Soft Robotics Technologies to Address Shortcomings in Surgery: The STIFF-FLOP Approach

Soft Robotics

1, 122-131

DOI: 10.1089/soro.2014.0001

Citation Report

#	Article	IF	Citations
1	The Bionic Handling Assistant: a success story of additive manufacturing. Assembly Automation, 2011, 31, 329-333.	1.0	125
2	Active Printed Materials for Complex Self-Evolving Deformations. Scientific Reports, 2014, 4, 7422.	1.6	407
3	Finite Element Analysis and Design Optimization of a Pneumatically Actuating Silicone Module for Robotic Surgery Applications. Soft Robotics, 2014, 1, 255-262.	4.6	172
4	Thin and flexible pressure/deformation sensors based on piezoelectric nanocomposites. , 2014, , .		4
5	Pneumatic Energy Sources for Autonomous and Wearable Soft Robotics. Soft Robotics, 2014, 1, 263-274.	4.6	215
6	Soft Transnasal Endoscopic Robot for Patient-Administered Nasopharynx Inspection1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.4	11
7	Design and Fabrication of an Elastomeric Unit for Soft Modular Robots in Minimally Invasive Surgery. Journal of Visualized Experiments, 2015, , .	0.2	4
8	A bioinspired soft manipulator for minimally invasive surgery. Bioinspiration and Biomimetics, 2015, 10, 035008.	1.5	267
9	Soft Robotics. , 2015, , .		51
10	SpineMan: Design of a soft robotic spine-like manipulator for safe human-robot interaction. , 2015, , .		7
11	New STIFF-FLOP module construction idea for improved actuation and sensing. , 2015, , .		56
12	Comfort and learnability assessment of a new soft robotic manipulator for minimally invasive surgery. , 2015, 2015, 4861-4.		2
13	Soft and Stretchable Sensor Using Biocompatible Electrodes and Liquid for Medical Applications. Soft Robotics, 2015, 2, 146-154.	4.6	92
14	A Recipe for Soft Fluidic Elastomer Robots. Soft Robotics, 2015, 2, 7-25.	4.6	538
15	Mathematical model of inchworm locomotion. International Journal of Non-Linear Mechanics, 2015, 76, 56-63.	1.4	39
16	Soft Robotics Research, Challenges, and Innovation Potential, Through Showcases. , 2015, , 255-264.		11
17	Tuneable Stiffness Design of Soft Continuum Manipulator. Lecture Notes in Computer Science, 2015, , 152-163.	1.0	3
18	Stiffness Control of Soft Robotic Manipulator for Minimally Invasive Surgery (MIS) Using Scale Jamming. Lecture Notes in Computer Science, 2015, , 141-151.	1.0	31

#	Article	IF	Citations
19	Modular soft mechatronic manipulator for minimally invasive surgery (MIS): overall architecture and development of a fully integrated soft module. Meccanica, 2015, 50, 2865-2878.	1.2	57
20	Celebrating Soft Matterâ€™s 10th Anniversary: Toward jamming by design. Soft Matter, 2015, 11, 12-27.	1.2	161
21	Contest-Driven Soft-Robotics Boost: The RoboSoft Grand Challenge. Frontiers in Robotics and AI, 2016, 3, .	2.0	13
22	Soft Manipulators and Grippers: A Review. Frontiers in Robotics and AI, 0, 3, .	2.0	403
23	Soft pop-up mechanisms for micro surgical tools: Design and characterization of compliant millimeter-scale articulated structures. , 2016, , .		23
24	Soft Robotic Grippers for Biological Sampling on Deep Reefs. Soft Robotics, 2016, 3, 23-33.	4.6	624
25	Framework for online simulation of soft robots with optimization-based inverse model. , 2016, , .		24
26	Stiffness-based modelling of a hydraulically-actuated soft robotics manipulator. , 2016, , .		21
27	Soft robotics: Technologies and systems pushing the boundaries of robot abilities. Science Robotics, 2016, 1, .	9.9	987
28	Design and Analysis of a Soft Pneumatic Actuator with Origami Shell Reinforcement. Soft Robotics, 2016, 3, 109-119.	4.6	170
29	A Novel, Variable Stiffness Robotic Gripper Based on Integrated Soft Actuating and Particle Jamming. Soft Robotics, 2016, 3, 134-143.	4.6	247
30	Shape Detection Algorithm for Soft Manipulator Based on Fiber Bragg Gratings. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2977-2982.	3.7	116
31	Stiffening in Soft Robotics: A Review of the State of the Art. IEEE Robotics and Automation Magazine, 2016, 23, 93-106.	2.2	442
32	Current and emerging robotic assisted intervention for Notes. Expert Review of Medical Devices, 2016, 13, 1095-1105.	1.4	22
33	Stretchable Materials for Robust Soft Actuators towards Assistive Wearable Devices. Scientific Reports, 2016, 6, 34224.	1.6	146
34	A novel fluid driven, foldable joint for minimally invasive surgery. , 2016, , .		0
35	A bio-inspired electro-active Velcro mechanism using Shape Memory Alloy for wearable and stiffness controllable layers. , 2016, , .		3
36	A continuum manipulator with phase changing alloy. , 2016, , .		38

#	Article	IF	Citations
37	Modeling, Design, and Development of Soft Pneumatic Actuators with Finite Element Method. Advanced Engineering Materials, 2016, 18, 978-988.	1.6	192
38	Visual Marker Based Shape Recognition System for Continuum Manipulators. Advances in Intelligent Systems and Computing, 2016, , 435-445.	0.5	0
39	Electrorheological Valves for Flexible Fluidic Actuators. Soft Robotics, 2016, 3, 34-41.	4.6	56
40	A Soft Modular Manipulator for Minimally Invasive Surgery: Design and Characterization of a Single Module. IEEE Transactions on Robotics, 2016, 32, 187-200.	7.3	191
41	A Novel Soft Machine Table for Manipulation of Delicate Objects Inspired by Caterpillar Locomotion. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1702-1710.	3.7	45
42	Tendon-Based Stiffening for a Pneumatically Actuated Soft Manipulator. IEEE Robotics and Automation Letters, 2016, 1, 632-637.	3.3	148
43	Passive Particle Jamming and Its Stiffening of Soft Robotic Grippers. IEEE Transactions on Robotics, 2017, 33, 446-455.	7.3	227
44	Soft robot review. International Journal of Control, Automation and Systems, 2017, 15, 3-15.	1.6	418
45	Optimizing Double-Network Hydrogel for Biomedical Soft Robots. Soft Robotics, 2017, 4, 191-201.	4.6	59
46	Soft-Material Robotics. Foundations and Trends in Robotics, 2017, 5, 191-259.	5.0	42
47	Feedback Control of Soft Robot Actuators via Commercial Flex Bend Sensors. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1881-1888.	3.7	158
48	CNT-based sensor arrays for local strain measurements in soft pneumatic actuators. International Journal of Intelligent Robotics and Applications, 2017, 1, 157-166.	1.6	22
49	Soft Robotics: Review of Fluidâ€Driven Intrinsically Soft Devices; Manufacturing, Sensing, Control, and Applications in Humanâ€Robot Interaction. Advanced Engineering Materials, 2017, 19, 1700016.	1.6	707
50	An Implantable Extracardiac Soft Robotic Device for the Failing Heart: Mechanical Coupling and Synchronization. Soft Robotics, 2017, 4, 241-250.	4.6	57
51	A variable stiffness soft robotic gripper with low-melting-point alloy. , 2017, , .		18
52	New soft robots really suck: Vacuum-powered systems empower diverse capabilities. Science Robotics, 2017, 2, .	9.9	253
53	Nonparametric Online Learning Control for Soft Continuum Robot: An Enabling Technique for Effective Endoscopic Navigation. Soft Robotics, 2017, 4, 324-337.	4.6	89
54	Variable-stiffness Sheets Obtained using Fabric Jamming and their applications in force displays. , 2017, , .		8

#	Article	IF	Citations
55	An Additive Millimeterâ€Scale Fabrication Method for Soft Biocompatible Actuators and Sensors. Advanced Materials Technologies, 2017, 2, 1700135.	3.0	54
56	The three-dimensional shape control for a soft robot. , 2017, , .		4
57	Software toolkit for modeling, simulation, and control of soft robots. Advanced Robotics, 2017, 31, 1208-1224.	1.1	144
58	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
59	A soft multi-module manipulator with variable stiffness for minimally invasive surgery. Bioinspiration and Biomimetics, 2017, 12, 056008.	1.5	75
60	Soft Robotics: Trends, Applications and Challenges. Biosystems and Biorobotics, 2017, , .	0.2	22
61	Soft Robots in Surgery. Biosystems and Biorobotics, 2017, , 75-85.	0.2	17
62	Design of a soft, parallel end-effector applied to robot-guided ultrasound interventions. , 2017, , .		18
63	Multi-arm snake-like robot. , 2017, , .		19
64	Trends in robot assisted endovascular catheterization technology: A review. , 2017, , .		2
65	Design and prototyping of a soft magnetic anchored and guidance endoscope system. , 2017, , .		5
66	FEM-based soft robotic control framework for intracavitary navigation. , 2017, , .		14
67	Variable stiffness element by granular jamming (Stiffness enhancement by a wrinkle-free outer) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 26	0.1	0
68	Research on soft manipulator actuated by shape memory alloy (SMA) springs. , 2017, , .		10
69	A variable stiffness catheter controlled with an external magnetic field. , 2017, , .		45
70	Low cost soft endoscope robotic probe. , 2017, , .		2
71	On Intrinsic Safety of Soft Robots. Frontiers in Robotics and AI, 0, 4, .	2.0	40
72	A Geometry Deformation Model for Braided Continuum Manipulators. Frontiers in Robotics and AI, 2017, 4, .	2.0	43

#	Article	IF	Citations
73	Flexible Medical Devices: Review of Controllable Stiffness Solutions. Actuators, 2017, 6, 23.	1.2	133
74	Stimuli-Responsive Soft Untethered Grippers for Drug Delivery and Robotic Surgery. Frontiers in Mechanical Engineering, 2017, 3, .	0.8	97
75	Soft robotic ventricular assist device with septal bracing for therapy of heart failure. Science Robotics, 2017, 2, .	9.9	46
76	A soft robot capable of 2D mobility and self-sensing for obstacle detection and avoidance. Smart Materials and Structures, 2018, 27, 045017.	1.8	22
77	Mechanically Versatile Soft Machines through Laminar Jamming. Advanced Functional Materials, 2018, 28, 1707136.	7.8	159
78	Stiffening Sheaths for Continuum Robots. Soft Robotics, 2018, 5, 291-303.	4.6	45
79	Finite Element Method-Based Kinematics and Closed-Loop Control of Soft, Continuum Manipulators. Soft Robotics, 2018, 5, 348-364.	4.6	82
80	Controllable and reversible tuning of material rigidity for robot applications. Materials Today, 2018, 21, 563-576.	8.3	158
81	Transforming the Dynamic Response of Robotic Structures and Systems Through Laminar Jamming. IEEE Robotics and Automation Letters, 2018, 3, 688-695.	3.3	42
82	Exploiting the Dynamics of Soft Materials for Machine Learning. Soft Robotics, 2018, 5, 339-347.	4.6	82
83	FBG based shape sensing of a silicone octopus tentacle model for soft robotics. Optik, 2018, 165, 7-15.	1.4	42
84	Active Stiffness Tuning of a Spring-Based Continuum Robot for MRI-Guided Neurosurgery. IEEE Transactions on Robotics, 2018, 34, 18-28.	7.3	59
85	Functionally Antagonistic Hybrid Electrode with Hollow Tubular Graphene Mesh and Nitrogenâ€Doped Crumpled Graphene for Highâ€Performance Ionic Soft Actuators. Advanced Functional Materials, 2018, 28, 1705714.	7.8	51
86	Electronic Control Concept for Surgical Manipulators Generated Using an Automated Design Process. , 2018, , .		2
87	Design and Motion Control of Biomimetic Soft Crawling Robot for GI Tract Inspection. , 2018, , .		7
88	Design, Measurement and Shape Reconstruction of Soft Surgical Actuator Based on Fiber Bragg Gratings. Applied Sciences (Switzerland), 2018, 8, 1773.	1.3	17
89	Auxetic Sleeves for Soft Actuators with Kinematically Varied Surfaces. , 2018, , .		7
90	Soft Robots Manufacturing: A Review. Frontiers in Robotics and AI, 2018, 5, 84.	2.0	201

#	Article	IF	Citations
91	Contact Detection and Size Estimation Using a Modular Soft Gripper with Embedded Flex Sensors. , 2018, , .		5
92	Soft LEGO: Bottom-Up Design Platform for Soft Robotics. , 2018, , .		9
93	A Biomimetic Soft Robot for Inspecting Pipeline with Significant Diameter Variation. , 2018, , .		25
94	A Serpentine Curve Based Motion Planning Method for Cable-Driven Snake Robots. , 2018, , .		2
95	An anthropomorphic soft skeleton hand exploiting conditional models for piano playing. Science Robotics, 2018, 3, .	9.9	58
96	Soft Robotic Finger with Integrated Stretchable Strain Sensor. , 2018, , .		13
97	Vacuum-Actuated Bending for Grasping. Robotics, 2018, 7, 73.	2.1	1
98	Localized online learning-based control of a soft redundant manipulator under variable loading. Advanced Robotics, 2018, 32, 1168-1183.	1.1	20
99	Popcorn-Driven Robotic Actuators. , 2018, , .		7
100	Design and Evaluation of a Continuum Robot with Discreted link joints for Cardiovascular Interventions. , 2018, , .		11
101	Hybrid Softâ€“Rigid Actuators for Minimally Invasive Surgery. Soft Robotics, 2018, 5, 783-799.	4.6	40
102	A Transient FEA-based Methodology for Designing Soft Surgical Manipulators. , 2018, , .		3
103	Soft Tool for Gallbladder Retraction in Minimally Invasive Surgery Based on Layer Jamming. , 2018, , .		3
104	Plant-Inspired Soft Pneumatic Eversion Robot. , 2018, , .		23
105	Safe Testing of Electrical Diathermy Cutting Using a New Generation Soft Manipulator. IEEE Transactions on Robotics, 2018, 34, 1659-1666.	7.3	4
106	Toward a Common Framework for the Design of Soft Robotic Manipulators with Fluidic Actuation. Soft Robotics, 2018, 5, 622-649.	4.6	30
107	Untethered Recyclable Tubular Actuators with Versatile Locomotion for Soft Continuum Robots. Advanced Materials, 2018, 30, e1801103.	11.1	133
108	Toward a Flexible Variable Stiffness Endoport for Single-Site Partial Nephrectomy. Annals of Biomedical Engineering, 2018, 46, 1498-1510.	1.3	19

#	Article	IF	Citations
109	Soft Robotics in Medical Applications. Journal of Medical Robotics Research, 2018, 03, 1841006.	1.0	17
110	Design and Evaluation of a Soft-Bodied Magnetic Anchored and Guided Endoscope. Journal of Medical Robotics Research, 2018, 03, 1841007.	1.0	4
111	Directly Printable Flexible Strain Sensors for Bending and Contact Feedback of Soft Actuators. Frontiers in Robotics and AI, 2018, 5, 2.	2.0	53
112	Lithographic production of vertically aligned CNT strain sensors for integration in soft robotic microactuators. , 2018, , .		2
113	Stiffness Control for Soft Surgical Manipulators. International Journal of Humanoid Robotics, 2018, 15, 1850021.	0.6	12
114	Soft wearable device for lower limb assistance: Assessment of an optimized energy efficient actuation prototype. , 2018, , .		21
115	Toward a low hysteresis helical scale Jamming interface inspired by teleost fish scale morphology and arrangement. , 2018, , .		4
116	A novel highly-extensible 2-DOF pneumatic actuator for soft robotic applications. Sensors and Actuators A: Physical, 2018, 281, 84-94.	2.0	13
117	A Variable Stiffness Springâ€“Sponge Composite Tube with Fast Response and Shape Recovery. Macromolecular Materials and Engineering, 2018, 303, 1800185.	1.7	0
118	Modular force approximating soft robotic pneumatic actuator. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1819-1827.	1.7	5
119	Robotizing the Bio-inspiration. Advances in Intelligent Systems and Computing, 2019, , 313-334.	0.5	1
120	Inchworm-Inspired Locomotion in Untethered Soft Robots. , 2019, , .		19
121	Design of Embedded Structure Variable Stiffness Pneumatic Actuator. Lecture Notes in Computer Science, 2019, , 234-239.	1.0	0
122	Development of a Multi-level Stiffness Soft Robotic Module with Force Haptic Feedback for Endoscopic Applications. , 2019, , .		4
123	Force Analysis and Experiment of Variable Stiffness Soft Actuator Based on Particle Jamming. Lecture Notes in Computer Science, 2019, , 513-525.	1.0	0
124	A Depth Camera-Based Soft Fingertip Device for Contact Region Estimation and Perception-Action Coupling. , 2019, , .		11
125	Towards Autonomous Robotic Systems. Lecture Notes in Computer Science, 2019, , .	1.0	9
126	Dimension Optimization of Pneumatically Actuated Soft Continuum Manipulators. , 2019, , .		14

#	Article	IF	Citations
127	Dynamic photovoltaic building envelopes for adaptive energy and comfort management. Nature Energy, 2019, 4, 671-682.	19.8	63
128	Evaluation of design aspects of modular pneumatic soft robotic endoscopes. , 2019, , .		9
129	Modelling of a Soft Sensor for Exteroception and Proprioception in a Pneumatically Actuated Soft Robot. Lecture Notes in Computer Science, 2019, , 99-110.	1.0	5
130	Pneumatic Soft Actuator with Anisotropic Soft and Rigid Restraints for Pure in-Plane Bending Motion. Applied Sciences (Switzerland), 2019, 9, 2999.	1.3	15
131	Driving Soft Robots with Low-Boiling Point Fluids. , 2019, , .		14
132	Kinematic Control and Obstacle Avoidance for Soft Inflatable Manipulator. Lecture Notes in Computer Science, 2019, , 52-64.	1.0	5
133	Helical optical fiber sensing configuration for hyper-elastic soft surgical manipulators. Optik, 2019, 198, 163242.	1.4	6
134	Kinematics Modeling of a Twisted and Coiled Polymer-Based Elastomer Soft Robot. IEEE Access, 2019, 7, 136792-136800.	2.6	10
135	Towards an ontology for soft robots: what is soft?. Bioinspiration and Biomimetics, 2019, 14, 063001.	1.5	19
136	A soft matter computer for soft robots. Science Robotics, 2019, 4, .	9.9	59
137	Deep Reinforcement Learning for Soft, Flexible Robots: Brief Review with Impending Challenges. Robotics, 2019, 8, 4.	2.1	73
138	Realizing the potential of dielectric elastomer artificial muscles. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2476-2481.	3.3	276
139	Elasticity Versus Hyperelasticity Considerations in Quasistatic Modeling of a Soft Finger-Like Robotic Appendage for Real-Time Position and Force Estimation. Soft Robotics, 2019, 6, 228-249.	4.6	35
140	4D Printing of Recyclable Lightweight Architectures Using High Recovery Stress Shape Memory Polymer. Scientific Reports, 2019, 9, 7621.	1.6	59
141	Tubular Jamming: A Variable Stiffening Method Toward High-Force Applications with Soft Robotic Components. Soft Robotics, 2019, 6, 468-482.	4.6	19
142	Model of a Coil-Reinforced Cylindrical Soft Actuator. Applied Sciences (Switzerland), 2019, 9, 2109.	1.3	9
143	A review on recent advances in soft surgical robots for endoscopic applications. International Journal of Medical Robotics and Computer Assisted Surgery, 2019, 15, e2010.	1.2	82
144	A Magnetically Coupled Dielectric Elastomer Pump for Soft Robotics. Advanced Materials Technologies, 2019, 4, 1900128.	3.0	85

#	Article	IF	Citations
145	Development of Forceps Manipulator Using Pneumatic Soft Actuator for a Bending Joint of Forceps Tip. , 2019, , .		8
146	Load-Sharing in Soft and Spiny Paws for a Large Climbing Robot. IEEE Robotics and Automation Letters, 2019, 4, 1439-1446.	3.3	27
147	Optical Fiber Sensor Performance Evaluation in Soft Polyimide Film with Different Thickness Ratios. Sensors, 2019, 19, 790.	2.1	11
148	Vacuumâ€Powered Soft Pneumatic Twisting Actuators to Empower New Capabilities for Soft Robots. Advanced Materials Technologies, 2019, 4, 1800429.	3.0	72
149	Soft Robotic Grippers Based on Particle Transmission. IEEE/ASME Transactions on Mechatronics, 2019, 24, 969-978.	3.7	42
150	Multi-level control architecture for Bionic Handling Assistant robot augmented by learning from demonstration for apple-picking. Advanced Robotics, 2019, 33, 469-485.	1.1	12
151	Soft Robotics in Minimally Invasive Surgery. Soft Robotics, 2019, 6, 423-443.	4.6	308
152	Polyimide sensing layer for bending shape measurement in soft surgical manipulators. Optik, 2019, 183, 179-188.	1.4	6
153	Pneumatic Soft Arm Based on Spiral Balloon Weaving and Shape Memory Polymer Backbone. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	1.7	5
154	Anastomoses in Visceral Surgery-First Approach towards a Universal Transluminal System for Micro Invasive Application. , 2019, , .		0
155	Actuation and stiffening in fluid-driven soft robots using low-melting-point material. , 2019, , .		18
156	Design and Kinematics of Cable-Driven Soft Module Coupled with Spring*. , 2019, , .		2
157	A review on Soft Robotics: Modeling, Control and Applications in Human-Robot interaction. , 2019, , .		10
158	A Matlab-Internal DSL for Modelling Hybrid Rigid-Continuum Robots with TMTDyn. , 2019, , .		6
159	Development of a mechanical element that changes the shape and rigidity by vacuum pressure. Transactions of the JSME (in Japanese), 2019, 85, 19-00046-19-00046.	0.1	3
160	Hydrogel-matrix encapsulated Nitinol actuation with self-cooling mechanism. RSC Advances, 2019, 9, 34244-34255.	1.7	27
161	Single chamber multiple degree-of-freedom soft pneumatic actuator enabled by adjustable stiffness layers. Smart Materials and Structures, 2019, 28, 035012.	1.8	22
163	Dual-Continuum Design Approach for Intuitive and Low-Cost Upper Gastrointestinal Endoscopy. IEEE Transactions on Biomedical Engineering, 2019, 66, 1963-1974.	2.5	31

#	Article	IF	Citations
164	Bio-inspired pneumatic shape-morphing elastomers. Nature Materials, 2019, 18, 24-28.	13.3	226
165	A Soft Retraction System for Surgery Based on Ferromagnetic Materials and Granular Jamming. Soft Robotics, 2019, 6, 161-173.	4.6	16
166	Robotic Visible Forceps Manipulator With a Novel Linkage Bending Mechanism. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	7
167	Hardware Sequencing of Inflatable Nonlinear Actuators for Autonomous Soft Robots. Advanced Materials, 2019, 31, e1804598.	11.1	46
168	Fastâ€Response, Stiffnessâ€Tunable Soft Actuator by Hybrid Multimaterial 3D Printing. Advanced Functional Materials, 2019, 29, 1806698.	7.8	292
169	Soft timer: Dynamic clock embedded in soft body. , 2019, , 181-196.		4
170	Kinematics of Continuum Robots With Constant Curvature Bending and Extension Capabilities. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	30
171	Transient characteristics of a straight tube actuated by viscous compressible flow with consideration of large axisymmetric deformation. Acta Mechanica, 2019, 230, 105-120.	1.1	6
172	Design and Manufacturing of Tendon-Driven Soft Foam Robots. Robotica, 2020, 38, 88-105.	1.3	22
173	Soft Hybrid Wave Spring Actuators. Advanced Intelligent Systems, 2020, 2, 1900097.	3.3	8
174	Interfacing Soft and Hard: A Spring Reinforced Actuator. Soft Robotics, 2020, 7, 44-58.	4.6	51
175	Haptics in Surgical Robots. , 2020, , 239-263.		6
176	Magnetic Continuum Device with Variable Stiffness for Minimally Invasive Surgery. Advanced Intelligent Systems, 2020, 2, 1900086.	3.3	92
177	Smart Composites and Hybrid Soft-Foldable Technologies for Minimally Invasive Surgical Robots. , 2020, , 323-340.		2
178	Robotic interventions. , 2020, , 841-860.		1
179	Confined spaces path following for cable-driven snake robots with prediction lookup and interpolation algorithms. Science China Technological Sciences, 2020, 63, 255-264.	2.0	18
180	MakeSense: Automated Sensor Design for Proprioceptive Soft Robots. Soft Robotics, 2020, 7, 332-345.	4.6	70
181	Operation Planning and Closed-Loop Control of a Soft Robotic Table for Simultaneous Multiple-Object Manipulation. IEEE Transactions on Automation Science and Engineering, 2020, 17, 981-990.	3.4	7

#	Article	IF	Citations
182	High-Speed Visual Feedback Control of Miniature Rotating Mirror System Using a Micro Ultrasonic Motor. IEEE Access, 2020, 8, 38546-38553.	2.6	16
183	Closed-loop 4D-printed soft robots. Materials and Design, 2020, 188, 108411.	3.3	127
184	Design and Integration of a Parallel, Soft Robotic End-Effector for Extracorporeal Ultrasound. IEEE Transactions on Biomedical Engineering, 2020, 67, 2215-2229.	2.5	29
185	Inferring the Material Properties of Granular Media for Robotic Tasks. , 2020, , .		18
186	Design and Workspace Characterisation of Malleable Robots. , 2020, , .		8
187	A bio-inspired soft-rigid hybrid actuator made of electroactive dielectric elastomers. Applied Materials Today, 2020, 21, 100814.	2.3	12
188	Superjammed: Tunable and Morphable Spanning Structures Through Granular Jamming. Technology Architecture and Design, 2020, 4, 211-220.	0.6	0
189	Soft robot system for heart surgery. , 2020, , .		0
190	Defective nematogenesis: Gauss curvature in programmable shape-responsive sheets with topological defects. Soft Matter, 2020, 16, 10935-10945.	1.2	15
191	Recent Progress of Soft Electrothermal Actuators. Soft Robotics, 2021, 8, 241-250.	4.6	30
192	An Origami Continuum Robot Capable of Precise Motion Through Torsionally Stiff Body and Smooth Inverse Kinematics. Soft Robotics, 2021, 8, 371-386.	4.6	71
193	Parallel Helix Actuators for Soft Robotic Applications. Frontiers in Robotics and AI, 2020, 7, 119.	2.0	8
194	The MemoFlex II, a non-robotic approach to follow-the-leader motion of a snake-like instrument for surgery using four predetermined physical tracks. Medical Engineering and Physics, 2020, 86, 86-95.	0.8	9
195	Design and Automatic Fabrication of Novel Bio-Inspired Soft Smart Robotic Hands. IEEE Access, 2020, 8, 155912-155925.	2.6	14
196	Human Interface for Teleoperated Object Manipulation with a Soft Growing Robot. , 2020, , .		16
197	Magnetorheological Fluidâ€Based Flow Control for Soft Robots. Advanced Intelligent Systems, 2020, 2, 2000139.	3.3	20
198	Kinematic modeling of a class of n-tendon continuum manipulators. Advanced Robotics, 2020, 34, 1254-1271.	1.1	10
200	Design and Kinematics Analysis for a Cable-driven Underwater Snake Arm Robot. Journal of Physics: Conference Series, 2020, 1654, 012028.	0.3	2

#	Article	IF	Citations
201	Control-Based 4D Printing: Adaptive 4D-Printed Systems. Applied Sciences (Switzerland), 2020, 10, 3020.	1.3	66
202	A Compression Valve for Sanitary Control of Fluid-Driven Actuators. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1005-1015.	3.7	7
203	A bending sensor insensitive to pressure: soft proprioception based on abraded optical fibres. , 2020, , .		7
204	Cable-Driven Jamming of a Boundary Constrained Soft Robot. , 2020, , .		11
205	Design and Development of a Growing Pneumatic Soft Robot. Soft Robotics, 2020, 7, 521-533.	4.6	28
206	Development of Visible Manipulator With Multi-Gear Array Mechanism for Laparoscopic Surgery. IEEE Robotics and Automation Letters, 2020, 5, 3090-3097.	3.3	7
207	Concentric Tube Robots for Minimally Invasive Surgery: Current Applications and Future Opportunities. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 410-424.	2.1	49
208	Challenges of continuum robots in clinical context: a review. Progress in Biomedical Engineering, 2020, 2, 032003.	2.8	116
209	A review of recent advancements in soft and flexible robots for medical applications. International Journal of Medical Robotics and Computer Assisted Surgery, 2020, 16, e2096.	1.2	51
210	Model-Based Pose Control of Inflatable Eversion Robot With Variable Stiffness. IEEE Robotics and Automation Letters, 2020, 5, 3398-3405.	3.3	25
211	Laser-Profiled Continuum Robot with Integrated Tension Sensing for Simultaneous Shape and Tip Force Estimation. Soft Robotics, 2020, 7, 421-443.	4.6	52
212	Reviewâ€"Recent Progresses in 4D Printing of Gel Materials. Journal of the Electrochemical Society, 2020, 167, 037563.	1.3	45
213	New Insights on the Control and Function of Octopus Suckers. Advanced Intelligent Systems, 2020, 2, 1900154.	3.3	11
214	Development of a Rigidity Tunable Flexible Joint Using Magneto-Rheological Compoundsâ€"Toward a Multijoint Manipulator for Laparoscopic Surgery. Frontiers in Robotics and AI, 2020, 7, 59.	2.0	13
215	Geometric constraint-based modeling and analysis of a novel continuum robot with Shape Memory Alloy initiated variable stiffness. International Journal of Robotics Research, 2020, 39, 1620-1634.	5.8	95
216	Lightweight Highly Tunable Jamming-Based Composites. Soft Robotics, 2020, 7, 724-735.	4.6	32
217	Energy-shaping control of soft continuum manipulators with in-plane disturbances. International Journal of Robotics Research, 2021, 40, 236-255.	5.8	37
218	Active Fault Detection of Soft Manipulator in Visual Servoing. IEEE Transactions on Industrial Electronics, 2021, 68, 9778-9788.	5.2	24

#	Article	IF	Citations
219	Finite Element Modeling of Soft Fluidic Actuators: Overview and Recent Developments. Advanced Intelligent Systems, 2021, 3, 2000187.	3.3	130
220	Bioinspired Sensing, Actuation, and Control in Underwater Soft Robotic Systems. , 2021, , .		13
221	Regional electromagnetic actuation simulation and monitoring for robotically aided surgical equipment with Medical platform. Measurement: Journal of the International Measurement Confederation, 2021, 168, 108248.	2.5	7
222	Shape-shifting panel from 3D printed undulated ribbon lattice. Extreme Mechanics Letters, 2021, 42, 101089.	2.0	5
223	Experimental study of the optimum puncture pattern of robot-assisted needle insertion into hyperelastic materials. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2021, 235, 28-43.	1.0	4
224	Shape Changing Robots: Bioinspiration, Simulation, and Physical Realization. Advanced Materials, 2021, 33, e2002882.	11.1	66
225	Jamming Skins that Control System Rigidity from the Surface. Advanced Functional Materials, 2021, 31, .	7.8	38
226	TMTDyn: A Matlab package for modeling and control of hybrid rigidâ€“continuum robots based on discretized lumped systems and reduced-order models. International Journal of Robotics Research, 2021, 40, 296-347.	5.8	52
227	An Electrohydraulic Control Device With Decoupling Effect for Three-Chamber Soft Actuators. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1683-1691.	3.7	2
228	Design and Analysis of a Multisegment Shape Morphing Mechanism. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	7
229	Soft Robotics Solutions for Minimally Invasive Surgery: The Need for Stiffness Controllability. RSC Soft Matter, 2021, , 684-719.	0.2	1
230	A Review on Actuator and Manipulator Techniques in Soft Robotics. Lecture Notes in Electrical Engineering, 2021, , 123-137.	0.3	1
231	Variable-Stiffness Control of a Dual-Segment Soft Robot Using Depth Vision. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1034-1045.	3.7	15
232	A Modeling Framework for Jamming Structures. Advanced Functional Materials, 2021, 31, 2007554.	7.8	27
233	Soft Robotics: Research, Challenges, and Prospects. Journal of Robotics and Mechatronics, 2021, 33, 45-68.	0.5	14
234	Design and Experiments of Pneumatic Soft Actuators. Robotica, 2021, 39, 1806-1815.	1.3	7
235	Variable Stiffness Devices Using Fiber Jamming for Application in Soft Robotics and Wearable Haptics. Soft Robotics, 2022, 9, 173-186.	4.6	47
236	Electro-pneumatic pumps for soft robotics. Science Robotics, 2021, 6, .	9.9	72

#	Article	IF	Citations
237	A novel robotic colonoscopy system integrating feeding and steering mechanisms with self-propelled paddling locomotion: A pilot study. Mechatronics, 2021, 73, 102478.	2.0	9
238	Harnessing the Multistability of Kresling Origami for Reconfigurable Articulation in Soft Robotic Arms. Soft Robotics, 2022, 9, 212-223.	4.6	55
239	Euclidean Frustrated Ribbons. Physical Review X, 2021, 11, .	2.8	5
240	Power-efficient adaptive behavior through a shape-changing elastic robot. Adaptive Behavior, 0, , 105971232199018.	1.1	0
241	Scaling Up Soft Robotics: A Meter-Scale, Modular, and Reconfigurable Soft Robotic System. Soft Robotics, 2022, 9, 324-336.	4.6	23
242	Bioâ€Inspired Soft Grippers Based on Impactive Gripping. Advanced Science, 2021, 8, 2002017.	5.6	68
243	A Structure for Fast Stiffness-Variation and Omnidirectional-Steering Continuum Manipulator. IEEE Robotics and Automation Letters, 2021, 6, 755-762.	3.3	13
244	Toward Teaching by Demonstration for Robot-Assisted Minimally Invasive Surgery. IEEE Transactions on Automation Science and Engineering, 2021, 18, 484-494.	3.4	116
245	Programmable and reprocessable multifunctional elastomeric sheets for soft origami robots. Science Robotics, 2021, 6, .	9.9	42
246	Predictive Uncertainty Estimation Using Deep Learning for Soft Robot Multimodal Sensing. IEEE Robotics and Automation Letters, 2021, 6, 951-957.	3.3	11
247	Enabling the control of a new degree of freedom by using anisotropic material on a 6-DOF parallel soft robot. , 2021, , .		4
248	Material Characterization for Magnetic Soft Robots. , 2021, , .		8
249	Active Bending Mechanism Employing Granular Jamming and Vacuum-Controlled Adaptable Gripper. IEEE Robotics and Automation Letters, 2021, 6, 3041-3048.	3.3	14
250	Soft Robotic Manipulators: Designs, Actuation, Stiffness Tuning, and Sensing. Advanced Materials Technologies, 2021, 6, 2100018.	3.0	66
251	Intelligent Soft Surgical Robots for Nextâ€Generation Minimally Invasive Surgery. Advanced Intelligent Systems, 2021, 3, 2100011.	3.3	55
252	An Origami-Based Soft Robotic Actuator for Upper Gastrointestinal Endoscopic Applications. Frontiers in Robotics and AI, 2021, 8, 664720.	2.0	17
253	Flexible Manipulator with Low-Melting-Point Alloy Actuation and Variable Stiffness. Soft Robotics, 2022, 9, 577-590.	4.6	18
254	Shape programming lines of concentrated Gaussian curvature. Journal of Applied Physics, 2021, 129, .	1.1	12

#	Article	IF	Citations
255	Inflatable Particle-Jammed Robotic Gripper Based on Integration of Positive Pressure and Partial Filling. Soft Robotics, 2022, 9, 309-323.	4.6	19
256	Research on performance of rigid-hoop-reinforced multi-DOF soft actuator. Advances in Mechanical Engineering, 2021, 13, 168781402110267.	0.8	2
257	One-Shot 3D-Printed Multimaterial Soft Robotic Jamming Grippers. Soft Robotics, 2022, 9, 497-508.	4.6	17
258	Stiffness-Tunable and all-soft electrical smart material made by magnetic liquid metal and sponge. , 2021, , .		0
259	Fusing Dexterity and Perception for Soft Robot-Assisted Minimally Invasive Surgery: What We Learnt from STIFF-FLOP. Applied Sciences (Switzerland), 2021, 11, 6586.	1.3	13
261	A Novel Pressure-Controlled Revolute Joint with Variable Stiffness. Soft Robotics, 2022, 9, 723-733.	4.6	9
262	Workspace Evaluation of Robotino-XT Under Reconfiguration. Lecture Notes in Mechanical Engineering, 2022, , 281-288.	0.3	0
263	Design methodology for the development of variable stiffness devices based on layer jamming transition. Engineering Research Express, 2021, 3, 035033.	0.8	6
264	Soft robotic steerable microcatheter for the endovascular treatment of cerebral disorders. Science Robotics, 2021, 6, .	9.9	47
265	A Soft Robot for Peripheral Lung Cancer Diagnosis and Therapy. Soft Robotics, 2022, 9, 754-766.	4.6	17
266	Paper-Based Robotics with Stackable Pneumatic Actuators. Soft Robotics, 2022, 9, 542-551.	4.6	8
267	Hardware Methods for Onboard Control of Fluidically Actuated Soft Robots. Frontiers in Robotics and AI, 2021, 8, 720702.	2.0	9
268	Soft robotic manipulator for intraoperative MRI-guided transoral laser microsurgery. Science Robotics, 2021, 6, .	9.9	54
269	Design, modeling and evaluation of a millimeter-scale SMA bending actuator with variable length. Journal of Intelligent Material Systems and Structures, 2022, 33, 942-957.	1.4	4
270	Mechanical Valves for Onâ€Board Flow Control of Inflatable Robots. Advanced Science, 2021, 8, e2101941.	5.6	20
271	The Italyâ€“Japan Workshop: A History of Bilateral Cooperation, Pushing the Boundaries of Robotics. IEEE Robotics and Automation Magazine, 2021, 28, 150-162.	2.2	0
272	Smart Tactile Gloves for Haptic Interaction, Communication, and Rehabilitation. Advanced Intelligent Systems, 2022, 4, 2100091.	3.3	78
273	Reprogrammable soft actuation and shape-shifting via tensile jamming. Science Advances, 2021, 7, eabh2073.	4.7	41

#	Article	IF	Citations
274	Research on energy consumption of fiber-reinforced fluidic soft actuators. Smart Materials and Structures, 2021, 30, 025036.	1.8	8
275	Design and Implementation of Pneumatic Soft Gripper with Suction and Grasp Composite Structure. Communications in Computer and Information Science, 2021, , 276-286.	0.4	1
276	Highly dexterous 2â€module soft robot for intraâ€organ navigation in minimally invasive surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1875.	1.2	79
277	Learning the Stiffness of a Continuous Soft Manipulator from Multiple Demonstrations. Lecture Notes in Computer Science, 2015, , 185-195.	1.0	2
278	Mechanics of Continuum Manipulators, a Comparative Study of Five Methods with Experiments. Lecture Notes in Computer Science, 2017, , 686-702.	1.0	40
279	Design of Fully Soft Actuator with Double-Helix Tendon Routing Path for Twisting Motion. , 2020, , .		6
280	Modelling the Soft Robot Kyma Based on Realâ€Time Finite Element Method. Computer Graphics Forum, 2020, 39, 289-302.	1.8	8
281	The First Interlaced Continuum Robot, Devised to Intrinsically Follow the Leader. PLoS ONE, 2016, 11, e0150278.	1.1	46
282	SOFT ROBOTICS WITH COMPLIANCE AND ADAPTATION FOR BIOMEDICAL APPLICATIONS AND FORTHCOMING CHALLENGES. International Journal of Robotics and Automation, 2018, 33, .	0.1	34
283	The Performance of a Novel Latching-Type Electromagnetic Actuator for Single-Port Laparoscopic Surgery. Journal of Modern Physics, 2019, 10, 1659-1673.	0.3	2
284	Design and evaluation of aÂcontinuum robot with extendable balloons. Mechanical Sciences, 2018, 9, 51-60.	0.5	9
285	Model and Validation of a Highly Extensible and Tough Actuator based on a Ballooning Membrane. , 2021, , .		8
286	Screw theory-based stiffness analysis for a fluidic-driven soft robotic manipulator. , 2021, , .		4
287	On the Mathematical Modeling of Slender Biomedical Continuum Robots. Frontiers in Robotics and AI, 2021, 8, 732643.	2.0	10
288	Design and Testing of 2-Degree-of-Freedom (DOF) Printable Pneumatic Soft Finger. Mechanisms and Machine Science, 2020, , 298-308.	0.3	1
289	Viabilidade da implementaÃ§Ã£o de um sistema hÃ¡ptico pneumÃ¡tico para cirurgia robÃ³tica. The Academic Society Journal, 0, , 269-281.	0.1	1
290	Principle of stiffness variation based on matching composite structures with fibers. Smart Materials and Structures, 2020, 29, 095017.	1.8	1
291	Protrusion mechanism study in sipunculid worms as model for developing bio-inspired linear actuators. Bioinspiration and Biomimetics, 2021, 16, 026008.	1.5	3

#	Article	IF	Citations
292	Self-Sensing Pneumatic Compressing Actuator. Frontiers in Neurorobotics, 2020, 14, 572856.	1.6	4
293	Textiles in soft robots: Current progress and future trends. Biosensors and Bioelectronics, 2022, 196, 113690.	5.3	50
294	Silicone Based Capacitive E-Skin Sensor for Soft Surgical Robots. Lecture Notes in Computer Science, 2020, , 62-65.	1.0	1
295	An Inhomogeneous Structured Eversion Actuator. Lecture Notes in Computer Science, 2020, , 37-48.	1.0	1
296	Bioinspired Bistable Dielectric Elastomer Actuators: Programmable Shapes and Application as Binary Valves. Soft Robotics, 2022, 9, 900-906.	4.6	5
297	Decentralized Estimation and Control of a Soft Robotic Arm. , 2021, , 229-246.		3
298	Soft Multi-point Waveguide Sensor for Proprioception and Extereoception in Inflatable Fingers. , 2021, , .		4
299	A decade retrospective of medical robotics research from 2010 to 2020. Science Robotics, 2021, 6, eabi8017.	9.9	158
300	Shape Reconstruction Processes for Interventional Application Devices: State of the Art, Progress, and Future Directions. Frontiers in Robotics and AI, 2021, 8, 758411.	2.0	13
301	Electrochemical Dual Transducer for Fluidic Self-Sensing Actuation. ACS Applied Materials & Interfaces, 2022, 14, 3496-3503.	4.0	6
302	Exploiting the Morphology of a Shape Memory Spring as the Active Backbone of a Highly Dexterous Tendril Robot (ATBR). , 2020, , .		2
303	Sliding-Mode Control of a Dielectric Elastomer Actuator Featuring Non-Invertible Dynamics. , 2021, , .		2
304	Inverse design of self-oscillatory gels through deep learning. Neural Computing and Applications, 2022, 34, 6879.	3.2	0
305	Kinestatic Modeling of a Spatial Screw-Driven Continuum Robot. IEEE Robotics and Automation Letters, 2022, 7, 3563-3570.	3.3	4
306	Evolutionary Inverse Material Identification: Bespoke Characterization of Soft Materials Using a Metaheuristic Algorithm. Frontiers in Robotics and AI, 2021, 8, 790571.	2.0	3
307	Actuator Fluid Control Using Fuzzy Feedback for Soft Robotics Activities. Intelligent Automation and Soft Computing, 2022, 32, 1855-1865.	1.6	2
308	Soft robotic systems for endoscopic interventions. , 2022, , 61-93.		3
309	A novel arthroscopic preâ€curved cannula with both flexibility and high stiffness. International Journal of Medical Robotics and Computer Assisted Surgery, 2022, , e2360.	1.2	0

#	Article	IF	Citations
310	Modulation of Magnetorheological Fluid Flow in Soft Robots Using Electropermanent Magnets. IEEE Robotics and Automation Letters, 2022, 7, 3914-3921.	3.3	20
311	A Static Modeling Approach for Thin-Walled Soft Robotic Arms Considering Geometric and Material Nonlinearity. IEEE Robotics and Automation Letters, 2022, 7, 1832-1839.	3.3	1
312	Continuum Robots for Medical Interventions. Proceedings of the IEEE, 2022, 110, 847-870.	16.4	80
313	Imaging Arm Regeneration: Label-Free Multiphoton Microscopy to Dissect the Process in Octopus vulgaris. Frontiers in Cell and Developmental Biology, 2022, 10, 814746.	1.8	4
314	A Variable Stiffness Magnetic Catheter Made of a Conductive Phaseâ€Change Polymer for Minimally Invasive Surgery. Advanced Functional Materials, 2022, 32, .	7.8	40
315	A review of soft manipulator research, applications, and opportunities. Journal of Field Robotics, 2022, 39, 281-311.	3.2	46
316	Cyber-secure pneumatic actuator system equipped with encrypted controller and attack detectors. Advanced Robotics, 2022, 36, 438-449.	1.1	3
317	Bistable and Multistable Actuators for Soft Robots: Structures, Materials, and Functionalities. Advanced Materials, 2022, 34, e2110384.	11.1	133
318	Constrained Motion Planning of a Cable-Driven Soft Robot With Compressible Curvature Modeling. IEEE Robotics and Automation Letters, 2022, 7, 4813-4820.	3.3	15
319	A theoretical model for multi-layer jamming systems. Mechanism and Machine Theory, 2022, 172, 104788.	2.7	6
320	Design and Evaluation of a Soft Robotic Catheter Tip Prototype with Self-Propulsion and Shape Changeable Teleoperation. , 2021, , .		0
321	Kinematic control of a cable-driven snake-like manipulator for deep-water based on fuzzy PID controller. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2022, 236, 989-998.	0.7	7
322	A Dataâ€Driven Review of Soft Robotics. Advanced Intelligent Systems, 2022, 4, .	3.3	28
323	A Dualâ€Origami Design that Enables the Quasisequential Deployment and Bending Motion of Soft Robots and Grippers. Advanced Intelligent Systems, 2022, 4, .	3.3	14
328	Soft Robot-Assisted Minimally Invasive Surgery and Interventions: Advances and Outlook. Proceedings of the IEEE, 2022, 110, 871-892.	16.4	15
329	Towards a Snake-Like Flexible Robot With Variable Stiffness Using an SMA Spring-Based Friction Change Mechanism. IEEE Robotics and Automation Letters, 2022, 7, 6582-6589.	3.3	7
330	Design and Characterisation of Cross-sectional Geometries for Soft Robotic Manipulators with Fibre-reinforced Chambers. , 2022, , .		5
331	A Wearable Soft Robotic Exoskeleton for Hip Flexion Rehabilitation. Frontiers in Robotics and AI, 2022, 9, 835237.	2.0	16

#	Article	IF	Citations
332	Snake Robots for Surgical Applications: A Review. Robotics, 2022, 11, 57.	2.1	15
333	Recent advances in wearable exoskeletons for human strength augmentation. Flexible and Printed Electronics, 2022, 7, 023002.	1.5	5
335	Soft Pneumatic Actuators: A Review of Design, Fabrication, Modeling, Sensing, Control and Applications. IEEE Access, 2022, 10, 59442-59485.	2.6	72
336	Control-Oriented Models for Hyperelastic Soft Robots Through Differential Geometry of Curves. Soft Robotics, 2023, 10, 129-148.	4.6	11
337	Kinematics and control of a cable-driven snake-like manipulator for underwater application. Mechanical Sciences, 2022, 13, 495-504.	0.5	1
338	Surgical Robotics and Computer-Integrated Interventional Medicine [Scanning the Issue]. Proceedings of the IEEE, 2022, 110, 823-834.	16.4	10
339	A novel soft-rigid wheeled crawling robot with high payload and passing capability. Robotica, 2022, 40, 3930-3951.	1.3	1
340	A Collapsible Soft Actuator Facilitates Performance in Constrained Environments. Advanced Intelligent Systems, 2022, 4, .	3.3	5
341	Stiffness-Tuneable Segment for Continuum Soft Robots with Vertebrae. Machines, 2022, 10, 581.	1.2	3
342	Unusual deformation patterns in a second-gradient cylindrical lattice shell: Numerical experiments. Mathematics and Mechanics of Solids, 2023, 28, 141-153.	1.5	6
343	Locomotion of an untethered, worm-inspired soft robot driven by a shape-memory alloy skeleton. Scientific Reports, 2022, 12, .	1.6	20
344	Measuring the interfacial bonding strength between soft composite material membranes using blister test. Materials Chemistry and Physics, 2022, 290, 126534.	2.0	2
345	Design and analysis of a novel hybrid-driven continuum robot with variable stiffness. Mechanism and Machine Theory, 2022, 177, 105067.	2.7	7
346	General Principles of Robotics. , 2022, , 23-48.		0
347	Three-Dimensional Printable Ball Joints with Variable Stiffness for Robotic Applications Based on Soft Pneumatic Elastomer Actuators. Polymers, 2022, 14, 3542.	2.0	1
348	On high stiffness of soft robots for compatibility of deformation and function. Advanced Robotics, 2022, 36, 995-1010.	1.1	3
349	A lightweight flexible semi-cylindrical valve for seamless integration in soft robots based on the giant electrorheological fluid. Sensors and Actuators A: Physical, 2022, 347, 113905.	2.0	5
350	Energy Harvesting for Robots with Adaptive Morphology. Soft Robotics, 0, , .	4.6	0

#	Article	IF	Citations
351	A Preliminary Study on Grip-Induced Nerve Damage Caused by a Soft Pneumatic Elastomeric Gripper. Polymers, 2022, 14, 4272.	2.0	1
352	A Bioinspired Fluid-Filled Soft Linear Actuator. Soft Robotics, 2023, 10, 454-466.	4.6	4
353	A Magnetically and Thermally Controlled Liquid Metal Variable Stiffness Material. Advanced Engineering Materials, 2023, 25, .	1.6	8
354	A variable-stiffness and healable pneumatic actuator. Materials Horizons, 2023, 10, 908-917.	6.4	2
355	Toward IoRT Collaborative Digital Twin Technology Enabled Future Surgical Sector: Technical Innovations, Opportunities and Challenges. IEEE Access, 2022, 10, 129079-129104.	2.6	3
356	A Survey of Transoral Robotic Mechanisms: Distal Dexterity, Variable Stiffness, and Triangulation. Cyborg and Bionic Systems, 2023, 4, .	3.7	1
357	Development of a 6 DOF Soft Robotic Manipulator with Integrated Sensing Skin. , 2022, , .		5
358	Design and Experiments of a Robotic Arm with a Rigid-Soft Coupling Structure. , 2022, , .		0
359	Large Scale Stiffness Variable Elastomer Made By Liquid Metal. , 2022, , .		0
360	Optimised Design and Performance Comparison of Soft Robotic Manipulators. , 2022, , .		1
361	Layer jamming: Modeling and experimental validation. International Journal of Mechanical Sciences, 2023, 251, 108325.	3.6	3
362	Modeling and Analysis of Tendon-Driven Continuum Robots for Rod-Based Locking. IEEE Robotics and Automation Letters, 2023, 8, 3126-3133.	3.3	2
363	Kirigami-Inspired 3D Printable Soft Pneumatic Actuators with Multiple Deformation Modes for Soft Robotic Applications. Soft Robotics, 2023, 10, 737-748.	4.6	1
364	Self-folding soft-robotic chains with reconfigurable shapes and functionalities. Nature Communications, 2023, 14, .	5.8	17
365	Continuum Robots: From Conventional to Customized Performance Indicators. Biomimetics, 2023, 8, 147.	1.5	1
369	Growing Robot Navigation Based on Deep Reinforcement Learning. , 2023, , .		2
370	Soft Robotics Workshops: Supporting Experiential Learning About Design, Movement, and Sustainability. Springer Series on Cultural Computing, 2023, , 189-218.	0.4	0
371	Soft Continuum Actuator Tip Position and Contact Force Prediction, Using Electrical Impedance Tomography and Recurrent Neural Networks. , 2023, , .		2

#	Article	IF	Citations
373	Soft Inflatable Fingers: An Overview of Design, Prototyping and Sensorisation for Various Applications. , 2023, , .		0
374	Differentiable Surrogate Models for Design and Trajectory Optimization of Auxetic Soft Robots. , 2023, , .		0
379	Soft robotics in medical applications: State of the art, challenges, and recent advances. , 2023, , 25-61.		0
380	A review of surgical soft robot. , 2023, , .		0
385	Independent Tendons Increase Stiffness of Continuum Robots without Actuator Coupling. , 2023, , .		0
388	High Density Surface Profiling of Multi-layer Soft Actuator Arrays for Use in Prosthetic Sockets. , 2023, , .		0
390	A Quadrupedal Soft Robot Based on Kresling Origami Actuators. Lecture Notes in Electrical Engineering, 2023, , 417-426.	0.3	0
391	Flexible Functional Component for Fluidic Soft Robots. Lecture Notes in Computer Science, 2023, , 288-297.	1.0	0
394	Adjustable Stiffness Techniques Endoscope for Minimally Invasive Surgery. , 2023, , .		0
398	COMPlacent: A Compliant Whisker Manipulator for Object Tactile Exploration. , 2023, , .		0
400	Soft actuators in surgical robotics: a state-of-the-art review. Intelligent Service Robotics, 0, , .	1.6	0
401	An Overview of Recent Medical Applications of Soft Robotics. , 2023, , 240-247.		0
407	Fishtail-inspired SPA with four different rubber-like materials. AIP Conference Proceedings, 2024, , .	0.3	0