# Jamie Paik

List of Publications by Year
in descending order

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|---|---|---|---|
| 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 | New soft robots really suck: Vacuum-powered systems empower diverse capabilities. Science Robotics, 2017, 2, . | 9.9 | 253 |
| 2 | Modeling, Design, and Development of Soft Pneumatic Actuators with Finite Element Method. Advanced Engineering Materials, 2016, 18, 978-988. | 1.6 | 192 |
| 3 | Design and Analysis of a Soft Pneumatic Actuator with Origami Shell Reinforcement. Soft Robotics, 2016, 3, 109-119. | 4.6 | 170 |
| 4 | Designing minimal and scalable insect-inspired multi-locomotion millirobots. Nature, 2019, 571, 381-386. | 13.7 | 154 |
| 5 | Stretchable Materials for Robust Soft Actuators towards Assistive Wearable Devices. Scientific Reports, 2016, 6, 34224. | 1.6 | 146 |
| 6 | Mori: A Modular Origami Robot. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2153-2164. | 3.7 | 113 |
| 7 | Soft Pneumatic Actuator Fascicles for High Force and Reliability. Soft Robotics, 2017, 4, 23-32. | 4.6 | 113 |
| 8 | Closed-Loop Haptic Feedback Control Using a Self-Sensing Soft Pneumatic Actuator Skin. Soft Robotics, 2020, 7, 22-29. | 4.6 | 98 |
| 9 | 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 |
| 10 | Stiffness Control With Shape Memory Polymer in Underactuated Robotic Origamis. IEEE Transactions on Robotics, 2017, 33, 765-777. | 7.3 | 91 |
| 11 | Characterization of silicone rubber based soft pneumatic actuators. , 2013, , . | | 85 |
| 12 | Robogami: A Fully Integrated Low-Profile Robotic Origami. Journal of Mechanisms and Robotics, 2015, 7, . | 1.5 | 81 |
| 13 | 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 |
| 14 | Modular Reconfigurable Robotics. Annual Review of Control, Robotics, and Autonomous Systems, 2019, 2, 63-88. | 7.5 | 76 |
| 15 | Soft Pneumatic Actuator Skin with Piezoelectric Sensors for Vibrotactile Feedback. Frontiers in Robotics and AI, 2016, 2, . | 2.0 | 69 |
| 16 | Design Methodology for Constructing Multimaterial Origami Robots and Machines. IEEE Transactions on Robotics, 2018, 34, 151-165. | 7.3 | 69 |
| 17 | Soft pneumatic gelatin actuator for edible robotics. , 2017, , . | | 66 |
| 18 | A novel low-profile shape memory alloy torsional actuator. Smart Materials and Structures, 2010, 19, 125014. | 1.8 | 65 |

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|---|---|---|---|
| 19 | A bidirectional shape memory alloy folding actuator. Smart Materials and Structures, 2012, 21, 065013. | 1.8 | 64 |
| 20 | Variable stiffness fabrics with embedded shape memory materials for wearable applications. , 2014, , . | | 62 |
| 21 | 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 |
| 22 | An under-actuated origami gripper with adjustable stiffness joints for multiple grasp modes. Smart Materials and Structures, 2017, 26, 055035. | 1.8 | 56 |
| 23 | A portable three-degrees-of-freedom force feedback origami robot for humanâ€“robot interactions. Nature Machine Intelligence, 2019, 1, 584-593. | 8.3 | 56 |
| 24 | How can human motion prediction increase transparency?. , 2008, , . | | 48 |
| 25 | Soft pneumatic actuator with adjustable stiffness layers for Multi-DoF Actuation. , 2015, , . | | 47 |
| 26 | 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 |
| 27 | Development and characterization of silicone embedded distributed piezoelectric sensors for contact detection. Smart Materials and Structures, 2015, 24, 075030. | 1.8 | 37 |
| 28 | The design and control of the multi-modal locomotion origami robot, Tribot. , 2015, , . | | 36 |
| 29 | Development of an Anthropomorphic Robotic Arm and Hand for Interactive Humanoids. Journal of Bionic Engineering, 2012, 9, 133-142. | 2.7 | 35 |
| 30 | Modeling vacuum bellows soft pneumatic actuators with optimal mechanical performance. , 2018, , . | | 35 |
| 31 | Sensor and actuator integrated low-profile robotic origami. , 2013, , . | | 34 |
| 32 | A Novel Torsional Shape Memory Alloy Actuator: Modeling, Characterization, and Control. IEEE Robotics and Automation Magazine, 2016, 23, 65-74. | 2.2 | 34 |
| 33 | Soft pneumatic actuator-driven origami-inspired modular robotic â€œpneumagamiâ€• International Journal of Robotics Research, 2021, 40, 72-85. | 5.8 | 34 |
| 34 | Soft piezoresistive sensor model and characterization with varying design parameters. Sensors and Actuators A: Physical, 2015, 233, 158-168. | 2.0 | 32 |
| 35 | 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 |
| 36 | Pneumatic Supply System Parameter Optimization for Soft Actuators. Soft Robotics, 2021, 8, 152-163. | 4.6 | 31 |

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|---|---|---|---|
| 37 | Toward the Development of a Hand-Held Surgical Robot for Laparoscopy. IEEE/ASME Transactions on Mechatronics, 2010, , . | 3.7 | 30 |
| 38 | A reconfiguration strategy for modular robots using origami folding. International Journal of Robotics Research, 2019, 38, 73-89. | 5.8 | 29 |
| 39 | Clawed Miniature Inchworm Robot Driven by Electromagnetic Oscillatory Actuator. Journal of Bionic Engineering, 2015, 12, 519-526. | 2.7 | 26 |
| 40 | Minimally Actuated Transformation of Origami Machines. IEEE Robotics and Automation Letters, 2018, 3, 1426-1433. | 3.3 | 25 |
| 41 | A Low Profile Electromagnetic Actuator Design and Model for an Origami Parallel Platform. Journal of Mechanisms and Robotics, 2017, 9, . | 1.5 | 24 |
| 42 | Soft robot for gait rehabilitation of spinalized rodents. , 2013, , . | | 23 |
| 43 | Soft robot design methodology for â€˜push-buttonâ€™ manufacturing. Nature Reviews Materials, 2018, 3, 81-83. | 23.3 | 23 |
| 44 | Hinges for origami-inspired structures by multimaterial additive manufacturing. Materials and Design, 2020, 191, 108643. | 3.3 | 23 |
| 45 | Soft pneumatic actuators for legged locomotion. , 2014, , . | | 22 |
| 46 | Single chamber multiple degree-of-freedom soft pneumatic actuator enabled by adjustable stiffness layers. Smart Materials and Structures, 2019, 28, 035012. | 1.8 | 22 |
| 47 | A Compact Modular Soft Surface With Reconfigurable Shape and Stiffness. IEEE/ASME Transactions on Mechatronics, 2019, 24, 16-24. | 3.7 | 22 |
| 48 | An under actuated robotic arm with adjustable stiffness shape memory polymer joints. , 2015, , . | | 21 |
| 49 | RoboScallop: A Bivalve Inspired Swimming Robot. IEEE Robotics and Automation Letters, 2019, 4, 2078-2085. | 3.3 | 21 |
| 50 | CMOSâ€inspired Complementary Fluidic Circuits for Soft Robots. Advanced Science, 2021, 8, e2100924. | 5.6 | 21 |
| 51 | 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 |
| 52 | Will robots be bodies with brains or brains with bodies?. Science Robotics, 2017, 2, . | 9.9 | 19 |
| 53 | Multimodal pipe-climbing robot with origami clutches and soft modular legs. Bioinspiration and Biomimetics, 2020, 15, 026002. | 1.5 | 19 |
| 54 | Stretchable Kirigami Components for Composite Meso-Scale Robots. IEEE Robotics and Automation Letters, 2020, 5, 1883-1890. | 3.3 | 19 |

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|---|---|---|---|
| 55 | Soft Touch using Soft Pneumatic Actuatorâ€“Skin as a Wearable Haptic Feedback Device. Advanced Intelligent Systems, 2021, 3, 2000168. | 3.3 | 19 |
| 56 | Generalized modeling of origami folding joints. Extreme Mechanics Letters, 2021, 45, 101213. | 2.0 | 19 |
| 57 | Design and acceptability assessment of a new reversible orthosis. , 2008, , . | | 18 |
| 58 | Mechanics of a pressure-controlled adhesive membrane for soft robotic gripping on curved surfaces. Extreme Mechanics Letters, 2019, 30, 100485. | 2.0 | 17 |
| 59 | The Design and Modeling of a Novel Resistive Stretch Sensor With Tunable Sensitivity. IEEE Sensors Journal, 2015, 15, 6390-6398. | 2.4 | 16 |
| 60 | Kirigami Design and Modeling for Strong, Lightweight Metamaterials. Advanced Functional Materials, 2022, 32, . | 7.8 | 16 |
| 61 | Tribot: A deployable, self-righting and multi-locomotive origami robot. , 2017, , . | | 15 |
| 62 | 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 |
| 63 | A reconfigurable interactive interface for controlling robotic origami in virtual environments. International Journal of Robotics Research, 2018, 37, 629-647. | 5.8 | 14 |
| 64 | Multi-DoF Force Characterization of Soft Actuators. IEEE Robotics and Automation Letters, 2019, 4, 3679-3686. | 3.3 | 13 |
| 65 | 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 |
| 66 | Flow Path Optimization for Soft Pneumatic Actuators: Towards Optimal Performance and Portability. IEEE Robotics and Automation Letters, 2021, 6, 7949-7956. | 3.3 | 13 |
| 67 | Rehabilitative Soft Exoskeleton for Rodents. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 107-118. | 2.7 | 12 |
| 68 | Soft Pneumatic Actuator skin with embedded sensors. , 2014, , . | | 11 |
| 69 | Energy for Biomimetic Robots: Challenges and Solutions. Soft Robotics, 2014, 1, 106-109. | 4.6 | 11 |
| 70 | An any-resolution pressure localization scheme using a soft capacitive sensor skin. , 2018, , . | | 11 |
| 71 | Haptigami: A Fingertip Haptic Interface With Vibrotactile and 3-DoF Cutaneous Force Feedback. IEEE Transactions on Haptics, 2022, 15, 131-141. | 1.8 | 11 |
| 72 | 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 |

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|---|---|---|---|
| 73 | Low-inertia vacuum-powered soft pneumatic actuator coil characterization and design methodology. , 2018, , . | | 10 |
| 74 | Programmable Fluidic Networks Design for Robotic Origami Sequential Self-Folding. , 2019, , . | | 9 |
| 75 | 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 |
| 76 | Automatic Couplings With Mechanical Overload Protection for Modular Robots. IEEE/ASME Transactions on Mechatronics, 2019, 24, 1420-1426. | 3.7 | 8 |
| 77 | Optimal Distribution of Active Modules in Reconfiguration Planning of Modular Robots. Journal of Mechanisms and Robotics, 2019, 11, . | 1.5 | 8 |
| 78 | Practical control methods for vacuum driven soft actuator modules. , 2017, , . | | 7 |
| 79 | Ori-Pixel, a Multi-DoFs Origami Pixel for Modular Reconfigurable Surfaces. IEEE Robotics and Automation Letters, 2020, 5, 6988-6995. | 3.3 | 7 |
| 80 | Compact Pneumatic Clutch With Integrated Stiffness Variation and Position Feedback. IEEE Robotics and Automation Letters, 2021, 6, 5697-5704. | 3.3 | 7 |
| 81 | Motion teaching method for complex robot links using motor current. International Journal of Control, Automation and Systems, 2010, 8, 1072-1081. | 1.6 | 5 |
| 82 | Algorithm for architectural origami. Nature, 2017, 541, 296-297. | 13.7 | 4 |
| 83 | Soft actuation and sensing towards robot-assisted facial rehabilitation. , 2017, , . | | 4 |
| 84 | Bi-modal control of vacuum-powered soft pneumatic actuators with embedded liquid metal-based strain sensitive skin. , 2019, , . | | 4 |
| 85 | Soft Components for Soft Robots. , 2015, , 272-281. | | 4 |
| 86 | Variable Stiffness Folding Joints for Haptic Feedback. , 2021, , . | | 4 |
| 87 | Stretchable circuits and sensors for robotic origami. , 2011, , . | | 3 |
| 88 | Design of Low-Profile Compliant Transmission Mechanisms. , 2019, , . | | 3 |
| 89 | Soft Bionic Sensors and Actuators. Advanced Intelligent Systems, 2021, 3, 2100003. | 3.3 | 3 |
| 90 | 3D Printed Motor-Sensory Module Prototype for Facial Rehabilitation. Soft Robotics, 2022, 9, 354-363. | 4.6 | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Lattice-and-Plate Model: Mechanics Modeling of Physical Origami Robots. Soft Robotics, 2023, 10, 149-158. | 4.6 | 3 |
| 92 | Towards Peak Torque Minimization for Modular Self-Folding Robots. , 2018, , . | | 2 |
| 93 | Guest Editorial Focused Section on Soft Actuators, Sensors, and Components (SASC). IEEE/ASME Transactions on Mechatronics, 2019, 24, 1-4. | 3.7 | 2 |
| 94 | An Actuation Fault Tolerance Approach to Reconfiguration Planning of Modular Self-folding Robots. , 2020, , . | | 2 |
| 95 | 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 |
| 96 | Flexure Variable Stiffness Actuators. Advanced Intelligent Systems, 2022, 4, . | 3.3 | 2 |
| 97 | Age-Dependent Asymmetry of Wrist Position Sense Is Not Influenced by Stochastic Tactile Stimulation. Frontiers in Human Neuroscience, 2020, 14, 65. | 1.0 | 1 |
| 98 | Hybrid Wirelessâ€“Local Communication via Information Propagation for Modular Robotic Synchronization Applications. Advanced Intelligent Systems, 0, , 2100226. | 3.3 | 1 |
| 99 | 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 |