Aaron M Dollar

List of Publications by Year
in descending order

224 papers	10,152 citations	87843 38 h-index	66879 78 g-index
227 all docs	227 docs citations	227 times ranked	6064 citing authors

#	Article	IF	Citations
1	Lower Extremity Exoskeletons and Active Orthoses: Challenges and State-of-the-Art. , 2008, 24, 144-158.		1,031
2	The GRASP Taxonomy of Human Grasp Types. IEEE Transactions on Human-Machine Systems, 2016, 46, 66-77.	2.5	594
3	Mechanical design and performance specifications of anthropomorphic prosthetic hands: A review. Journal of Rehabilitation Research and Development, 2013, 50, 599.	1.6	552
4	A compliant, underactuated hand for robust manipulation. International Journal of Robotics Research, 2014, 33, 736-752.	5.8	471
5	The Highly Adaptive SDM Hand: Design and Performance Evaluation. International Journal of Robotics Research, 2010, 29, 585-597.	5.8	428
6	Benchmarking in Manipulation Research: Using the Yale-CMU-Berkeley Object and Model Set. IEEE Robotics and Automation Magazine, 2015, 22, 36-52.	2.2	384
7	The YCB object and Model set: Towards common benchmarks for manipulation research. , 2015, , .		326
8	Stability of small-scale UAV helicopters and quadrotors with added payload mass under PID control. Autonomous Robots, 2012, 33, 129-142.	3.2	252
9	Grasping from the air: Hovering capture and load stability. , 2011, , .		228
10	Yale-CMU-Berkeley dataset for robotic manipulation research. International Journal of Robotics Research, 2017, 36, 261-268.	5.8	205
11	A robust compliant grasper via shape deposition manufacturing. IEEE/ASME Transactions on Mechatronics, 2006, 11, 154-161.	3.7	200
12	Grasp Frequency and Usage in Daily Household and Machine Shop Tasks. IEEE Transactions on Haptics, 2013, 6, 296-308.	1.8	181
13	A modular, open-source 3D printed underactuated hand. , 2013, , .		175
14	A Hand-Centric Classification of Human and Robot Dexterous Manipulation. IEEE Transactions on Haptics, 2013, 6, 129-144.	1.8	139
15	Analysis of Human Grasping Behavior: Object Characteristics and Grasp Type. IEEE Transactions on Haptics, 2014, 7, 311-323.	1.8	137
16	Estimation of Quasi-Stiffness and Propulsive Work of the Human Ankle in the Stance Phase of Walking. PLoS ONE, 2013, 8, e59935.	1.1	120
17	An investigation of grasp type and frequency in daily household and machine shop tasks. , 2011, , .		116
18	Single-Grasp Object Classification and Feature Extraction with Simple Robot Hands and Tactile Sensors. IEEE Transactions on Haptics, 2016, 9, 207-220.	1.8	110

#	Article	IF	Citations
19	Yale OpenHand Project: Optimizing Open-Source Hand Designs for Ease of Fabrication and Adoption. IEEE Robotics and Automation Magazine, 2017, 24, 32-40.	2.2	104
20	Dexterous manipulation with underactuated elastic hands. , 2011, , .		96
21	Performance characteristics of anthropomorphic prosthetic hands. , 2011, 2011, 5975476.		95
22	Towards grasping in unstructured environments: grasper compliance and configuration optimization. Advanced Robotics, 2005, 19, 523-543.	1.1	93
23	On dexterity and dexterous manipulation. , 2011, , .		91
24	The GR2 Gripper: An Underactuated Hand for Open-Loop In-Hand Planar Manipulation. IEEE Transactions on Robotics, 2016, 32, 763-770.	7.3	91
25	Design of a quasi-passive knee exoskeleton to assist running. , 2008, , .		90
26	State of the Art in Artificial Wrists: A Review of Prosthetic and Robotic Wrist Design. IEEE Transactions on Robotics, 2019, 35, 261-277.	7.3	89
27	Open-Loop Precision Grasping With Underactuated Hands Inspired by a Human Manipulation Strategy. IEEE Transactions on Automation Science and Engineering, 2013, 10, 625-633.	3.4	87
28	Strengthening of 3D Printed Fused Deposition Manufactured Parts Using the Fill Compositing Technique. PLoS ONE, 2015, 10, e0122915.	1.1	87
29	Biomechanical considerations in the design of lower limb exoskeletons. , 2011, 2011, 5975366.		86
30	Design and Evaluation of a Quasi-Passive Knee Exoskeleton for Investigation of Motor Adaptation in Lower Extremity Joints. IEEE Transactions on Biomedical Engineering, 2014, 61, 1809-1821.	2.5	86
31	Stability of Helicopters in Compliant Contact Under PD-PID Control. IEEE Transactions on Robotics, 2014, 30, 1472-1486.	7.3	83
32	Estimation of Quasi-Stiffness of the Human Knee in the Stance Phase of Walking. PLoS ONE, 2013, 8, e59993.	1.1	82
33	The SDM Hand as a Prosthetic Terminal Device: A Feasibility Study. , 2007, , .		80
34	Hybrid Deposition Manufacturing: Design Strategies for Multimaterial Mechanisms Via Three-Dimensional Printing and Material Deposition. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	76
35	Classifying human manipulation behavior. , 2011, 2011, 5975408.		73
36	The Yale human grasping dataset: Grasp, object, and task data in household and machine shop environments. International Journal of Robotics Research, 2015, 34, 251-255.	5.8	72

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37	Benchmarking grasping and manipulation: Properties of the Objects of Daily Living. , 2010, , .		70
38	Joint coupling design of underactuated hands for unstructured environments. International Journal of Robotics Research, 2011, 30, 1157-1169.	5.8	70
39	Estimation of Quasi-Stiffness of the Human Hip in the Stance Phase of Walking. PLoS ONE, 2013, 8, e81841.	1.1	69
40	Perching and restingâ€"A paradigm for UAV maneuvering with modularized landing gears. Science Robotics, 2019, 4, .	9.9	69
41	Simple, Robust Autonomous Grasping in Unstructured Environments. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	68
42	Variable-Friction Finger Surfaces to Enable Within-Hand Manipulation via Gripping and Sliding. IEEE Robotics and Automation Letters, 2018, 3, 4116-4123.	3.3	67
43	Contact sensing and grasping performance of compliant hands. Autonomous Robots, 2010, 28, 65-75.	3.2	66
44	The Smooth Curvature Model: An Efficient Representation of Eulerâ€"Bernoulli Flexures as Robot Joints. IEEE Transactions on Robotics, 2012, 28, 761-772.	7.3	63
45	Stable, open-loop precision manipulation with underactuated hands. International Journal of Robotics Research, 2015, 34, 1347-1360.	5.8	60
46	Analysis of Human Grasping Behavior: Correlating Tasks, Objects and Grasps. IEEE Transactions on Haptics, 2014, 7, 430-441.	1.8	56
47	An Adaptive Three-Fingered Prismatic Gripper With Passive Rotational Joints. IEEE Robotics and Automation Letters, 2016, 1, 668-675.	3.3	55
48	Estimating thumbâ€"index finger precision grip and manipulation potential in extant and fossil primates. Journal of the Royal Society Interface, 2015, 12, 20150176.	1.5	50
49	Design and Functional Evaluation of a Quasi-Passive Compliant Stance Control Kneeâ€"Ankleâ€"Foot Orthosis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 258-268.	2.7	49
50	The Yale Aerial Manipulator: Grasping in flight. , 2011, , .		48
51	Assessing assumptions in kinematic hand models: A review. , 2012, , .		48
52	Classifying Human Hand Use and the Activities of Daily Living. Springer Tracts in Advanced Robotics, 2014, , 201-216.	0.3	48
53	Joint Coupling Design of Underactuated Grippers. , 2006, , 903.		47
54	Precision grasping and manipulation of small objects from flat surfaces using underactuated fingers. , 2012, , .		46

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55	Mechanical analysis of avian feet: multiarticular muscles in grasping and perching. Royal Society Open Science, 2015, 2, 140350.	1.1	45
56	Design and Evaluation of Shape-Changing Haptic Interfaces for Pedestrian Navigation Assistance. IEEE Transactions on Haptics, 2017, 10, 17-28.	1.8	41
57	State of the art in prosthetic wrists: Commercial and research devices. , 2015, , .		40
58	Pre-Grasp Sliding Manipulation of Thin Objects Using Soft, Compliant, or Underactuated Hands. IEEE Robotics and Automation Letters, 2019, 4, 662-669.	3.3	38
59	Linkage-Based Analysis and Optimization of an Underactuated Planar Manipulator for In-Hand Manipulation. Journal of Mechanisms and Robotics, 2014, 6, .	1.5	37
60	The SDM Hand: A Highly Adaptive Compliant Grasper for Unstructured Environments. Springer Tracts in Advanced Robotics, 2009, , 3-11.	0.3	37
61	Hovering Stability of Helicopters With Elastic Constraints. , 2010, , .		36
62	Novel differential mechanism enabling two DOF from a single actuator: Application to a prosthetic hand. , 2013, 2013, 6650441.		36
63	M2 Gripper: Extending the Dexterity of a Simple, Underactuated Gripper. Mechanisms and Machine Science, 2016, , 795-805.	0.3	35
64	Active Orthoses for the Lower-Limbs: Challenges and State of the Art. , 2007, , .		34
65	On the mechanics of the knee during the stance phase of the gait. , 2011, 2011, 5975478.		34
66	Finding small, versatile sets of human grasps to span common objects. , 2013, , .		33
67	An underactuated hand for efficient finger-gaiting-based dexterous manipulation. , 2014, , .		33
68	Design of hands for aerial manipulation: Actuator number and routing for grasping and perching. , 2014, , .		32
69	Biomechanical Effects of Stiffness in Parallel With the Knee Joint During Walking. IEEE Transactions on Biomedical Engineering, 2015, 62, 2389-2401.	2.5	32
70	Unplanned, model-free, single grasp object classification with underactuated hands and force sensors. , 2015, , .		30
71	Dimensional synthesis of three-fingered robot hands for maximal precision manipulation workspace. International Journal of Robotics Research, 2015, 34, 1731-1746.	5.8	28
72	UAV rotorcraft in compliant contact: Stability analysis and simulation. , 2011, , .		25

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73	Vision-based model predictive control for within-hand precision manipulation with underactuated grippers. , 2017, , .		25
74	Complex manipulation with a simple robotic hand through contact breaking and caging. Science Robotics, 2021, 6, .	9.9	25
75	Disturbance Response of Two-Link Underactuated Serial-Link Chains. Journal of Mechanisms and Robotics, 2012, 4, .	1.5	24
76	Analyzing dexterous hands using a parallel robots framework. Autonomous Robots, 2014, 36, 169-180.	3.2	24
77	A two-fingered robot gripper with large object reorientation range. , 2017, , .		24
78	On the mechanics of the ankle in the stance phase of the gait. , 2011, 2011, 8135-40.		23
79	Spherical Hands: Toward Underactuated, In-Hand Manipulation Invariant to Object Size and Grasp Location. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	23
80	Deriving dexterous, in-hand manipulation primitives for adaptive robot hands. , 2017, , .		23
81	Printing Three-Dimensional Electrical Traces in Additive Manufactured Parts for Injection of Low Melting Temperature Metals. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	22
82	Design for Control of Wheeled Inverted Pendulum Platforms. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	22
83	Complex In-Hand Manipulation Via Compliance-Enabled Finger Gaiting and Multi-Modal Planning. IEEE Robotics and Automation Letters, 2022, 7, 4821-4828.	3.3	22
84	A quasi-passive compliant stance control Knee-Ankle-Foot Orthosis. , 2013, 2013, 6650471.		21
85	Toward robust, whole-hand caging manipulation with underactuated hands. , 2017, , .		21
86	Learning a State Transition Model of an Underactuated Adaptive Hand. IEEE Robotics and Automation Letters, 2019, 4, 1287-1294.	3.3	21
87	Post-contact, in-hand object motion compensation for compliant and underactuated hands. , 2016, , .		20
88	Outdoor pedestrian navigation assistance with a shape-changing haptic interface and comparison with a vibrotactile device. , 2016, , .		19
89	Guest Editorial Open Discussion of Robot Grasping Benchmarks, Protocols, and Metrics. IEEE Transactions on Automation Science and Engineering, 2018, 15, 1440-1442.	3.4	19
90	Learning task-specific models for dexterous, in-hand manipulation with simple, adaptive robot hands. , 2016, , .		17

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91	Design of a stewart platform-inspired dexterous hand for 6-DOF within-hand manipulation. , 2017, , .		17
92	Post-Contact, In-Hand Object Motion Compensation With Adaptive Hands. IEEE Transactions on Automation Science and Engineering, 2018, 15, 456-467.	3.4	17
93	Modeling and Evaluation of Robust Whole-Hand Caging Manipulation. IEEE Transactions on Robotics, 2019, 35, 549-563.	7.3	17
94	Quantifying Prosthetic and Intact Limb Use in Upper Limb Amputees via Egocentric Video: An Unsupervised, At-Home Study. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 463-484.	2.1	17
95	External Disturbances and Coupling Mechanisms in Underactuated Hands. , 2010, , .		16
96	A parallel robots framework to study precision grasping and dexterous manipulation. , 2013, , .		16
97	Workspace Shape and Characteristics for Human Two- and Three-Fingered Precision Manipulation. IEEE Transactions on Biomedical Engineering, 2015, 62, 2196-2207.	2.5	16
98	Analyzing at-home prosthesis use in unilateral upper-limb amputees to inform treatment & device design. , 2017, 2017, 1273-1280.		16
99	Robust Precision Manipulation With Simple Process Models Using Visual Servoing Techniques With Disturbance Rejection. IEEE Transactions on Automation Science and Engineering, 2019, 16, 406-419.	3.4	16
100	Benchmarking Cluttered Robot Pick-and-Place Manipulation With the Box and Blocks Test. IEEE Robotics and Automation Letters, 2020, 5, 454-461.	3.3	16
101	Manipulation for self-Identification, and self-Identification for better manipulation. Science Robotics, 2021, 6, .	9.9	16
102	Intrinsic Embedded Sensors for Polymeric Mechatronics: Flexure and Force Sensing. Sensors, 2014, 14, 3861-3870.	2.1	15
103	A Passively Adaptive Rotary-to-Linear Continuously Variable Transmission. IEEE Transactions on Robotics, 2014, 30, 1148-1160.	7.3	15
104	In-Hand Manipulation Primitives for a Minimal, Underactuated Gripper With Active Surfaces. , 2016, , .		15
105	Underactuated Gripper That Is Able to Convert from Precision to Power Grasp by a Variable Transmission Ratio. , 2012, , 669-679.		15
106	Practical aerial grasping of unstructured objects. , 2011, , .		14
107	First validation of the Haptic Sandwich: A shape changing handheld haptic navigation aid. , 2015, , .		14
108	Vision-based precision manipulation with underactuated hands: Simple and effective solutions for dexterity. , 2016, , .		14

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109	Gross Motion Analysis of Fingertip-Based Within-Hand Manipulation. IEEE Transactions on Robotics, 2016, 32, 1009-1016.	7.3	13
110	Classification and Kinematic Equivalents of Contact Types for Fingertip-Based Robot Hand Manipulation. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	13
111	Learning the post-contact reconfiguration of the hand object system for adaptive grasping mechanisms. , 2017, , .		13
112	Learning Modes of Within-Hand Manipulation. , 2018, , .		13
113	Aerial Grasping from a Helicopter UAV Platform. Springer Tracts in Advanced Robotics, 2014, , 269-283.	0.3	13
114	Design and Evaluation of a Robust Compliant Grasper Using Shape Deposition Manufacturing. , 2005, , 1403.		12
115	Grasp and force based taxonomy of split-hook prosthetic terminal devices. , 2014, 2014, 6613-8.		12
116	Robust Resonant Frequency-Based Contact Detection With Applications in Robotic Reaching and Grasping. IEEE/ASME Transactions on Mechatronics, 2014, 19, 1552-1561.	3.7	12
117	Preliminary Design and Evaluation of a Single-Actuator Anthropomorphic Prosthetic Hand with Multiple Distinct Grasp Types. , 2018, , .		12
118	Model Predictive Actor-Critic: Accelerating Robot Skill Acquisition with Deep Reinforcement Learning. , 2021, , .		12
119	Performance of serial underactuated mechanisms: Number of degrees of freedom and actuators. , 2011, , .		11
120	Dexterous manipulation with underactuated fingers: Flip-and-pinch task. , 2012, , .		11
121	Comparative clinical evaluation of the Yale Multigrasp Hand. , 2016, , .		11
122	Examining the Impact of Wrist Mobility on Reaching Motion Compensation Across a Discretely Sampled Workspace. , 2018, , .		11
123	Combining Analytical Modeling and Learning to Simplify Dexterous Manipulation With Adaptive Robot Hands. IEEE Transactions on Automation Science and Engineering, 2019, 16, 1361-1372.	3.4	11
124	Exploring Dexterous Manipulation Workspaces with the iHY Hand. Journal of the Robotics Society of Japan, 2014, 32, 318-322.	0.0	10
125	Shape Control of Compliant, Articulated Meshes: Towards Modular Active-Cell Robots (MACROs). IEEE Robotics and Automation Letters, 2017, 2, 1878-1884.	3.3	10
126	Handâ€“object configuration estimation using particle filters for dexterous in-hand manipulation. International Journal of Robotics Research, 2020, 39, 1760-1774.	5.8	10

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127	Dexterous workspace of human two- and three-fingered precision manipulation. , 2014, , .		9
128	Development and experimental validation of a minimalistic shape-changing haptic navigation device. , 2016, , .		9
129	Experiments in Underactuated In-Hand Manipulation. Springer Tracts in Advanced Robotics, 2013, , 27-40.	0.3	9
130	Dimensionality Reduction and Motion Clustering During Activities of Daily Living: Three-, Four-, and Seven-Degree-of-Freedom Arm Movements. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2826-2836.	2.7	9
131	Simple, reliable robotic grasping for human environments. , 2008, , .		8
132	Robust, inexpensive resonant frequency based contact detection for robotic manipulators. , 2012, , .		8
133	Actuation Torque Reduction in Parallel Robots Using Joint Compliance. Journal of Mechanisms and Robotics, 2014, 6, .	1.5	8
134	Humanlike, task-specific reaching and grasping with redundant arms and low-complexity hands. , 2015, , .		8
135	Adaptive Legged Robots Through Exactly Constrained and Non-Redundant Design. IEEE Access, 2017, 5, 11131-11141.	2.6	8
136	Toward Modular Active-Cell Robots (MACROs): SMA Cell Design and Modeling of Compliant, Articulated Meshes. IEEE Transactions on Robotics, 2017, 33, 796-806.	7.3	8
137	Using a Variable-Friction Robot Hand to Determine Proprioceptive Features for Object Classification During Within-Hand-Manipulation. IEEE Transactions on Haptics, 2020, 13, 600-610.	1.8	8
138	The Connectedness of Packed Circles and Spheres with Application to Conductive Cellular Materials. PLoS ONE, 2012, 7, e51695.	1.1	8
139	A comparison of workspace and force capabilities between classes of underactuated mechanisms. , 2011, , .		7
140	Static analysis of parallel robots with compliant joints for in-hand manipulation. , 2012, , .		7
141	Patterned compliance in robotic finger pads for versatile surface usage in dexterous manipulation. , 2015, , .		7
142	Lightweight custom composite prosthetic components using an additive manufacturing-based molding technique. , 2015, 2015, 4797-802.		7
143	A Prismatic-Revolute-Revolute Joint Hand for Grasping From Unmanned Aerial Vehicles and Other Minimally Constrained Vehicles. Journal of Mechanisms and Robotics, 2018, 10, .	1.5	7
144	Design and Preliminary Evaluation of a 3-DOF Powered Prosthetic Wrist Device. , 2018, , .		7

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145	Object-Agnostic Dexterous Manipulation of Partially Constrained Trajectories. IEEE Robotics and Automation Letters, 2020, 5, 5494-5501.	3.3	7
146	Dimensionality Reduction and Motion Clustering During Activities of Daily Living: Decoupling Hand Location and Orientation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2955-2965.	2.7	7
147	Kinematic Design of an Underactuated Robot Leg for Passive Terrain Adaptability and Stability. Journal of Mechanisms and Robotics, 2013, 5, .	1.5	6
148	Preliminary investigation of effects of a quasi-passive knee exoskeleton on gait energetics. , 2014, 2014, 3061-4.		6
149	Strengthening of 3D printed robotic parts via fill compositing. , 2014, , .		6
150	Analyzing human fingertip usage in dexterous precision manipulation: Implications for robotic finger design. , 2014, , .		6
151	Injected 3D electrical traces in additive manufactured parts with low melting temperature metals. , 2015, , .		6
152	A Clustering Approach to Categorizing 7 Degree-of-Freedom Arm Motions during Activities of Daily Living. , 2019, , .		6
153	The Stewart Hand: A Highly Dexterous, Six-Degrees-of-Freedom Manipulator Based on the Stewart-Gough Platform. IEEE Robotics and Automation Magazine, 2021, 28, 23-36.	2.2	6
154	Trajectory Controlâ€“An Effective Strategy for Controlling Multi-DOF Upper Limb Prosthetic Devices. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2022, 30, 420-430.	2.7	6
155	Improved grasp robustness through variable transmission ratios in underactuated fingers. , 2012, , .		5
156	Simple, scalable active cells for articulated robot structures. , 2014, , .		5
157	Special Issue on the Mechanics and Design of Robotic Hands. International Journal of Robotics Research, 2014, 33, 675-676.	5.8	5
158	Human precision manipulation workspace: Effects of object size and number of fingers used. , 2015, 2015, 5768-72.		5
159	Design of mesoscale active cells for networked, compliant robotic structures. , 2015, , .		5
160	Effects of exoskeletal stiffness in parallel with the knee on the motion of the human body center of mass during walking. , 2015, , .		5
161	Design Principles and Optimization of a Planar Underactuated Hand for Caging Grasps. , 2019, , .		5
162	Towards Generalized Manipulation Learning Through Grasp Mechanics-Based Features and Self-Supervision. IEEE Transactions on Robotics, 2021, 37, 1553-1569.	7.3	5

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163	Path Planning for Within-Hand Manipulation over Learned Representations of Safe States. Springer Proceedings in Advanced Robotics, 2020, , 437-447.	0.9	5
164	Underactuated grasp acquisition and stability using friction based coupling mechanisms. , 2011, , .		4
165	Simplifying robot hands using recursively scaled power grasps. , 2012, , .		4
166	The design of exactly constrained walking robots. , 2014, , .		4
167	Characterization of the precision manipulation capabilities of robot hands via the continuous group of displacements. , 2014, , .		4
168	A two-fingered underactuated anthropomorphic manipulator based on human precision manipulation motions. , 2016, , .		4
169	Towards Predictable Precision Manipulation of Unknown Objects with Underactuated Fingers. Mechanisms and Machine Science, 2016, , 927-937.	0.3	4
170	Reconfigurable Modular Chain: A Reversible Material for Folding Three-Dimensional Lattice Structures. Journal of Mechanisms and Robotics, 2017, 9, .	1.5	4
171	Open-Source and Widely Disseminated Robot Hardware [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2017, 24, 30-31.	2.2	4
172	Energy Gradient-Based Graphs for Planning Within-Hand Caging Manipulation. , 2019, , .		4
173	Stability Optimization of Two-Fingered Anthropomorphic Hands for Precision Grasping with a Single Actuator. , 2019, , .		4
174	Examining the Frictional Behavior of Primitive Contact Geometries for use as Robotic Finger Pads. IEEE Robotics and Automation Letters, 2020, 5, 3137-3144.	3.3	4
175	Behavioral correlates of semi-zygodactyly in Ospreys (<i>Pandion haliaetus</i>) based on analysis of internet images. PeerJ, 2019, 7, e6243.	0.9	4
176	Robot Hand based on a Spherical Parallel Mechanism for Within-Hand Rotations about a Fixed Point. , 2021, , .		4
177	Starting on the Right Track: Introducing Students to Mechanical Engineering With a Project-Based Machine Design Course. , 2005, , 363.		3
178	Variation in compliance in two classes of two-link underactuated mechanisms. , 2011, , .		3
179	Energy-Based Limit Cycle Compensation for Dynamically Balancing Wheeled Inverted Pendulum Machines. , 2013, , .		3
180	Electrically Conductive Bulk Composites through a Contact-Connected Aggregate. PLoS ONE, 2013, 8, e82260.	1.1	3

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181	Rotational ranges of human precision manipulation when grasping objects with two to five digits. , 2015, 2015, 5785-90.		3
182	Investigation of a passive capstan based grasp enhancement feature in a voluntary-closing prosthetic terminal device. , 2016, 2016, 5019-5025.		3
183	Design Optimization of a Prismatic-Revolute-Revolute Joint Hand for Grasping From Unconstrained Vehicles. , 2017, , .		3
184	Pinbot: A Walking Robot with Locking Pin Arrays for Passive Adaptability to Rough Terrains. , 2020, , .		3
185	Effect of Number of Digits on Human Precision Manipulation Workspaces. IEEE Transactions on Haptics, 2021, 14, 68-82.	1.8	3
186	Active-Cells for the Construction of Redundant and Configurable Articulated Structures. , 2013, , .		3
187	Fast, Accurate Models for Predicting the Compliance of Elastic Flexure-Jointed Robots. , 2010, , .		2
188	Toward simpler models of bending sheet joints. , 2011, , .		2
189	Optimization of Coupling Ratio and Kinematics of an Underactuated Robot Leg for Passive Terrain Adaptability. , 2012, , .		2
190	Optimization of parallel spring antagonists for Nitinol shape memory alloy actuators. , 2014, , .		2
191	A unified position analysis of the Dixon and the generalized Peaucellier linkages. Mechanism and Machine Theory, 2015, 94, 28-40.	2.7	2
192	The Coupler Surface of the RSRS Mechanism. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	2
193	Distance-based kinematics of the five-oblique-axis thumb model with intersecting axes at the metacarpophalangeal joint. , 2017, 2017, 1331-1336.		2
194	Analysis and Dimensional Synthesis of a Robotic Hand Based on the Stewart-Gough Platform. , 2018, , .		2
195	A Data-Driven Framework for Learning Dexterous Manipulation of Unknown Objects. , 2019, , .		2
196	Trajectory Control for 3 Degree-of-Freedom Wrist Prosthesis in Virtual Reality: A Pilot Study. , 2020, , .		2
197	Highly Underactuated Radial Gripper for Automated Planar Grasping and Part Fixturing. , 2020, , .		2
198	Finite Element Modeling of Internally Actuated Triangular Lattice and Its Variants for Modular Active Cell Robots (MACROs). IEEE Robotics and Automation Letters, 2022, 7, 6083-6090.	3.3	2

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199	Force-Based Simultaneous Mapping and Object Reconstruction for Robotic Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 4749-4756.	3.3	2
200	RoboticsCourseWare.org: An Open Repository for Robotics Pedagogical Materials [Education]. IEEE Robotics and Automation Magazine, 2008, 15, 14-15.	2.2	1
201	Rigid 2D space-filling folds of unbroken linear chains. , 2013, , .		1
202	Design of a Passively-Adaptive Three Degree-of-Freedom Multi-Legged Robot With Underactuated Legs. , 2015, , .		1
203	Object stability during human precision fingertip manipulation. , 2016, , .		1
204	Evaluation of regular planar meshes for Modular Active Cell Robots (MACROs). , 2017, , .		1
205	Kinematic Optimization of a Novel Partially Decoupled Three Degree of Freedom Hybrid Wrist Mechanism. , 2018, , .		1
206	Analyzing Exfordance Use by Unilateral Upper-Limb Amputees*. , 2018, , .		1
207	Learning from Transferable Mechanics Models: Generalizable Online Mode Detection in Underactuated Dexterous Manipulation. , 2019, , .		1
208	Guest Editorial: Introduction to the Special Issue on Benchmarking Protocols for Robotic Manipulation. IEEE Robotics and Automation Letters, 2021, 6, 8678-8680.	3.3	1
209	Design of a Bulk Conductive Polymer Using Embedded Macroscopic Copper Cells. , 2013, , .		1
210	Design of an Underactuated Legged Robot With Prismatic Legs for Passive Adaptability to Terrain. , 2019, , .		1
211	Design of a Large Workspace Passive Spherical Joint via Contact Edge Design. , 2020, , .		1
212	Mechanical Characterization of Compliant Cellular Robots. Part II: Active Strain. Journal of Mechanisms and Robotics, 2023, 15, .	1.5	1
213	Mechanical Characterization of Compliant Cellular Robots. Part I: Passive Stiffness. Journal of Mechanisms and Robotics, 2023, 15, .	1.5	1
214	Towards Hyper-Redundant and Super-Configurable Articulated Structures. , 2012, , .		0
215	Design of cluster geometries for clusterwheel IP robots: Obstacle size and controllability. , 2014, , .		0
216	Active cells for redundant and configurable articulated structures. Smart Materials and Structures, 2014, 23, 104003.	1.8	0

#	Article	IF	Citations
217	Design of a Reconfigurable Modular Chain for Folding 3D Lattice Structures. , 2016, , .		0
218	Between-leg coupling schemes for passively-adaptive non-redundant legged robots. , 2017, , .		0
219	Fusion Clutch: A Bi-Stable Latching Mechanism for Human-Safe Robots. , 2017, , .		0
220	Towards Understanding Complex Human Dexterous Manipulation Strategies: Kinematics of Gaiting-based Object Rotations. , 2020, 2020, 4024-4029.		0
221	Kinematic Optimization of a 2-DOF U, 2PSS Parallel Wrist Device. , 2019, , .		0
222	Performance of serial underactuated mechanisms: number of degrees of freedom and actuators. , 2011, , .		0
223	UAV rotorcraft in compliant contact: Stability analysis and simulation. , 2011, , .		0
224	Toward simpler models of bending sheet joints. , 2011, , .		0