

# Ronald S Fearing

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

114  
papers

9,372  
citations

35  
h-index

96  
g-index

127  
ext. papers

10,584  
ext. citations

7.4  
avg, IF

5.91  
L-index

#	Paper	IF	Citations
114	Adhesive force of a single gecko foot-hair. <i>Nature</i> , <b>2000</b> , 405, 681-5	50.4	2035
113	Evidence for van der Waals adhesion in gecko setae. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2002</b> , 99, 12252-6	11.5	1371
112	Nanowire active-matrix circuitry for low-voltage macroscale artificial skin. <i>Nature Materials</i> , <b>2010</b> , 9, 821-6	10.7	1013
111	Synthetic gecko foot-hair micro/nano-structures as dry adhesives. <i>Journal of Adhesion Science and Technology</i> , <b>2003</b> , 17, 1055-1073	2	412
110	Optically- and thermally-responsive programmable materials based on carbon nanotube-hydrogel polymer composites. <i>Nano Letters</i> , <b>2011</b> , 11, 3239-44	11.5	411
109	Wearable Microfluidic Diaphragm Pressure Sensor for Health and Tactile Touch Monitoring. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701985	24	254
108	Effective elastic modulus of isolated gecko setal arrays. <i>Journal of Experimental Biology</i> , <b>2006</b> , 209, 3558-68	3.68	254
107	Carbon nanotube active-matrix backplanes for conformal electronics and sensors. <i>Nano Letters</i> , <b>2011</b> , 11, 5408-13	11.5	245
106	Microfabricated hinges. <i>Sensors and Actuators A: Physical</i> , <b>1992</b> , 33, 249-256	3.9	242
105	Photoactuators and motors based on carbon nanotubes with selective chirality distributions. <i>Nature Communications</i> , <b>2014</b> , 5, 2983	17.4	223
104	Optimal energy density piezoelectric bending actuators. <i>Sensors and Actuators A: Physical</i> , <b>2005</b> , 119, 476-488	3.9	177
103	Insect-scale fast moving and ultrarobust soft robot. <i>Science Robotics</i> , <b>2019</b> , 4,	18.6	137
102	Directional adhesion of gecko-inspired angled microfiber arrays. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 191910	9.4	131
101	RoACH: An autonomous 2.4g crawling hexapod robot <b>2008</b> ,		116
100	Sliding-induced adhesion of stiff polymer microfibre arrays. I. Macroscale behaviour. <i>Journal of the Royal Society Interface</i> , <b>2008</b> , 5, 835-44	4.1	113
99	Contact self-cleaning of synthetic gecko adhesive from polymer microfibers. <i>Langmuir</i> , <b>2008</b> , 24, 10587-91	9.1	109
98	Tracking fast inverted trajectories of the underactuated Acrobot. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>1999</b> , 15, 740-750		96

97	Basic Solid Mechanics for Tactile Sensing. <i>International Journal of Robotics Research</i> , <b>1985</b> , 4, 40-54	5.7	88
96	Applications of micromechatronics in minimally invasive surgery. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>1998</b> , 3, 34-42	5.5	80
95	Efficient charge recovery method for driving piezoelectric actuators with quasi-square waves. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , <b>2003</b> , 50, 237-44	3.2	79
94	Gecko-inspired combined lamellar and nanofibrillar array for adhesion on nonplanar surface. <i>Langmuir</i> , <b>2009</b> , 25, 12449-53	4	78
93	Sliding-induced adhesion of stiff polymer microfibre arrays. II. Microscale behaviour. <i>Journal of the Royal Society Interface</i> , <b>2008</b> , 5, 845-53	4.1	74
92	Controllable Particle Adhesion with a Magnetically Actuated Synthetic Gecko Adhesive. <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 3256-3261	15.6	65
91	Robotics in scansorial environments <b>2005</b> ,		65
90	Attachment of fiber array adhesive through side contact. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 103521	2.5	64
89	Sliding and hopping gaits for the underactuated Acrobot. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>1998</b> , 14, 629-634		62
88	Hybrid core-shell nanowire forests as self-selective chemical connectors. <i>Nano Letters</i> , <b>2009</b> , 9, 2054-8	11.5	56
87	Efficient resonant drive of flapping-wing robots <b>2009</b> ,		55
86	Terradynamically streamlined shapes in animals and robots enhance traversability through densely cluttered terrain. <i>Bioinspiration and Biomimetics</i> , <b>2015</b> , 10, 046003	2.6	53
85	Animal-inspired design and aerodynamic stabilization of a hexapedal millirobot <b>2013</b> ,		47
84	Shear adhesion strength of thermoplastic gecko-inspired synthetic adhesive exceeds material limits. <i>Langmuir</i> , <b>2011</b> , 27, 11278-81	4	45
83	Gecko toe and lamellar shear adhesion on macroscopic, engineered rough surfaces. <i>Journal of Experimental Biology</i> , <b>2014</b> , 217, 283-9	3	44
82	Towards friction and adhesion from high modulus microfiber arrays. <i>Journal of Adhesion Science and Technology</i> , <b>2007</b> , 21, 1297-1315	2	43
81	Wet self-cleaning of superhydrophobic microfiber adhesives formed from high density polyethylene. <i>Langmuir</i> , <b>2012</b> , 28, 15372-7	4	38
80	An integrated jumping-crawling robot using height-adjustable jumping module <b>2016</b> ,		35

79	Dry self-cleaning properties of hard and soft fibrillar structures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 6081-8	9.5	35
78	Design Exploration and Kinematic Tuning of a Power Modulating Jumping Monopod. <i>Journal of Mechanisms and Robotics</i> , <b>2017</b> , 9,	2.2	34
77	Flight control for target seeking by 13 gram ornithopter <b>2011</b> ,		33
76	Integrated Manufacture of Exoskeletons and Sensing Structures for Folded Millirobots. <i>Journal of Mechanisms and Robotics</i> , <b>2015</b> , 7,	2.2	31
75	Controlled In-Plane Locomotion of a Hexapod Using a Single Actuator. <i>IEEE Transactions on Robotics</i> , <b>2015</b> , 31, 157-167	6.5	30
74	Wet and Dry Adhesion Properties of Self-Selective Nanowire Connectors. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 3098-3102	15.6	29
73	Repetitive extreme-acceleration (14-g) spatial jumping with Salto-1P <b>2017</b> ,		28
72	Effect of fiber geometry on macroscale friction of ordered low-density polyethylene nanofiber arrays. <i>Langmuir</i> , <b>2011</b> , 27, 11008-16	4	28
71	Adhesion of an elastic plate to a sphere. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2008</b> , 464, 1309-1317	2.4	27
70	Alignment of microparts using force-controlled pushing <b>1998</b> ,		27
69	Transition by head-on collision: mechanically mediated manoeuvres in cockroaches and small robots. <i>Journal of the Royal Society Interface</i> , <b>2018</b> , 15,	4.1	26
68	STAR, a sprawl tuned autonomous robot <b>2013</b> ,		26
67	Fast scale prototyping for folded millirobots <b>2008</b> ,		26
66	Experimental dynamics of wing assisted running for a bipedal ornithopter <b>2011</b> ,		24
65	Performance analysis and terrain classification for a legged robot over rough terrain <b>2012</b> ,		22
64	Dynamic climbing of near-vertical smooth surfaces <b>2012</b> ,		22
63	Running beyond the bio-inspired regime <b>2015</b> ,		20
62	MEDIC: A legged millirobot utilizing novel obstacle traversal <b>2011</b> ,		20

61	Fast scale prototyping for folded millirobots <b>2008</b> ,		20
60	JumpRoACH: A Trajectory-Adjustable Integrated Jumping/Crawling Robot. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2019</b> , 24, 947-958	5.5	19
59	Ground fluidization promotes rapid running of a lightweight robot. <i>International Journal of Robotics Research</i> , <b>2013</b> , 32, 859-869	5.7	19
58	Rapid inversion: running animals and robots swing like a pendulum under ledges. <i>PLoS ONE</i> , <b>2012</b> , 7, e38003	3.7	18
57	Dynamometer Power Output Measurements of Miniature Piezoelectric Actuators. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2009</b> , 14, 1-10	5.5	18
56	Pop-up mars rover with textile-enhanced rigid-flex PCB body <b>2017</b> ,		17
55	Mechanical principles of dynamic terrestrial self-righting using wings. <i>Advanced Robotics</i> , <b>2017</b> , 31, 881-900	10	16
54	Planning with the STAR(s) <b>2014</b> ,		16
53	Finding Only Finite Roots to Large Kinematic Synthesis Systems. <i>Journal of Mechanisms and Robotics</i> , <b>2017</b> , 9,	2.2	15
52	Towards a Soft Fingertip with Integrated Sensing and Actuation <b>2018</b> ,		15
51	Simulation of synthetic gecko arrays shearing on rough surfaces. <i>Journal of the Royal Society Interface</i> , <b>2014</b> , 11, 20140021	4.1	14
50	Rapidly Prototyped Orthotweezers for Automated Microassembly <b>2007</b> ,		14
49	Role of counter-substrate surface energy in macroscale friction of nanofiber arrays. <i>Langmuir</i> , <b>2012</b> , 28, 2922-7	4	12
48	Systematic study of the performance of small robots on controlled laboratory substrates <b>2010</b> ,		12
47	Flight forces and altitude regulation of 12 gram I-Bird <b>2010</b> ,		12
46	Reducing Contact Resistance Using Compliant Nickel Nanowire Arrays. <i>IEEE Transactions on Components and Packaging Technologies</i> , <b>2008</b> , 31, 859-868		12
45	A power modulating leg mechanism for monopedal hopping <b>2016</b> ,		12
44	Anisotropic collapsible leg spines for increased millirobot traction <b>2015</b> ,		11

43	Comparison of ornithopter wind tunnel force measurements with free flight <b>2014</b> ,		11
42	Optical flow on a flapping wing robot <b>2009</b> ,		11
41	Thin-film repulsive-force electrostatic actuators. <i>Sensors and Actuators A: Physical</i> , <b>2018</b> , 270, 252-261	3.9	10
40	Roll oscillation modulated turning in dynamic millirobots <b>2014</b> ,		9
39	Compliance-based dynamic steering for hexapods <b>2012</b> ,		9
38	Learning Image-Conditioned Dynamics Models for Control of Underactuated Legged Millirobots <b>2018</b> ,		9
37	Precision Jumping Limits from Flight-phase Control in Salto-1P <b>2018</b> ,		9
36	Friction characteristics of polymeric nanofiber arrays against substrates with tailored geometry. <i>Langmuir</i> , <b>2013</b> , 29, 8395-401	4	8
35	Automatic identification of dynamic piecewise affine models for a running robot <b>2013</b> ,		8
34	Cockroach-inspired winged robot reveals principles of ground-based dynamic self-righting <b>2016</b> ,		7
33	Precision Robotic Leaping and Landing Using Stance-Phase Balance. <i>IEEE Robotics and Automation Letters</i> , <b>2020</b> , 5, 3422-3429	4.2	6
32	Step climbing cooperation primitives for legged robots with a reversible connection <b>2016</b> ,		6
31	Dynamic terrestrial self-righting with a minimal tail <b>2017</b> ,		6
30	Coordinated launching of an ornithopter with a hexapedal robot <b>2015</b> ,		6
29	Cost of locomotion of a dynamic hexapedal robot <b>2013</b> ,		6
28	Challenges for Effective Millirobots <b>2006</b> ,		6
27	Foot design and integration for bioinspired climbing robots <b>2006</b> , 6230, 426		6
26	Detection of slippery terrain with a heterogeneous team of legged robots <b>2014</b> ,		5

25	Cockroach Milli-Robot With Improved Load Capacity. <i>Journal of Mechanisms and Robotics</i> , <b>2019</b> , 11,	2.2	4
24	1STAR, A one-actuator steerable robot <b>2014</b> ,		4
23	AUTONOMOUS NAVIGATION OF A 5 GRAM CRAWLING MILLIROBOT IN A COMPLEX ENVIRONMENT <b>2012</b> , 121-128		4
22	Modeling and control of an ornithopter for diving <b>2016</b> ,		4
21	Steering of an Underactuated Legged Robot through Terrain Contact with an Active Tail <b>2018</b> ,		4
20	Bidirectional, Thin-Film Repulsive-/Attractive-Force Electrostatic Actuators for a Crawling Milli-Robot <b>2018</b> ,		4
19	Designing Dynamic Machines With Large-Scale Root Finding. <i>IEEE Transactions on Robotics</i> , <b>2020</b> , 36, 1135-1152	6.5	3
18	Force sensing shell using a planar sensor for miniature legged robots <b>2015</b> ,		3
17	Wearable Devices: Wearable Microfluidic Diaphragm Pressure Sensor for Health and Tactile Touch Monitoring (Adv. Mater. 39/2017). <i>Advanced Materials</i> , <b>2017</b> , 29,	24	2
16	Drift-free Roll and Pitch Estimation for High-acceleration Hopping <b>2019</b> ,		2
15	Robotic folding of 2D and 3D structures from a ribbon <b>2016</b> ,		2
14	Cooperative inchworm localization with a low cost team <b>2017</b> ,		2
13	VLR: Cockroach millirobot with load decoupling structure <b>2015</b> ,		2
12	Maneuverability and mobility in palm-sized legged robots <b>2012</b> ,		2
11	Rapid-manufacturable hair sensor array for legged millirobots <b>2012</b> ,		2
10	Macromodel for the mechanics of gecko hair adhesion <b>2008</b> ,		2
9	Micro-Actuators for Micro-Robots: Electric and Magnetic. <i>Handbook of Sensors and Actuators</i> , <b>1998</b> , 6, 161-179		2
8	Flocking: Don't need no stinkin' robot recognition		2

7	Challenges for 100 Milligram Flapping Flight <b>2009</b> , 219-229		2
6	Self-Engaging Spined Gripper with Dynamic Penetration and Release for Steep Jumps <b>2018</b> ,		2
5	Adjustable Power Modulation For A Leg Mechanism Suitable For Running <b>2019</b> ,		1
4	Dynamic legged locomotion for palm-size robots <b>2015</b> ,		1
3	Angled microfiber arrays as low-modulus, low Poisson's ratio compliant substrates. <i>Journal of Micromechanics and Microengineering</i> , <b>2014</b> , 24, 065016	2	1
2	A Study on Finding Finite Roots for Kinematic Synthesis <b>2017</b> ,		1
1	Mechanics of a Novel Shear-activated Microfiber Array Adhesive. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1086, 1		1