Egidio Falotico

List of Publications by Year
in descending order

70	1,754	567281 15	315739 38
papers	citations	h-index	g-index

73	73	73	1378
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Control Strategies for Soft Robotic Manipulators: A Survey. Soft Robotics, 2018, 5, 149-163.	8.0	412
2	Model-Based Reinforcement Learning for Closed-Loop Dynamic Control of Soft Robotic Manipulators. IEEE Transactions on Robotics, 2019, 35, 124-134.	10.3	228
3	Connecting Artificial Brains to Robots in a Comprehensive Simulation Framework: The Neurorobotics Platform. Frontiers in Neurorobotics, 2017, 11, 2.	2.8	102
4	Learning dynamic models for open loop predictive control of soft robotic manipulators. Bioinspiration and Biomimetics, 2017, 12, 066003.	2.9	96
5	Learning Closed Loop Kinematic Controllers for Continuum Manipulators in Unstructured Environments. Soft Robotics, 2017, 4, 285-296.	8.0	84
6	Multiobjective Optimization for Stiffness and Position Control in a Soft Robot Arm Module. IEEE Robotics and Automation Letters, 2018, 3, 108-115.	5.1	82
7	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.	2.1	72
8	Stable Open Loop Control of Soft Robotic Manipulators. IEEE Robotics and Automation Letters, 2018, 3, 1292-1298.	5.1	60
9	Hopping on Uneven Terrains With an Underwater One-Legged Robot. IEEE Robotics and Automation Letters, 2016, 1, 461-468.	5.1	33
10	Learning Global Inverse Kinematics Solutions for a Continuum Robot. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, , 47-54.	0.6	28
11	Learning Global Inverse Statics Solution for a Redundant Soft Robot. , 2016, , .		28
12	A Multiagent Reinforcement Learning approach for inverse kinematics of high dimensional manipulators with precision positioning. , 2016, , .		25
13	A Digital Hardware Realization for Spiking Model of Cutaneous Mechanoreceptor. Frontiers in Neuroscience, 2018, 12, 322.	2.8	25
14	Closed-Loop Dynamic Control of a Soft Manipulator Using Deep Reinforcement Learning. IEEE Robotics and Automation Letters, 2022, 7, 4741-4748.	5.1	24
15	Realization of biped walking on soft ground with stabilization control based on gait analysis. , 2012, , .		23
16	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.	2.5	23
17	A Biomimetic Control Method Increases the Adaptability of a Humanoid Robot Acting in a Dynamic Environment. Frontiers in Neurorobotics, 2019, 13, 70.	2.8	18
18	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.	1.3	17

#	Article	IF	Citations
19	A comparison between two bio-inspired adaptive models of Vestibulo-Ocular Reflex (VOR) implemented on the iCub robot. , 2010, , .		16
20	A Framework for Coupled Simulations of Robots and Spiking Neuronal Networks. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 85, 71-91.	3.4	16
21	Adaptive visual pursuit involving eye-head coordination and prediction of the target motion. , 2014, , .		15
22	Head stabilization in a humanoid robot: models and implementations. Autonomous Robots, 2017, 41, 349-365.	4.8	14
23	A Cerebellar Internal Models Control Architecture for Online Sensorimotor Adaptation of a Humanoid Robot Acting in a Dynamic Environment. IEEE Robotics and Automation Letters, 2020, 5, 80-87.	5.1	14
24	A Model of the Smooth Pursuit Eye Movement with Prediction and Learning. Applied Bionics and Biomechanics, 2010, 7, 109-118.	1.1	13
25	A comprehensive gaze stabilization controller based on cerebellar internal models. Bioinspiration and Biomimetics, 2017, 12, 065001.	2.9	13
26	A Cerebellum-Inspired Learning Approach for Adaptive and Anticipatory Control. International Journal of Neural Systems, 2020, 30, 1950028.	5.2	13
27	Biped walking stabilization on soft ground based on gait analysis. , 2012, , .		12
28	Implementation of a bio-inspired visual tracking model on the iCub robot. , 2010, , .		11
29	Running Large-Scale Simulations on the Neurorobotics Platform to Understand Vision â€“ The Case of Visual Crowding. Frontiers in Neurorobotics, 2019, 13, 33.	2.8	11
30	Cerebellum-inspired approach for adaptive kinematic control of soft robots. , 2019, , .		11
31	Emotion as an emergent phenomenon of the neurocomputational energy regulation mechanism of a cognitive agent in a decision-making task. Adaptive Behavior, 2021, 29, 55-71.	1.9	11
32	Predictive tracking across occlusions in the iCub robot. , 2009, , .		10
33	Sequential decision making based on emergent emotion for a humanoid robot. , 2016, , .		10
34	Proprioceptive Feedback through a Neuromorphic Muscle Spindle Model. Frontiers in Neuroscience, 2017, 11, 341.	2.8	10
35	Reaching and Grasping Movements in Parkinsonâ€™s Disease: A Review. Journal of Parkinson's Disease, 2022, 12, 1083-1113.	2.8	10
36	Head stabilization based on a feedback error learning in a humanoid robot. , 2012, , .		9

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37	A visual tracking model implemented on the iCub robot as a use case for a novel neurorobotic toolkit integrating brain and physics simulation. , 2015, , .		9
38	Adaptive gaze stabilization through cerebellar internal models in a humanoid robot. , 2016, , .		9
39	Combining Evolutionary and Adaptive Control Strategies for Quadruped Robotic Locomotion. Frontiers in Neurorobotics, 2019, 13, 71.	2.8	9
40	Recurrence quantification analysis of EEG signals for tactile roughness discrimination. International Journal of Machine Learning and Cybernetics, 2021, 12, 1115-1136.	3.6	9
41	Sharpness recognition based on synergy between bio-inspired nociceptors and tactile mechanoreceptors. Scientific Reports, 2021, 11, 2109.	3.3	9
42	Using trunk compensation to model head stabilization during locomotion. , 2011, , .		8
43	Emergence of behavior through morphology: a case study on an octopus inspired manipulator. Bioinspiration and Biomimetics, 2019, 14, 034001.	2.9	8
44	Controlling Soft Robotic Arms Using Continual Learning. IEEE Robotics and Automation Letters, 2022, 7, 5469-5476.	5.1	8
45	A robotic implementation of a bio-inspired head motion stabilization model on a humanoid platform. , 2012, , .		7
46	Modeling the Encoding of Saccade Kinematic Metrics in the Purkinje Cell Layer of the Cerebellar Vermis. Frontiers in Computational Neuroscience, 2018, 12, 108.	2.1	6
47	A Digital Hardware System for Spiking Network of Tactile Afferents. Frontiers in Neuroscience, 2019, 13, 1330.	2.8	6
48	Retina Color-Opponency Based Pursuit Implemented Through Spiking Neural Networks in the Neurorobotics Platform. Lecture Notes in Computer Science, 2016, , 16-27.	1.3	6
49	Exploiting Morphology of a Soft Manipulator for Assistive Tasks. Lecture Notes in Computer Science, 2017, , 291-301.	1.3	6
50	Cerebellar adaptive mechanisms explain the optimal control of saccadic eye movements. Bioinspiration and Biomimetics, 2021, 16, 016004.	2.9	5
51	Point-to-point motion controller for soft robotic manipulators. , 2016, , .		4
52	Eye-Head Stabilization Mechanism for a Humanoid Robot Tested on Human Inertial Data. Lecture Notes in Computer Science, 2016, , 341-352.	1.3	4
53	Induced Vibrations of Soft Robotic Manipulators for Controller Design and Stiffness Estimation. , 2018, , .		4
54	Closed loop control of a braided-structure continuum manipulator with hybrid actuation based on learning models. , 2019, , .		4

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55	Spike train analysis in a digital neuromorphic system of cutaneous mechanoreceptor. Neurocomputing, 2020, 379, 343-355.	5.9	4
56	Brain-inspired meta-reinforcement learning cognitive control in conflictual inhibition decision-making task for artificial agents. Neural Networks, 2022, 154, 283-302.	5.9	4
57	A model of the smooth pursuit eye movement with prediction and learning. Applied Bionics and Biomechanics, 2010, 7, 109-118.	1.1	3
58	Correcting for changes: expected perception-based control for reaching a moving target. IEEE Robotics and Automation Magazine, 2016, 23, 63-70.	2.0	3
59	Intelligent Position, Pressure and Depth Sensing in a Soft Optical Waveguide Skin. , 2019, , .		3
60	A Closed Loop Shape Control for Bio-inspired Soft Arms. Lecture Notes in Computer Science, 2017, , 567-573.	1.3	3
61	Open-loop Model-free Dynamic Control of a Soft Manipulator for Tracking Tasks. , 2021, , .		3
62	Cubic spline regression based enhancement of side-scan sonar imagery. , 2017, , .		2
63	Structured motor exploration for adaptive learning-based tracking in soft robotic manipulators. , 2019, , .		2
64	Robust Fractional-Order Control Using a Decoupled Pitch and Roll Actuation Strategy for the I-Support Soft Robot. Mathematics, 2021, 9, 702.	2.2	2
65	Visual Target Sequence Prediction via Hierarchical Temporal Memory Implemented on the iCub Robot. Lecture Notes in Computer Science, 2016, , 119-130.	1.3	2
66	A bio-inspired model of visual pursuit combining feedback and predictive control for a humanoid robot. , 2015, , .		1
67	Sense of movement: Simplifying principles for humanoid robots. Science Robotics, 2017, 2, .	17.6	1
68	Towards in-silico robotic post-stroke rehabilitation for mice. , 2019, , .		1
69	Multimodal Sensory Representation for Object Classification via Neocortically-inspired Algorithm. , 2018, , .		0
70	Experiments on Oscillation Control of a Continuum Soft Robotic Manipulator. Lecture Notes in Mechanical Engineering, 2021, , 557-571.	0.4	0