum Manipulator Inspired by the Octopus Arm. *Lecture Notes in Computer Science*, **2012**, 347-348	0.9	1
29	A model of the smooth pursuit eye movement with prediction and learning. *Applied Bionics and Biomechanics*, **2010**, 7, 109-118	1.6	1
28	A mechatronic toy for measuring infants grasping development **2008**,		1
27	Neurophysiological Models of Gaze Control in Humanoid Robotics **2009**,		1
26	Interfacing Neural and Artificial Systems: From Neuroengineering to Neurorobotics421-431		1
25			1
24	Closed-loop Dynamic Control of a Soft Manipulator using Deep Reinforcement Learning. *IEEE Robotics and Automation Letters*, **2022**, 1-1	4.2	1
23	Biorobotics490-520		1
22	Visual Target Sequence Prediction via Hierarchical Temporal Memory Implemented on the iCub Robot. *Lecture Notes in Computer Science*, **2016**, 119-130	0.9	1
21	Cerebellar adaptive mechanisms explain the optimal control of saccadic eye movements. *Bioinspiration and Biomimetics*, **2020**, 16, 016004	2.6	1
20	A Closed Loop Shape Control for Bio-inspired Soft Arms. *Lecture Notes in Computer Science*, **2017**, 567-573	0.9	1
19	Evaluation of the Electroglottographic Signal Variability in Organic and Functional Dysphonia. *Journal of Voice*, **2020**,	1.9	1
18	Conductive Silicone Vocal Folds Reproducing Electroglottographic Signal in Pathophysiological Conditions. *IEEE Transactions on Medical Robotics and Bionics*, **2021**, 3, 337-348	3.1	1
17	Sequential decision making based on emergent emotion for a humanoid robot **2016**,		1
16	Making an Opportunity Out of a Crisis: The Inclusive Approach of the Italian Robotics Community. *IEEE Robotics and Automation Magazine*, **2021**, 2-14	3.4	1
15	Robotics Responds to the COVID-19 Outbreak [From the Guest Editors]. *IEEE Robotics and Automation Magazine*, **2021**, 28, 16-17	3.4	1

14	Controlling Soft Robotic Arms Using Continual Learning. *IEEE Robotics and Automation Letters*, **2022**, 7, 5469-5476	4.2	1
13	Sensorized graspable devices for the study of motor imitation in infants. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 7394-7	0.9	0
12	A Solar-Powered Amphibian Robot for Aquatic Monitoring Network. *Lecture Notes in Computer Science*, **2008**, 1145-1154	0.9	0
11	Bioinspired materials and approaches for soft robotics. *MRS Bulletin*, **2021**, 46, 345-349	3.2	0
10	Learning to stop: a unifying principle for legged locomotion in varying environments. *Royal Society Open Science*, **2021**, 8, 210223	3.3	0
9	Spike train analysis in a digital neuromorphic system of cutaneous mechanoreceptor. *Neurocomputing*, **2020**, 379, 343-355	5.4	0
8	The Use of Smart Tools for Combined Training of People with MCI: A Case Report. *Lecture Notes in Electrical Engineering*, **2019**, 121-134	0.2	
7	Biorobotics1613-1643		
6	Real-Time Least-Square Fitting of Ellipses Applied to the RobotCub Platform. *Lecture Notes in Computer Science*, **2008**, 270-282	0.9	
5	Experiments on Oscillation Control of a Continuum Soft Robotic Manipulator. *Lecture Notes in Mechanical Engineering*, **2021**, 557-571	0.4	
4	Bio-inspired Design of an Artificial Muscular-Hydrostat Unit for Soft Robotic Systems. *Lecture Notes in Computer Science*, **2012**, 375-376	0.9	
3	The Italy□apan Workshop: A History of Bilateral Cooperation, Pushing the Boundaries of Robotics. *IEEE Robotics and Automation Magazine*, **2021**, 28, 150-162	3.4	
2	Modeling Vestibular Afferents for Neuromorphic Sensing and Eye Movement Control. *Lecture Notes in Networks and Systems*, **2022**, 142-153	0.5	
1	Soft Robotics. *Intelligent Systems, Control and Automation: Science and Engineering*, **2022**, 115-136	0.6	