

Aaron M Dollar

List of Publications by Year in descending order

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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	Mechanical Characterization of Compliant Cellular Robots. Part II: Active Strain. Journal of Mechanisms and Robotics, 2023, 15, .	1.5	1
2	Mechanical Characterization of Compliant Cellular Robots. Part I: Passive Stiffness. Journal of Mechanisms and Robotics, 2023, 15, .	1.5	1
3	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
4	Trajectory Control—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
5	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
6	Force-Based Simultaneous Mapping and Object Reconstruction for Robotic Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 4749-4756.	3.3	2
7	Effect of Number of Digits on Human Precision Manipulation Workspaces. IEEE Transactions on Haptics, 2021, 14, 68-82.	1.8	3
8	Towards Generalized Manipulation Learning Through Grasp Mechanics-Based Features and Self-Supervision. IEEE Transactions on Robotics, 2021, 37, 1553-1569.	7.3	5
9	Complex manipulation with a simple robotic hand through contact breaking and caging. Science Robotics, 2021, 6, .	9.9	25
10	Manipulation for self-Identification, and self-Identification for better manipulation. Science Robotics, 2021, 6, .	9.9	16
11	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
12	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
13	Model Predictive Actor-Critic: Accelerating Robot Skill Acquisition with Deep Reinforcement Learning. , 2021, , .		12
14	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
15	Robot Hand based on a Spherical Parallel Mechanism for Within-Hand Rotations about a Fixed Point. , 2021, , .		4
16	Hand—object configuration estimation using particle filters for dexterous in-hand manipulation. International Journal of Robotics Research, 2020, 39, 1760-1774.	5.8	10
17	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
18	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

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19	Object-Agnostic Dexterous Manipulation of Partially Constrained Trajectories. IEEE Robotics and Automation Letters, 2020, 5, 5494-5501.	3.3	7
20	Trajectory Control for 3 Degree-of-Freedom Wrist Prosthesis in Virtual Reality: A Pilot Study. , 2020, , .		2
21	Towards Understanding Complex Human Dexterous Manipulation Strategies: Kinematics of Gaiting-based Object Rotations. , 2020, 2020, 4024-4029.		0
22	Pinbot: A Walking Robot with Locking Pin Arrays for Passive Adaptability to Rough Terrains. , 2020, , .		3
23	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
24	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
25	Design of a Large Workspace Passive Spherical Joint via Contact Edge Design. , 2020, , .		1
26	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
27	Path Planning for Within-Hand Manipulation over Learned Representations of Safe States. Springer Proceedings in Advanced Robotics, 2020, , 437-447.	0.9	5
28	Highly Underactuated Radial Gripper for Automated Planar Grasping and Part Fixturing. , 2020, , .		2
29	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
30	Design Principles and Optimization of a Planar Underactuated Hand for Caging Grasps. , 2019, , .		5
31	A Clustering Approach to Categorizing 7 Degree-of-Freedom Arm Motions during Activities of Daily Living. , 2019, , .		6
32	Energy Gradient-Based Graphs for Planning Within-Hand Caging Manipulation. , 2019, , .		4
33	Stability Optimization of Two-Fingered Anthropomorphic Hands for Precision Grasping with a Single Actuator. , 2019, , .		4
34	Learning from Transferable Mechanics Models: Generalizable Online Mode Detection in Underactuated Dexterous Manipulation. , 2019, , .		1
35	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
36	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

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37	Modeling and Evaluation of Robust Whole-Hand Caging Manipulation. IEEE Transactions on Robotics, 2019, 35, 549-563.	7.3	17
38	Perching and restingâ€”A paradigm for UAV maneuvering with modularized landing gears. Science Robotics, 2019, 4, .	9.9	69
39	Learning a State Transition Model of an Underactuated Adaptive Hand. IEEE Robotics and Automation Letters, 2019, 4, 1287-1294.	3.3	21
40	A Data-Driven Framework for Learning Dexterous Manipulation of Unknown Objects. , 2019, , .		2
41	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
42	Behavioral correlates of semi-zygodactyly in Ospreys (<i>Pandion haliaetus</i>) based on analysis of internet images. PeerJ, 2019, 7, e6243.	0.9	4
43	Design of an Underactuated Legged Robot With Prismatic Legs for Passive Adaptability to Terrain. , 2019, , .		1
44	Kinematic Optimization of a 2-DOF U, 2PSS Parallel Wrist Device. , 2019, , .		0
45	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
46	Post-Contact, In-Hand Object Motion Compensation With Adaptive Hands. IEEE Transactions on Automation Science and Engineering, 2018, 15, 456-467.	3.4	17
47	Examining the Impact of Wrist Mobility on Reaching Motion Compensation Across a Discretely Sampled Workspace. , 2018, , .		11
48	Analysis and Dimensional Synthesis of a Robotic Hand Based on the Stewart-Gough Platform. , 2018, , .		2
49	Kinematic Optimization of a Novel Partially Decoupled Three Degree of Freedom Hybrid Wrist Mechanism. , 2018, , .		1
50	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
51	Learning Modes of Within-Hand Manipulation. , 2018, , .		13
52	Analyzing Exfordance Use by Unilateral Upper-Limb Amputees*. , 2018, , .		1
53	Preliminary Design and Evaluation of a Single-Actuator Anthropomorphic Prosthetic Hand with Multiple Distinct Grasp Types. , 2018, , .		12
54	Design and Preliminary Evaluation of a 3-DOF Powered Prosthetic Wrist Device. , 2018, , .		7

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55	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
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	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
58	Adaptive Legged Robots Through Exactly Constrained and Non-Redundant Design. IEEE Access, 2017, 5, 11131-11141.	2.6	8
59	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
60	Shape Control of Compliant, Articulated Meshes: Towards Modular Active-Cell Robots (MACROs). IEEE Robotics and Automation Letters, 2017, 2, 1878-1884.	3.3	10
61	Yale-CMU-Berkeley dataset for robotic manipulation research. International Journal of Robotics Research, 2017, 36, 261-268.	5.8	205
62	Reconfigurable Modular Chain: A Reversible Material for Folding Three-Dimensional Lattice Structures. Journal of Mechanisms and Robotics, 2017, 9, .	1.5	4
63	Distance-based kinematics of the five-oblique-axis thumb model with intersecting axes at the metacarpophalangeal joint. , 2017, 2017, 1331-1336.		2
64	Between-leg coupling schemes for passively-adaptive non-redundant legged robots. , 2017, , .		0
65	Open-Source and Widely Disseminated Robot Hardware [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2017, 24, 30-31.	2.2	4
66	Fusion Clutch: A Bi-Stable Latching Mechanism for Human-Safe Robots. , 2017, , .		0
67	Design Optimization of a Prismatic-Revolute-Revolute Joint Hand for Grasping From Unconstrained Vehicles. , 2017, , .		3
68	Analyzing at-home prosthesis use in unilateral upper-limb amputees to inform treatment & device design. , 2017, 2017, 1273-1280.		16
69	A two-fingered robot gripper with large object reorientation range. , 2017, , .		24
70	Vision-based model predictive control for within-hand precision manipulation with underactuated grippers. , 2017, , .		25
71	Learning the post-contact reconfiguration of the hand object system for adaptive grasping mechanisms. , 2017, , .		13
72	Deriving dexterous, in-hand manipulation primitives for adaptive robot hands. , 2017, , .		23

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73	Evaluation of regular planar meshes for Modular Active Cell Robots (MACROs). , 2017, , .		1
74	Design of a stewart platform-inspired dexterous hand for 6-DOF within-hand manipulation. , 2017, , .		17
75	Toward robust, whole-hand caging manipulation with underactuated hands. , 2017, , .		21
76	Spherical Hands: Toward Underactuated, In-Hand Manipulation Invariant to Object Size and Grasp Location. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	23
77	Investigation of a passive capstan based grasp enhancement feature in a voluntary-closing prosthetic terminal device. , 2016, 2016, 5019-5025.		3
78	Post-contact, in-hand object motion compensation for compliant and underactuated hands. , 2016, , .		20
79	In-Hand Manipulation Primitives for a Minimal, Underactuated Gripper With Active Surfaces. , 2016, , .		15
80	Design of a Reconfigurable Modular Chain for Folding 3D Lattice Structures. , 2016, , .		0
81	Vision-based precision manipulation with underactuated hands: Simple and effective solutions for dexterity. , 2016, , .		14
82	Learning task-specific models for dexterous, in-hand manipulation with simple, adaptive robot hands. , 2016, , .		17
83	The Coupler Surface of the RSRS Mechanism. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	2
84	Outdoor pedestrian navigation assistance with a shape-changing haptic interface and comparison with a vibrotactile device. , 2016, , .		19
85	Gross Motion Analysis of Fingertip-Based Within-Hand Manipulation. IEEE Transactions on Robotics, 2016, 32, 1009-1016.	7.3	13
86	Comparative clinical evaluation of the Yale Multigrasp Hand. , 2016, , .		11
87	The GR2 Gripper: An Underactuated Hand for Open-Loop In-Hand Planar Manipulation. IEEE Transactions on Robotics, 2016, 32, 763-770.	7.3	91
88	Object stability during human precision fingertip manipulation. , 2016, , .		1
89	Development and experimental validation of a minimalistic shape-changing haptic navigation device. , 2016, , .		9
90	A two-fingered underactuated anthropomorphic manipulator based on human precision manipulation motions. , 2016, , .		4

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91	Classification and Kinematic Equivalents of Contact Types for Fingertip-Based Robot Hand Manipulation. <i>Journal of Mechanisms and Robotics</i> , 2016, 8, .	1.5	13
92	The GRASP Taxonomy of Human Grasp Types. <i>IEEE Transactions on Human-Machine Systems</i> , 2016, 46, 66-77.	2.5	594
93	Single-Grasp Object Classification and Feature Extraction with Simple Robot Hands and Tactile Sensors. <i>IEEE Transactions on Haptics</i> , 2016, 9, 207-220.	1.8	110
94	An Adaptive Three-Fingered Prismatic Gripper With Passive Rotational Joints. <i>IEEE Robotics and Automation Letters</i> , 2016, 1, 668-675.	3.3	55
95	Towards Predictable Precision Manipulation of Unknown Objects with Underactuated Fingers. <i>Mechanisms and Machine Science</i> , 2016, , 927-937.	0.3	4
96	M2 Gripper: Extending the Dexterity of a Simple, Underactuated Gripper. <i>Mechanisms and Machine Science</i> , 2016, , 795-805.	0.3	35
97	Patterned compliance in robotic finger pads for versatile surface usage in dexterous manipulation. , 2015, , .		7
98	Human precision manipulation workspace: Effects of object size and number of fingers used. , 2015, 2015, 5768-72.		5
99	Rotational ranges of human precision manipulation when grasping objects with two to five digits. , 2015, 2015, 5785-90.		3
100	Design of a Passively-Adaptive Three Degree-of-Freedom Multi-Legged Robot With Underactuated Legs. , 2015, , .		1
101	Strengthening of 3D Printed Fused Deposition Manufactured Parts Using the Fill Compositing Technique. <i>PLoS ONE</i> , 2015, 10, e0122915.	1.1	87
102	Mechanical analysis of avian feet: multiarticular muscles in grasping and perching. <i>Royal Society Open Science</i> , 2015, 2, 140350.	1.1	45
103	Estimating thumbâ€“index finger precision grip and manipulation potential in extant and fossil primates. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150176.	1.5	50
104	Design of mesoscale active cells for networked, compliant robotic structures. , 2015, , .		5
105	The YCB object and Model set: Towards common benchmarks for manipulation research. , 2015, , .		326
106	Unplanned, model-free, single grasp object classification with underactuated hands and force sensors. , 2015, , .		30
107	Dimensional synthesis of three-fingered robot hands for maximal precision manipulation workspace. <i>International Journal of Robotics Research</i> , 2015, 34, 1731-1746.	5.8	28
108	Lightweight custom composite prosthetic components using an additive manufacturing-based molding technique. , 2015, 2015, 4797-802.		7

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109	First validation of the Haptic Sandwich: A shape changing handheld haptic navigation aid. , 2015, , .		14
110	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
111	Effects of exoskeletal stiffness in parallel with the knee on the motion of the human body center of mass during walking. , 2015, , .		5
112	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
113	Design for Control of Wheeled Inverted Pendulum Platforms. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	22
114	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
115	State of the art in prosthetic wrists: Commercial and research devices. , 2015, , .		40
116	A unified position analysis of the Dixon and the generalized Peaucellier linkages. Mechanism and Machine Theory, 2015, 94, 28-40.	2.7	2
117	Humanlike, task-specific reaching and grasping with redundant arms and low-complexity hands. , 2015, , .		8
118	Biomechanical Effects of Stiffness in Parallel With the Knee Joint During Walking. IEEE Transactions on Biomedical Engineering, 2015, 62, 2389-2401.	2.5	32
119	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
120	Injected 3D electrical traces in additive manufactured parts with low melting temperature metals. , 2015, , .		6
121	Workspace Shape and Characteristics for Human Two- and Three-Fingered Precision Manipulation. IEEE Transactions on Biomedical Engineering, 2015, 62, 2196-2207.	2.5	16
122	Stable, open-loop precision manipulation with underactuated hands. International Journal of Robotics Research, 2015, 34, 1347-1360.	5.8	60
123	Exploring Dexterous Manipulation Workspaces with the iHY Hand. Journal of the Robotics Society of Japan, 2014, 32, 318-322.	0.0	10
124	Grasp and force based taxonomy of split-hook prosthetic terminal devices. , 2014, 2014, 6613-8.		12
125	Preliminary investigation of effects of a quasi-passive knee exoskeleton on gait energetics. , 2014, 2014, 3061-4.		6
126	Strengthening of 3D printed robotic parts via fill compositing. , 2014, , .		6

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127	Intrinsic Embedded Sensors for Polymeric Mechatronics: Flexure and Force Sensing. <i>Sensors</i> , 2014, 14, 3861-3870.	2.1	15
128	Design of cluster geometries for clusterwheel IP robots: Obstacle size and controllability. , 2014, , .		0
129	Linkage-Based Analysis and Optimization of an Underactuated Planar Manipulator for In-Hand Manipulation. <i>Journal of Mechanisms and Robotics</i> , 2014, 6, .	1.5	37
130	An underactuated hand for efficient finger-gaiting-based dexterous manipulation. , 2014, , .		33
131	A Passively Adaptive Rotary-to-Linear Continuously Variable Transmission. <i>IEEE Transactions on Robotics</i> , 2014, 30, 1148-1160.	7.3	15
132	Design of hands for aerial manipulation: Actuator number and routing for grasping and perching. , 2014, , .		32
133	Stability of Helicopters in Compliant Contact Under PD-PID Control. <i>IEEE Transactions on Robotics</i> , 2014, 30, 1472-1486.	7.3	83
134	Simple, scalable active cells for articulated robot structures. , 2014, , .		5
135	Optimization of parallel spring antagonists for Nitinol shape memory alloy actuators. , 2014, , .		2
136	The design of exactly constrained walking robots. , 2014, , .		4
137	Special Issue on the Mechanics and Design of Robotic Hands. <i>International Journal of Robotics Research</i> , 2014, 33, 675-676.	5.8	5
138	Analyzing dexterous hands using a parallel robots framework. <i>Autonomous Robots</i> , 2014, 36, 169-180.	3.2	24
139	Robust Resonant Frequency-Based Contact Detection With Applications in Robotic Reaching and Grasping. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014, 19, 1552-1561.	3.7	12
140	Active cells for redundant and configurable articulated structures. <i>Smart Materials and Structures</i> , 2014, 23, 104003.	1.8	0
141	Design and Evaluation of a Quasi-Passive Knee Exoskeleton for Investigation of Motor Adaptation in Lower Extremity Joints. <i>IEEE Transactions on Biomedical Engineering</i> , 2014, 61, 1809-1821.	2.5	86
142	Design and Functional Evaluation of a Quasi-Passive Compliant Stance Control Knee-“Ankle”-Foot Orthosis. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2014, 22, 258-268.	2.7	49
143	Dexterous workspace of human two- and three-fingered precision manipulation. , 2014, , .		9
144	A compliant, underactuated hand for robust manipulation. <i>International Journal of Robotics Research</i> , 2014, 33, 736-752.	5.8	471

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145	Analysis of Human Grasping Behavior: Correlating Tasks, Objects and Grasps. IEEE Transactions on Haptics, 2014, 7, 430-441.	1.8	56
146	Analysis of Human Grasping Behavior: Object Characteristics and Grasp Type. IEEE Transactions on Haptics, 2014, 7, 311-323.	1.8	137
147	Actuation Torque Reduction in Parallel Robots Using Joint Compliance. Journal of Mechanisms and Robotics, 2014, 6, .	1.5	8
148	Analyzing human fingertip usage in dexterous precision manipulation: Implications for robotic finger design. , 2014, , .		6
149	Characterization of the precision manipulation capabilities of robot hands via the continuous group of displacements. , 2014, , .		4
150	Classifying Human Hand Use and the Activities of Daily Living. Springer Tracts in Advanced Robotics, 2014, , 201-216.	0.3	48
151	Aerial Grasping from a Helicopter UAV Platform. Springer Tracts in Advanced Robotics, 2014, , 269-283.	0.3	13
152	Grasp Frequency and Usage in Daily Household and Machine Shop Tasks. IEEE Transactions on Haptics, 2013, 6, 296-308.	1.8	181
153	Kinematic Design of an Underactuated Robot Leg for Passive Terrain Adaptability and Stability. Journal of Mechanisms and Robotics, 2013, 5, .	1.5	6
154	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
155	Finding small, versatile sets of human grasps to span common objects. , 2013, , .		33
156	A parallel robots framework to study precision grasping and dexterous manipulation. , 2013, , .		16
157	Novel differential mechanism enabling two DOF from a single actuator: Application to a prosthetic hand. , 2013, 2013, 6650441.		36
158	A quasi-passive compliant stance control Knee-Ankle-Foot Orthosis. , 2013, 2013, 6650471.		21
159	A Hand-Centric Classification of Human and Robot Dexterous Manipulation. IEEE Transactions on Haptics, 2013, 6, 129-144.	1.8	139
160	A modular, open-source 3D printed underactuated hand. , 2013, , .		175
161	Energy-Based Limit Cycle Compensation for Dynamically Balancing Wheeled Inverted Pendulum Machines. , 2013, , .		3
162	Mechanical design and performance specifications of anthropomorphic prosthetic hands: A review. Journal of Rehabilitation Research and Development, 2013, 50, 599.	1.6	552

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163	Rigid 2D space-filling folds of unbroken linear chains. , 2013, , .		1
164	Estimation of Quasi-Stiffness of the Human Hip in the Stance Phase of Walking. PLoS ONE, 2013, 8, e81841.	1.1	69
165	Electrically Conductive Bulk Composites through a Contact-Connected Aggregate. PLoS ONE, 2013, 8, e82260.	1.1	3
166	Experiments in Underactuated In-Hand Manipulation. Springer Tracts in Advanced Robotics, 2013, , 27-40.	0.3	9
167	Active-Cells for the Construction of Redundant and Configurable Articulated Structures. , 2013, , .		3
168	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
169	Estimation of Quasi-Stiffness of the Human Knee in the Stance Phase of Walking. PLoS ONE, 2013, 8, e59993.	1.1	82
170	Design of a Bulk Conductive Polymer Using Embedded Macroscopic Copper Cells. , 2013, , .		1
171	Simplifying robot hands using recursively scaled power grasps. , 2012, , .		4
172	Assessing assumptions in kinematic hand models: A review. , 2012, , .		48
173	Dexterous manipulation with underactuated fingers: Flip-and-pinch task. , 2012, , .		11
174	Robust, inexpensive resonant frequency based contact detection for robotic manipulators. , 2012, , .		8
175	Improved grasp robustness through variable transmission ratios in underactuated fingers. , 2012, , .		5
176	Static analysis of parallel robots with compliant joints for in-hand manipulation. , 2012, , .		7
177	Disturbance Response of Two-Link Underactuated Serial-Link Chains. Journal of Mechanisms and Robotics, 2012, 4, .	1.5	24
178	Optimization of Coupling Ratio and Kinematics of an Underactuated Robot Leg for Passive Terrain Adaptability. , 2012, , .		2
179	Towards Hyper-Redundant and Super-Configurable Articulated Structures. , 2012, , .		0
180	The Smooth Curvature Model: An Efficient Representation of Euler-Bernoulli Flexures as Robot Joints. IEEE Transactions on Robotics, 2012, 28, 761-772.	7.3	63

#	ARTICLE	IF	CITATIONS
181	Precision grasping and manipulation of small objects from flat surfaces using underactuated fingers. , 2012, , .		46
182	Stability of small-scale UAV helicopters and quadrotors with added payload mass under PID control. Autonomous Robots, 2012, 33, 129-142.	3.2	252
183	Underactuated Gripper That Is Able to Convert from Precision to Power Grasp by a Variable Transmission Ratio. , 2012, , 669-679.		15
184	The Connectedness of Packed Circles and Spheres with Application to Conductive Cellular Materials. PLoS ONE, 2012, 7, e51695.	1.1	8
185	Classifying human manipulation behavior. , 2011, 2011, 5975408.		73
186	Practical aerial grasping of unstructured objects. , 2011, , .		14
187	On the mechanics of the knee during the stance phase of the gait. , 2011, 2011, 5975478.		34
188	Performance of serial underactuated mechanisms: Number of degrees of freedom and actuators. , 2011, , .		11
189	Toward simpler models of bending sheet joints. , 2011, , .		2
190	Dexterous manipulation with underactuated elastic hands. , 2011, , .		96
191	UAV rotorcraft in compliant contact: Stability analysis and simulation. , 2011, , .		25
192	Biomechanical considerations in the design of lower limb exoskeletons. , 2011, 2011, 5975366.		86
193	An investigation of grasp type and frequency in daily household and machine shop tasks. , 2011, , .		116
194	Performance characteristics of anthropomorphic prosthetic hands. , 2011, 2011, 5975476.		95
195	Underactuated grasp acquisition and stability using friction based coupling mechanisms. , 2011, , .		4
196	Variation in compliance in two classes of two-link underactuated mechanisms. , 2011, , .		3
197	A comparison of workspace and force capabilities between classes of underactuated mechanisms. , 2011, , .		7
198	The Yale Aerial Manipulator: Grasping in flight. , 2011, , .		48

#	ARTICLE	IF	CITATIONS
199	On dexterity and dexterous manipulation. , 2011, , .		91
200	Grasping from the air: Hovering capture and load stability. , 2011, , .		228
201	On the mechanics of the ankle in the stance phase of the gait. , 2011, 2011, 8135-40.		23
202	Joint coupling design of underactuated hands for unstructured environments. International Journal of Robotics Research, 2011, 30, 1157-1169.	5.8	70
203	Performance of serial underactuated mechanisms: number of degrees of freedom and actuators. , 2011, , .		0
204	UAV rotorcraft in compliant contact: Stability analysis and simulation. , 2011, , .		0
205	Toward simpler models of bending sheet joints. , 2011, , .		0
206	External Disturbances and Coupling Mechanisms in Underactuated Hands. , 2010, , .		16
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