Aaron M Dollar

List of Publications by Year
in descending order

224	10,152	87723	66788
papers	citations	38	78
		h-index	g-index

227	227	227	6064
all docs	docs citations	times ranked	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

#	Article	IF	Citations
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

#	Article	IF	Citations
37	Modeling and Evaluation of Robust Whole-Hand Caging Manipulation. IEEE Transactions on Robotics, 2019, 35, 549-563.	7.3	17
38	Perching and resting—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 (*Pandion haliaetus*) 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

#	Article	IF	Citations
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

#	Article	IF	Citations
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

#	Article	IF	Citations
91	Classification and Kinematic Equivalents of Contact Types for Fingertip-Based Robot Hand Manipulation. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	13
92	The GRASP Taxonomy of Human Grasp Types. IEEE Transactions on Human-Machine Systems, 2016, 46, 66-77.	2.5	594
93	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
94	An Adaptive Three-Fingered Prismatic Gripper With Passive Rotational Joints. IEEE Robotics and Automation Letters, 2016, 1, 668-675.	3.3	55
95	Towards Predictable Precision Manipulation of Unknown Objects with Underactuated Fingers. Mechanisms and Machine Science, 2016, , 927-937.	0.3	4
96	M2 Gripper: Extending the Dexterity of a Simple, Underactuated Gripper. Mechanisms and Machine Science, 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. PLoS ONE, 2015, 10, e0122915.	1.1	87
102	Mechanical analysis of avian feet: multiarticular muscles in grasping and perching. Royal Society Open Science, 2015, 2, 140350.	1.1	45
103	Estimating thumb–index finger precision grip and manipulation potential in extant and fossil primates. Journal of the Royal Society Interface, 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. International Journal of Robotics Research, 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

#	Article	IF	Citations
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

#	Article	IF	Citations
127	Intrinsic Embedded Sensors for Polymeric Mechatronics: Flexure and Force Sensing. Sensors, 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. Journal of Mechanisms and Robotics, 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. IEEE Transactions on Robotics, 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. IEEE Transactions on Robotics, 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. International Journal of Robotics Research, 2014, 33, 675-676.	5.8	5
138	Analyzing dexterous hands using a parallel robots framework. Autonomous Robots, 2014, 36, 169-180.	3.2	24
139	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
140	Active cells for redundant and configurable articulated structures. Smart Materials and Structures, 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. IEEE Transactions on Biomedical Engineering, 2014, 61, 1809-1821.	2.5	86
142	Design and Functional Evaluation of a Quasi-Passive Compliant Stance Control Knee–Ankle–Foot Orthosis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 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. International Journal of Robotics Research, 2014, 33, 736-752.	5.8	471

#	Article	IF	Citations
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

#	Article	IF	Citations
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 Eulerâ€"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
207	Contact sensing and grasping performance of compliant hands. Autonomous Robots, 2010, 28, 65-75.	3.2	66
208	Fast, Accurate Models for Predicting the Compliance of Elastic Flexure-Jointed Robots. , 2010, , .		2
209	The Highly Adaptive SDM Hand: Design and Performance Evaluation. International Journal of Robotics Research, 2010, 29, 585-597.	5.8	428
210	Hovering Stability of Helicopters With Elastic Constraints. , 2010, , .		36
211	Benchmarking grasping and manipulation: Properties of the Objects of Daily Living. , 2010, , .		70
212	The SDM Hand: A Highly Adaptive Compliant Grasper for Unstructured Environments. Springer Tracts in Advanced Robotics, 2009, , 3-11.	0.3	37
213	Lower Extremity Exoskeletons and Active Orthoses: Challenges and State-of-the-Art. , 2008, 24, 144-158.		1,031
214	RoboticsCourseWare.org: An Open Repository for Robotics Pedagogical Materials [Education]. IEEE Robotics and Automation Magazine, 2008, 15, 14-15.	2.2	1
215	Simple, reliable robotic grasping for human environments. , 2008, , .		8
216	Design of a quasi-passive knee exoskeleton to assist running. , 2008, , .		90

#	Article	IF	Citations
217	The SDM Hand as a Prosthetic Terminal Device: A Feasibility Study. , 2007, , .		80
218	Simple, Robust Autonomous Grasping in Unstructured Environments. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	68
219	Active Orthoses for the Lower-Limbs: Challenges and State of the Art. , 2007, , .		34
220	A robust compliant grasper via shape deposition manufacturing. IEEE/ASME Transactions on Mechatronics, 2006, 11, 154-161.	3.7	200
221	Joint Coupling Design of Underactuated Grippers. , 2006, , 903.		47
222	Starting on the Right Track: Introducing Students to Mechanical Engineering With a Project-Based Machine Design Course. , 2005, , 363.		3
223	Design and Evaluation of a Robust Compliant Grasper Using Shape Deposition Manufacturing. , 2005, , 1403.		12
224	Towards grasping in unstructured environments: grasper compliance and configuration optimization. Advanced Robotics, 2005, 19, 523-543.	1.1	93