Jamie Paik

List of Publications by Year
in descending order

99 papers	3,575 citations	186209 28 h-index	168321 53 g-index
102 all docs	102 docs citations	102 times ranked	2943 citing authors

#	Article	IF	Citations
1	Lattice-and-Plate Model: Mechanics Modeling of Physical Origami Robots. Soft Robotics, 2023, 10, 149-158.	4.6	3
2	3PAC: A Plug-and-Play System for Distributed Power Sharing and Communication in Modular Robots. IEEE/ASME Transactions on Mechatronics, 2022, 27, 858-867.	3.7	2
3	Haptigami: A Fingertip Haptic Interface With Vibrotactile and 3-DoF Cutaneous Force Feedback. IEEE Transactions on Haptics, 2022, 15, 131-141.	1.8	11
4	3D Printed Motor-Sensory Module Prototype for Facial Rehabilitation. Soft Robotics, 2022, 9, 354-363.	4.6	3
5	Kirigami Design and Modeling for Strong, Lightweight Metamaterials. Advanced Functional Materials, 2022, 32, .	7.8	16
6	Flexure Variable Stiffness Actuators. Advanced Intelligent Systems, 2022, 4, .	3.3	2
7	Soft pneumatic actuator-driven origami-inspired modular robotic â€œpneumagamiâ€. International Journal of Robotics Research, 2021, 40, 72-85.	5.8	34
8	Pneumatic Supply System Parameter Optimization for Soft Actuators. Soft Robotics, 2021, 8, 152-163.	4.6	31
9	Hybrid Control Strategy for Force and Precise End Effector Positioning of a Twisted String Actuator. IEEE/ASME Transactions on Mechatronics, 2021, 26, 2791-2802.	3.7	13
10	Soft Touch using Soft Pneumatic Actuatorâ€“Skin as a Wearable Haptic Feedback Device. Advanced Intelligent Systems, 2021, 3, 2000168.	3.3	19
11	Robotic Muscular Assistance-As-Needed for Physical and Training/Rehabilitation Tasks: Design and Experimental Validation of a Closed-Loop Myoelectric Control in Grounded and Wearable Applications. Springer Proceedings in Advanced Robotics, 2021, , 16-30.	0.9	0
12	Soft Bionic Sensors and Actuators. Advanced Intelligent Systems, 2021, 3, 2100003.	3.3	3
13	Generalized modeling of origami folding joints. Extreme Mechanics Letters, 2021, 45, 101213.	2.0	19
14	A 4D printed active compliant hinge for potential space applications using shape memory alloys and polymers. Smart Materials and Structures, 2021, 30, 085004.	1.8	20
15	CMOSâ€inspired Complementary Fluidic Circuits for Soft Robots. Advanced Science, 2021, 8, e2100924.	5.6	21
16	Flow Path Optimization for Soft Pneumatic Actuators: Towards Optimal Performance and Portability. IEEE Robotics and Automation Letters, 2021, 6, 7949-7956.	3.3	13
17	Closed-Loop Position Control of a Self-Sensing 3-DoF Origami Module With Pneumatic Actuators. IEEE Robotics and Automation Letters, 2021, 6, 8213-8220.	3.3	11
18	Compact Pneumatic Clutch With Integrated Stiffness Variation and Position Feedback. IEEE Robotics and Automation Letters, 2021, 6, 5697-5704.	3.3	7

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19	Variable Stiffness Folding Joints for Haptic Feedback. , 2021, , .		4
20	Closed-Loop Haptic Feedback Control Using a Self-Sensing Soft Pneumatic Actuator Skin. Soft Robotics, 2020, 7, 22-29.	4.6	98
21	Multimodal pipe-climbing robot with origami clutches and soft modular legs. Bioinspiration and Biomimetics, 2020, 15, 026002.	1.5	19
22	An Actuation Fault Tolerance Approach to Reconfiguration Planning of Modular Self-folding Robots. , 2020, , .		2
23	Ori-Pixel, a Multi-DoFs Origami Pixel for Modular Reconfigurable Surfaces. IEEE Robotics and Automation Letters, 2020, 5, 6988-6995.	3.3	7
24	Age-Dependent Asymmetry of Wrist Position Sense Is Not Influenced by Stochastic Tactile Stimulation. Frontiers in Human Neuroscience, 2020, 14, 65.	1.0	1
25	Stretchable Kirigami Components for Composite Meso-Scale Robots. IEEE Robotics and Automation Letters, 2020, 5, 1883-1890.	3.3	19
26	Hinges for origami-inspired structures by multimaterial additive manufacturing. Materials and Design, 2020, 191, 108643.	3.3	23
27	A sEMG-Driven Soft ExoSuit Based on Twisted String Actuators for Elbow Assistive Applications. IEEE Robotics and Automation Letters, 2020, 5, 4094-4101.	3.3	45
28	Programmable Fluidic Networks Design for Robotic Origami Sequential Self-Folding. , 2019, , .		9
29	Multi-DoF Force Characterization of Soft Actuators. IEEE Robotics and Automation Letters, 2019, 4, 3679-3686.	3.3	13
30	Designing minimal and scalable insect-inspired multi-locomotion millirobots. Nature, 2019, 571, 381-386.	13.7	154
31	Bi-modal control of vacuum-powered soft pneumatic actuators with embedded liquid metal-based strain sensitive skin. , 2019, , .		4
32	Mechanics of a pressure-controlled adhesive membrane for soft robotic gripping on curved surfaces. Extreme Mechanics Letters, 2019, 30, 100485.	2.0	17
33	Automatic Couplings With Mechanical Overload Protection for Modular Robots. IEEE/ASME Transactions on Mechatronics, 2019, 24, 1420-1426.	3.7	8
34	RoboScallop: A Bivalve Inspired Swimming Robot. IEEE Robotics and Automation Letters, 2019, 4, 2078-2085.	3.3	21
35	Guest Editorial Focused Section on Soft Actuators, Sensors, and Components (SASC). IEEE/ASME Transactions on Mechatronics, 2019, 24, 1-4.	3.7	2
36	Design of Low-Profile Compliant Transmission Mechanisms. , 2019, , .		3

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37	A portable three-degrees-of-freedom force feedback origami robot for humanâ€“robot interactions. Nature Machine Intelligence, 2019, 1, 584-593.	8.3	56
38	Single chamber multiple degree-of-freedom soft pneumatic actuator enabled by adjustable stiffness layers. Smart Materials and Structures, 2019, 28, 035012.	1.8	22
39	Modular Reconfigurable Robotics. Annual Review of Control, Robotics, and Autonomous Systems, 2019, 2, 63-88.	7.5	76
40	Optimal Distribution of Active Modules in Reconfiguration Planning of Modular Robots. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	8
41	A Compact Modular Soft Surface With Reconfigurable Shape and Stiffness. IEEE/ASME Transactions on Mechatronics, 2019, 24, 16-24.	3.7	22
42	A reconfiguration strategy for modular robots using origami folding. International Journal of Robotics Research, 2019, 38, 73-89.	5.8	29
43	Minimally Actuated Transformation of Origami Machines. IEEE Robotics and Automation Letters, 2018, 3, 1426-1433.	3.3	25
44	Design Methodology for Constructing Multimaterial Origami Robots and Machines. IEEE Transactions on Robotics, 2018, 34, 151-165.	7.3	69
45	Soft robot design methodology for â€˜push-buttonâ€™ manufacturing. Nature Reviews Materials, 2018, 3, 81-83.	23.3	23
46	A reconfigurable interactive interface for controlling robotic origami in virtual environments. International Journal of Robotics Research, 2018, 37, 629-647.	5.8	14
47	Towards Peak Torque Minimization for Modular Self-Folding Robots. , 2018, , .		2
48	Low-inertia vacuum-powered soft pneumatic actuator coil characterization and design methodology. , 2018, , .		10
49	Modeling vacuum bellows soft pneumatic actuators with optimal mechanical performance. , 2018, , .		35
50	An any-resolution pressure localization scheme using a soft capacitive sensor skin. , 2018, , .		11
51	An Origami-Inspired Reconfigurable Suction Gripper for Picking Objects With Variable Shape and Size. IEEE Robotics and Automation Letters, 2018, 3, 2894-2901.	3.3	60
52	Rehabilitative Soft Exoskeleton for Rodents. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 107-118.	2.7	12
53	Algorithm for architectural origami. Nature, 2017, 541, 296-297.	13.7	4
54	JammJoint: A Variable Stiffness Device Based on Granular Jamming for Wearable Joint Support. IEEE Robotics and Automation Letters, 2017, 2, 849-855.	3.3	80

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55	Mori: A Modular Origami Robot. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2153-2164.	3.7	113
56	Stiffness Control With Shape Memory Polymer in Underactuated Robotic Origamis. IEEE Transactions on Robotics, 2017, 33, 765-777.	7.3	91
57	A Low Profile Electromagnetic Actuator Design and Model for an Origami Parallel Platform. Journal of Mechanisms and Robotics, 2017, 9, .	1.5	24
58	An under-actuated origami gripper with adjustable stiffness joints for multiple grasp modes. Smart Materials and Structures, 2017, 26, 055035.	1.8	56
59	New soft robots really suck: Vacuum-powered systems empower diverse capabilities. Science Robotics, 2017, 2, .	9.9	253
60	Grasp Mode and Compliance Control of an Underactuated Origami Gripper Using Adjustable Stiffness Joints. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2165-2173.	3.7	93
61	Will robots be bodies with brains or brains with bodies?. Science Robotics, 2017, 2, .	9.9	19
62	Design and Computational Modeling of a Modular, Compliant Robotic Assembly for Human Lumbar Unit and Spinal Cord Assistance. Scientific Reports, 2017, 7, 14391.	1.6	32
63	Soft Pneumatic Actuator Fascicles for High Force and Reliability. Soft Robotics, 2017, 4, 23-32.	4.6	113
64	Soft pneumatic gelatin actuator for edible robotics. , 2017, , .		66
65	Tribot: A deployable, self-righting and multi-locomotive origami robot. , 2017, , .		15
66	Soft actuation and sensing towards robot-assisted facial rehabilitation. , 2017, , .		4
67	Practical control methods for vacuum driven soft actuator modules. , 2017, , .		7
68	The Effect of the Phase Angle between the Forewing and Hindwing on the Aerodynamic Performance of a Dragonfly-Type Ornithopter. Aerospace, 2016, 3, 4.	1.1	14
69	Soft Pneumatic Actuator Skin with Piezoelectric Sensors for Vibrotactile Feedback. Frontiers in Robotics and AI, 2016, 2, .	2.0	69
70	Design and Analysis of a Soft Pneumatic Actuator with Origami Shell Reinforcement. Soft Robotics, 2016, 3, 109-119.	4.6	170
71	A Novel Torsional Shape Memory Alloy Actuator: Modeling, Characterization, and Control. IEEE Robotics and Automation Magazine, 2016, 23, 65-74.	2.2	34
72	Stretchable Materials for Robust Soft Actuators towards Assistive Wearable Devices. Scientific Reports, 2016, 6, 34224.	1.6	146

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73	Modeling, Design, and Development of Soft Pneumatic Actuators with Finite Element Method. Advanced Engineering Materials, 2016, 18, 978-988.	1.6	192
74	Soft pneumatic actuator with adjustable stiffness layers for Multi-DoF Actuation. , 2015, , .		47
75	The design and control of the multi-modal locomotion origami robot, Tribot. , 2015, , .		36
76	Robogami: A Fully Integrated Low-Profile Robotic Origami. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	81
77	Soft piezoresistive sensor model and characterization with varying design parameters. Sensors and Actuators A: Physical, 2015, 233, 158-168.	2.0	32
78	An under actuated robotic arm with adjustable stiffness shape memory polymer joints. , 2015, , .		21
79	The Design and Modeling of a Novel Resistive Stretch Sensor With Tunable Sensitivity. IEEE Sensors Journal, 2015, 15, 6390-6398.	2.4	16
80	Clawed Miniature Inchworm Robot Driven by Electromagnetic Oscillatory Actuator. Journal of Bionic Engineering, 2015, 12, 519-526.	2.7	26
81	Development and characterization of silicone embedded distributed piezoelectric sensors for contact detection. Smart Materials and Structures, 2015, 24, 075030.	1.8	37
82	Soft Components for Soft Robots. , 2015, , 272-281.		4
83	Soft Pneumatic Actuator skin with embedded sensors. , 2014, , .		11
84	Energy for Biomimetic Robots: Challenges and Solutions. Soft Robotics, 2014, 1, 106-109.	4.6	11
85	Variable stiffness fabrics with embedded shape memory materials for wearable applications. , 2014, , .		62
86	Soft pneumatic actuators for legged locomotion. , 2014, , .		22
87	Soft robot for gait rehabilitation of spinalized rodents. , 2013, , .		23
88	Characterization of silicone rubber based soft pneumatic actuators. , 2013, , .		85
89	Sensor and actuator integrated low-profile robotic origami. , 2013, , .		34
90	A bidirectional shape memory alloy folding actuator. Smart Materials and Structures, 2012, 21, 065013.	1.8	64

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91	Development of an Anthropomorphic Robotic Arm and Hand for Interactive Humanoids. Journal of Bionic Engineering, 2012, 9, 133-142.	2.7	35
92	Stretchable circuits and sensors for robotic origami. , 2011, , .		3
93	Motion teaching method for complex robot links using motor current. International Journal of Control, Automation and Systems, 2010, 8, 1072-1081.	1.6	5
94	A novel low-profile shape memory alloy torsional actuator. Smart Materials and Structures, 2010, 19, 125014.	1.8	65
95	Toward the Development of a Hand-Held Surgical Robot for Laparoscopy. IEEE/ASME Transactions on Mechatronics, 2010, , .	3.7	30
96	Robotic Hand-Held Surgical Device: Evaluation of End-Effectorâ€™s Kinematics and Development of Proof-of-Concept Prototypes. Lecture Notes in Computer Science, 2010, 13, 432-439.	1.0	9
97	How can human motion prediction increase transparency?. , 2008, , .		48
98	Design and acceptability assessment of a new reversible orthosis. , 2008, , .		18
99	Hybrid Wirelessâ€“Local Communication via Information Propagation for Modular Robotic Synchronization Applications. Advanced Intelligent Systems, 0, , 2100226.	3.3	1