Kyu-Jin Cho

List of Publications by Year
in descending order

152	6,280	136885	82499
papers	citations	32 h-index	72 g-index

155	155	155	4947
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Meshworm: A Peristaltic Soft Robot With Antagonistic Nickel Titanium Coil Actuators. IEEE/ASME Transactions on Mechatronics, 2013, 18, 1485-1497.	3.7	536
2	Exo-Glove: A Wearable Robot for the Hand with a Soft Tendon Routing System. IEEE Robotics and Automation Magazine, 2015, 22, 97-105.	2.2	351
3	Hygrobot: A self-locomotive ratcheted actuator powered by environmental humidity. Science Robotics, 2018, 3, .	9.9	307
4	Jumping on water: Surface tensionâ€“dominated jumping of water striders and robotic insects. Science, 2015, 349, 517-521.	6.0	306
5	Review of biomimetic underwater robots using smart actuators. International Journal of Precision Engineering and Manufacturing, 2012, 13, 1281-1292.	1.1	291
6	Review of manufacturing processes for soft biomimetic robots. International Journal of Precision Engineering and Manufacturing, 2009, 10, 171-181.	1.1	236
7	Flea-Inspired Catapult Mechanism for Miniature Jumping Robots. IEEE Transactions on Robotics, 2012, 28, 1007-1018.	7.3	202
8	Omega-Shaped Inchworm-Inspired Crawling Robot With Large-Index-and-Pitch (LIP) SMA Spring Actuators. IEEE/ASME Transactions on Mechatronics, 2013, 18, 419-429.	3.7	194
9	Electronic skins for soft, compact, reversible assembly of wirelessly activated fully soft robots. Science Robotics, 2018, 3, .	9.9	176
10	An origami-inspired, self-locking robotic arm that can be folded flat. Science Robotics, 2018, 3, .	9.9	166
11	Exo-Glove Poly II: A Polymer-Based Soft Wearable Robot for the Hand with a Tendon-Driven Actuation System. Soft Robotics, 2019, 6, 214-227.	4.6	144
12	Wheel Transformer: A Wheel-Leg Hybrid Robot With Passive Transformable Wheels. IEEE Transactions on Robotics, 2014, 30, 1487-1498.	7.3	136
13	Bioinspired dual-morphing stretchable origami. Science Robotics, 2019, 4, .	9.9	127
14	Flytrap-inspired robot using structurally integrated actuation based on bistability and a developable surface. Bioinspiration and Biomimetics, 2014, 9, 036004.	1.5	126
15	Engineering design framework for a shape memory alloy coil spring actuator using a static two-state model. Smart Materials and Structures, 2012, 21, 055009.	1.8	125
16	Development of a polymer-based tendon-driven wearable robotic hand. , 2016, , .		105
17	Review of machine learning methods in soft robotics. PLoS ONE, 2021, 16, e0246102.	1.1	105
18	Origami Wheel Transformer: A Variable-Diameter Wheel Drive Robot Using an Origami Structure. Soft Robotics, 2017, 4, 163-180.	4.6	103

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19	Exo-Glove PM: An Easily Customizable Modularized Pneumatic Assistive Glove. IEEE Robotics and Automation Letters, 2017, 2, 1725-1732.	3.3	100
20	Kinematic Condition for Maximizing the Thrust of a Robotic Fish Using a Compliant Caudal Fin. IEEE Transactions on Robotics, 2012, 28, 1216-1227.	7.3	84
21	Ladybird beetleâ€“inspired compliant origami. Science Robotics, 2020, 5, .	9.9	79
22	Design of an Optically Controlled MR-Compatible Active Needle. IEEE Transactions on Robotics, 2015, 31, 1-11.	7.3	77
23	Omegabot : Biomimetic inchworm robot using SMA coil actuator and smart composite microstructures (SCM). , 2009, , .		69
24	Soft Robotic Blocks: Introducing SoBL, a Fast-Build Modularized Design Block. IEEE Robotics and Automation Magazine, 2016, 23, 30-41.	2.2	69
25	Design of a variable-stiffness flapping mechanism for maximizing the thrust of a bio-inspired underwater robot. Bioinspiration and Biomimetics, 2014, 9, 036002.	1.5	63
26	Eyes are faster than hands: A soft wearable robot learns user intention from the egocentric view. Science Robotics, 2019, 4, .	9.9	57
27	The Deformable Wheel Robot Using Magic-Ball Origami Structure. , 2013, , .		53
28	Interfacing Soft and Hard: A Spring Reinforced Actuator. Soft Robotics, 2020, 7, 44-58.	4.6	51
29	Development and evaluation of a soft wearable weight support device for reducing muscle fatigue on shoulder. PLoS ONE, 2017, 12, e0173730.	1.1	50
30	Deformable wheel robot based on origami structure. , 2013, , .		49
31	Highâ€“load capacity origami transformable wheel. Science Robotics, 2021, 6, .	9.9	47
32	JumpRoACH: A Trajectory-Adjustable Integrated Jumpingâ€“Crawling Robot. IEEE/ASME Transactions on Mechatronics, 2019, 24, 947-958.	3.7	46
33	Segmented binary control of shape memory alloy actuator systems using the Peltier effect. , 2004, , .		45
34	Implementation of various control algorithms for hand rehabilitation exercise using wearable robotic hand. Intelligent Service Robotics, 2013, 6, 181-189.	1.6	43
35	Anisotropic Patterning to Reduce Instability of Concentric-Tube Robots. IEEE Transactions on Robotics, 2015, 31, 1311-1323.	7.3	43
36	Underactuated Adaptive Gripper Using Flexural Buckling. IEEE Transactions on Robotics, 2013, 29, 1396-1407.	7.3	40

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37	Jointless structure and under-actuation mechanism for compact hand exoskeleton. , 2011, 2011, 5975394.		37
38	Flea inspired catapult mechanism with active energy storage and release for small scale jumping robot. , 2013, , .		37
39	Toward a solution to the snapping problem in a concentric-tube continuum robot: Grooved tubes with anisotropy. , 2014, , .		34
40	Exo-Wrist: A Soft Tendon-Driven Wrist-Wearable Robot With Active Anchor for Dart-Throwing Motion in Hemiplegic Patients. IEEE Robotics and Automation Letters, 2019, 4, 4499-4506.	3.3	34
41	Design and analysis of a stiffness adjustable structure using an endoskeleton. International Journal of Precision Engineering and Manufacturing, 2012, 13, 1255-1258.	1.1	33
42	Continuously Variable Stiffness Mechanism Using Nonuniform Patterns on Coaxial Tubes for Continuum Microsurgical Robot. IEEE Transactions on Robotics, 2019, 35, 1475-1487.	7.3	32
43	Towards a biologically inspired small-scale water jumping robot. , 2008, , .		31
44	Deformable-wheel robot based on soft material. International Journal of Precision Engineering and Manufacturing, 2013, 14, 1439-1445.	1.1	30
45	A Novel Slack-Enabling Tendon Drive That Improves Efficiency, Size, and Safety in Soft Wearable Robots. IEEE/ASME Transactions on Mechatronics, 2017, 22, 59-70.	3.7	30
46	Kinematic analysis and experimental verification on the locomotion of gecko. Journal of Bionic Engineering, 2009, 6, 246-254.	2.7	29
47	Towards a bio-mimetic flytrap robot based on a snap-through mechanism. , 2010, , .		29
48	Effect of initial tool-plate curvature on snap-through load of unsymmetric laminated cross-ply bistable composites. Composite Structures, 2015, 122, 82-91.	3.1	29
49	A self-deployable origami structure with locking mechanism induced by buckling effect. , 2015, , .		28
50	Sensorless displacement estimation of a shape memory alloy coil spring actuator using inductance. Smart Materials and Structures, 2013, 22, 025001.	1.8	27
51	Froghopper-inspired direction-changing concept for miniature jumping robots. Bioinspiration and Biomimetics, 2016, 11, 056015.	1.5	26
52	SBC Hand: A Lightweight Robotic Hand with an SMA Actuator Array implementing C-segmentation. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	25
53	Curvature tailoring of unsymmetric laminates with an initial curvature. Journal of Composite Materials, 2013, 47, 3163-3174.	1.2	25
54	Wheel transformer: A miniaturized terrain adaptive robot with passively transformed wheels. , 2013, , .		25

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55	Architecture design of a multiaxis cellular actuator array using segmented binary control of shape memory alloy. , 2006, 22, 831-843.		24
56	A Novel Low-Cost, Large Curvature Bend Sensor Based on a Bowden-Cable. Sensors, 2016, 16, 961.	2.1	23
57	Tendon-Driven Jamming Mechanism for Configurable Variable Stiffness. Soft Robotics, 2021, 8, 109-118.	4.6	23
58	Modification of microstructure and strength/conductivity properties of Cu-15 Ag in-situ composites by equal-channel angular pressing. Metals and Materials International, 2012, 18, 355-360.	1.8	21
59	Self-Folding Origami Using Torsion Shape Memory Alloy Wire Actuators. , 2014, , .		21
60	Hydrodynamic advantages of a low aspect-ratio flapping foil. Journal of Fluids and Structures, 2017, 71, 70-77.	1.5	21
61	Control of a Bowden-Cable Actuation System With Embedded BoASensor for Soft Wearable Robots. IEEE Transactions on Industrial Electronics, 2020, 67, 7669-7680.	5.2	21
62	Component assembly with shape memory polymer fastener for microrobots. Smart Materials and Structures, 2014, 23, 015011.	1.8	20
63	Fabrication of Composite and Sheet Metal Laminated Bistable Jumping Mechanism. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	20
64	Reliability analysis of a tendon-driven actuation for soft robots. International Journal of Robotics Research, 2021, 40, 494-511.	5.8	20
65	A Positive Pressure Jamming Based Variable Stiffness Structure and its Application on Wearable Robots. IEEE Robotics and Automation Letters, 2021, 6, 8078-8085.	3.3	20
66	Omegabot: Crawling robot inspired by Ascotis Selenaria. , 2010, , .		19
67	Deformable soft wheel robot using hybrid actuation. , 2012, , .		19
68	Feedforward friction compensation of Bowden-cable transmission via loop routing. , 2015, , .		19
69	Investigation on the control strategy of soft wearable robotic hand with slack enabling tendon actuator. , 2015, , .		19
70	Vortical structures around a flexible oscillating panel for maximum thrust in a quiescent fluid. Journal of Fluids and Structures, 2016, 67, 241-260.	1.5	19
71	Stretchable Kirigami Components for Composite Meso-Scale Robots. IEEE Robotics and Automation Letters, 2020, 5, 1883-1890.	3.3	19
72	Morphing Origami Block for Lightweight Reconfigurable System. IEEE Transactions on Robotics, 2021, 37, 494-505.	7.3	19

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73	The effect of leg compliance in multi-directional jumping of a flea-inspired mechanism. Bioinspiration and Biomimetics, 2017, 12, 026006.	1.5	18
74	Learning-Based Fingertip Force Estimation for Soft Wearable Hand Robot With Tendon-Sheath Mechanism. IEEE Robotics and Automation Letters, 2020, 5, 946-953.	3.3	18
75	Design of a slider-crank leg mechanism for mobile hopping robotic platforms. Journal of Mechanical Science and Technology, 2013, 27, 207-214.	0.7	17
76	Design & analysis a flytrap robot using bi-stable composite. , 2011, , .		15
77	Dual-stiffness structures with reconfiguring mechanism: Design and investigation. Journal of Intelligent Material Systems and Structures, 2016, 27, 995-1010.	1.4	15
78	Development of a transformable wheel actuated by soft pneumatic actuators. International Journal of Control, Automation and Systems, 2017, 15, 36-44.	1.6	15
79	Research on Technology Status and Development Direction of Wearable Robot. Fashion & Textile Research Journal, 2019, 21, 640-655.	0.1	15
80	Finger-sized climbing robot using artificial proleg. , 2010, , .		14
81	Capstan brake: Passive brake for tendon-driven mechanism. , 2012, , .		14
82	Design of a passive brake mechanism for tendon driven devices. International Journal of Precision Engineering and Manufacturing, 2012, 13, 1487-1490.	1.1	14
83	Body-powered variable impedance: An approach to augmenting humans with a passive device by reshaping lifting posture. Science Robotics, 2021, 6, .	9.9	14
84	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
85	A large-stroke shape memory alloy spring actuator using double-coil configuration. Smart Materials and Structures, 2015, 24, 095014.	1.8	13
86	Force characteristics of rolling contact joint for compact structure. , 2016, , .		13
87	Fast, compact, and lightweight shape-shifting system composed of distributed self-folding origami modules. , 2016, , .		13
88	Multi-Axis SMA Actuator Array for Driving Anthropomorphic Robot Hand. , 0, , .		12
89	Generalized curvature tailoring of bistable CFRP laminates by curing on a cylindrical tool-plate with misalignment. Composites Science and Technology, 2014, 103, 127-133.	3.8	12
90	Biomimetic Robots. Springer Handbooks, 2016, , 543-574.	0.3	12

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91	Design of a Bioinspired Robotic Hand: Magnetic Synapse Sensor Integration for a Robust Remote Tactile Sensing. IEEE Robotics and Automation Letters, 2018, 3, 3545-3552.	3.3	12
92	Design Optimization of Asymmetric Patterns for Variable Stiffness of Continuum Tubular Robots. IEEE Transactions on Industrial Electronics, 2022, 69, 8190-8200.	5.2	12
93	Underwater maneuvering of robotic sheets through buoyancy-mediated active flutter. Science Robotics, 2021, 6, .	9.9	12
94	Design and control of vast DOF wet SMA array actuators. , 0, , .		11
95	Design of vast DOF artificial muscle actuators with a cellular array structure and its application to a five-fingered robotic hand. , 0, , .		11
96	Development of A Meal Assistive Exoskeleton made of Soft Materials for polymyositis patients. , 2014, , .		11
97	Evaluation of an improved soft meal assistive exoskeleton with an adjustable weight-bearing system for people with disability. , 2015, , .		11
98	Development of a Multi-functional Soft Robot (SNUMAX) and Performance in RoboSoft Grand Challenge. Frontiers in Robotics and AI, 2016, 3, .	2.0	11
99	A feasibility study on tension control of Bowden-cable based on a dual-wire scheme. , 2017, , .		11
100	Design and Manufacturing a Bio-inspired Variable Stiffness Mechanism in a Robotic Dolphin. Lecture Notes in Computer Science, 2013, , 302-309.	1.0	11
101	Deployable Soft Pneumatic Networks (D-PneuNets) Actuator With Dual-Morphing Origami Chambers for High-Compactness. IEEE Robotics and Automation Letters, 2022, 7, 1262-1269.	3.3	11
102	Wake and thrust of an angularly reciprocating plate. Journal of Fluid Mechanics, 2013, 720, 545-557.	1.4	10
103	A jumping robotic insect based on a torque reversal catapult mechanism. , 2013, , .		9
104	A Needlescopic Wrist Mechanism With Articulated Motion and Kinematic Tractability for Micro Laparoscopic Surgery. IEEE/ASME Transactions on Mechatronics, 2020, 25, 229-238.	3.7	9
105	Single EMG Sensor-Driven Robotic Glove Control for Reliable Augmentation of Power Grasping. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 179-189.	2.1	9
106	Design, fabrication and analysis of a body-caudal fin propulsion system for a microrobotic fish. , 2008, , .		8
107	The effect of compliant joint and caudal fin in thrust generation for robotic fish. , 2010, , .		8
108	Evaluation of the antagonistic tendon driven system for SNU Exo-Glove. , 2012, , .		8

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109	Role of compliant leg in the flea-inspired jumping mechanism. , 2014, , .		8
110	Single to Multi: Data-Driven High Resolution Calibration Method for Piezoresistive Sensor Array. IEEE Robotics and Automation Letters, 2021, 6, 4970-4977.	3.3	8
111	An Omnidirectional Jumper with Expanded Movability via Steering, Self-Righting and Take-off Angle Adjustment. , 2018, , .		7
112	Joint Angle Estimation of a Tendon-Driven Soft Wearable Robot through a Tension and Stroke Measurement. Sensors, 2020, 20, 2852.	2.1	7
113	Slider-Tendon Linear Actuator With Under-Actuation and Fast-Connection for Soft Wearable Robots. IEEE/ASME Transactions on Mechatronics, 2021, 26, 2932-2943.	3.7	7
114	Anthropomorphic Prosthetic Hand Inspired by Efficient Swing Mechanics for Sports Activities. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1196-1207.	3.7	7
115	Design of the shape memory alloy coil spring actuator for the soft deformable wheel robot. , 2012, , .		6
116	Wearable Lymphedema Massaging Modules: Proof of Concept using Origami-inspired Soft Fabric Pneumatic Actuators. , 2019, 2019, 950-956.		6
117	Development and Preclinical Trials of a Novel Steerable Cannula for 360Â° Arthroscopic Capsular Release in Minimally Invasive Surgery. , 2020, 2020, 4890.		6
118	Development of an Insect Size Micro Jumping Robot. Lecture Notes in Computer Science, 2014, , 405-407.	1.0	6
119	Meso-scale compliant gripper inspired by caterpillar's proleg. , 2011, , .		5
120	CaseCrawler: A Lightweight and Low-Profile Crawling Phone Case Robot. IEEE Robotics and Automation Letters, 2020, 5, 5858-5865.	3.3	5
121	4D Printing of Continuous Shape Representation. Advanced Materials Technologies, 2021, 6, 2100133.	3.0	5
122	Stabilizing the head motion of a robotic dolphin with varying the stiffness of a caudal fin. , 2013, , .		4
123	Curved Compliant Facet Origami-Based Self-Deployable Gliding Wing Module for Jump-Gliding. , 2016, , .		4
124	Design of anisotropic pneumatic artificial muscles and their applications to soft wearable devices for text neck symptoms. , 2017, 2017, 4135-4138.		4
125	Soft Morphing Motion of Flytrap Robot Using Bending Propagating Actuation. Journal of Institute of Control, Robotics and Systems, 2012, 18, 168-174.	0.1	4
126	Bio-inspired Design of a Double-Sided Crawling Robot. Lecture Notes in Computer Science, 2017, , 562-566.	1.0	4

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127	Snap-through behavior of bi-stable composite structure using SMA spring actuator. , 2011, , .		3
128	Design of Continuum Robot With Variable Stiffness for Gastrointestinal Stenting Using Conformability Factor. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 529-532.	2.1	3
129	Segmentation architecture of multi-axis SMA array actuators inspired by biological muscles. , 0, , .		2
130	Multi-Segment State Coordination for Reducing Latency Time of Shape Memory Alloy Actuator Systems. , 0, , .		2
131	Segmentation theory for design of a multi-axis actuator array using segmented binary control. , 0, , .		2
132	Modeling of tendon driven soft wearable robot for the finger. , 2013, , .		2
133	Design and manufacturing a robotic dolphin to increase dynamic performance. , 2013, , .		2
134	Segmented binary control of multi-axis SMA array actuators. , 2005, , .		1
135	The development of a scalable underactuated gripper based on flexural buckling. , 2013, , .		1
136	Concept of variable transmission for tendon driven mechanism. , 2013, , .		1
137	Development of Efficiency Enhanced Scotch Yoke Mechanism for Robotic Fish. International Journal of Precision Engineering and Manufacturing, 2018, 19, 1507-1513.	1.1	1
138	Review of the Insect-Inspired Robots: from Single to Multi-Modal Locomotion. Journal of the Korean Society for Precision Engineering, 2018, 35, 911-923.	0.1	1
139	System Architecture and Control of Vast DOF Array Actuators. , 2003, , .		1
140	Segmented Binary Control of Shape Memory Alloy Actuators â€" Feedforward Servo Control. , 2004, , .		1
141	Maximum Thrust Condition by Compliant Joint of a Caudal Fin for Developing a Robotic Fish. Journal of Institute of Control, Robotics and Systems, 2012, 18, 103-109.	0.1	1
142	Exo-Abs: A Wearable Robotic System Inspired by Human Abdominal Muscles for Noninvasive and Effort-Synchronized Respiratory Assistance. IEEE Transactions on Robotics, 2022, 38, 2994-3014.	7.3	1
143	Dimensionality reduction of cellular actuator arrays using the concept of synergy for driving a robotic hand. , 2006, 2006, 2718-21.		0
144	Endoskeletons using composite flexure joint for biomimetic meso-scale robot. , 2011, , .		0

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145	Modified Brinson model as an equivalent one-dimensional constitutive equation of SMA spring. Proceedings of SPIE, 2011, , .	0.8	0
146	Towards a bistable morphing winglet for unmanned aerial vehicle(UAV). , 2013, , .		0
147	Meso-scale robot assembly using shape memory polymer rivet fastener. , 2013, , .		0
148	Sensorless admittance control of cycle ergometer for rehabilitation. , 2014, , .		0
149	Evaluation of Initial Curvature Effect on the Snap-through Load of Bi-stable Composites. , 2014, , .		0
150	Design of a Multi-Axis SMA Actuator Arrays Using Segmented Binary Control. , 2004, , .		0
151	Survey of Brassiere Related Clothing Tendency for Mastectomy Patients. Fashion & Textile Research Journal, 2019, 21, 800-812.	0.1	0
152	Dimensionality reduction of cellular actuator arrays using the concept of synergy for driving a robotic hand. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0