Michael T Tolley

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.

72 papers	6,956 citations	29 h-index	79 g-index
79 ext. papers	8,965 ext. citations	9.1 avg, IF	6.79 L-index

#	Paper	IF	Citations
72	Design, fabrication and control of soft robots. *Nature*, **2015**, 521, 467-75	50.4	2586
71	A Resilient, Untethered Soft Robot. *Soft Robotics*, **2014**, 1, 213-223	9.2	612
70	SOFT ROBOTICS. A 3D-printed, functionally graded soft robot powered by combustion. *Science*, **2015**, 349, 161-5	33.3	608
69	Soft Robotics: Review of Fluid-Driven Intrinsically Soft Devices; Manufacturing, Sensing, Control, and Applications in Human-Robot Interaction . *Advanced Engineering Materials*, **2017**, 19, 1700016	3.5	456
68	Self-folding with shape memory composites. *Soft Matter*, **2013**, 9, 7688	3.6	196
67	Design, fabrication and control of origami robots. *Nature Reviews Materials*, **2018**, 3, 101-112	73.3	195
66	Soft robot perception using embedded soft sensors and recurrent neural networks. *Science Robotics*, **2019**, 4,	18.6	189
65	Self-folding origami: shape memory composites activated by uniform heating. *Smart Materials and Structures*, **2014**, 23, 094006	3.4	180
64	Pneumatic Energy Sources for Autonomous and Wearable Soft Robotics. *Soft Robotics*, **2014**, 1, 263-274	9.2	160
63	Translucent soft robots driven by frameless fluid electrode dielectric elastomer actuators. *Science Robotics*, **2018**, 3,	18.6	150
62	A Soft Robotic Gripper With Gecko-Inspired Adhesive. *IEEE Robotics and Automation Letters*, **2018**, 3, 903-910	4.2	144
61	Electrically controlled liquid crystal elastomer-based soft tubular actuator with multimodal actuation. *Science Advances*, **2019**, 5, eaax5746	14.3	141
60	Electronic skins and machine learning for intelligent soft robots. *Science Robotics*, **2020**, 5,	18.6	131
59	. *IEEE/ASME Transactions on Mechatronics*, **2015**, 20, 2214-2221	5.5	84
58	Robot self-assembly by folding: A printed inchworm robot **2013**,		83
57	3D printed soft actuators for a legged robot capable of navigating unstructured terrain **2017**,		82
56	An untethered jumping soft robot **2014**,		73

55	Application-Driven Design of Soft, 3-D Printed, Pneumatic Actuators With Bellows. *IEEE/ASME Transactions on Mechatronics*, **2019**, 24, 78-87	5.5	54
54	Electronics-free pneumatic circuits for controlling soft-legged robots. *Science Robotics*, **2021**, 6,	18.6	47
53	Self-folding miniature elastic electric devices. *Smart Materials and Structures*, **2014**, 23, 094005	3.4	44
52	Scalable Manufacturing of Solderable and Stretchable Physiologic Sensing Systems. *Advanced Materials*, **2017**, 29, 1701312	24	41
51	Dynamically programmable fluidic assembly. *Applied Physics Letters*, **2008**, 93, 254105	3.4	40
50	Design Considerations for 3D Printed, Soft, Multimaterial Resistive Sensors for Soft Robotics. *Frontiers in Robotics and AI*, **2019**, 6, 30	2.8	37
49	Reversible adhesion to rough surfaces both in and out of water, inspired by the clingfish suction disc. *Bioinspiration and Biomimetics*, **2019**, 14, 066016	2.6	35
48	A Biologically Inspired, Functionally Graded End Effector for Soft Robotics Applications. *Soft Robotics*, **2017**, 4, 317-323	9.2	33
47	The flying monkey: A mesoscale robot that can run, fly, and grasp **2016**,		32
46	Custom soft robotic gripper sensor skins for haptic object visualization **2017**,		32
45	Stochastic Modular Robotic Systems: A Study of Fluidic Assembly Strategies. *IEEE Transactions on Robotics*, **2010**, 26, 518-530	6.5	30
44	Differential pressure control of 3D printed soft fluidic actuators **2017**,		29
43	On-line assembly planning for stochastically reconfigurable systems. *International Journal of Robotics Research*, **2011**, 30, 1566-1584	5.7	29
42	Eversion and Retraction of a Soft Robot Towards the Exploration of Coral Reefs **2019**,		26
41	An end-to-end approach to making self-folded 3D surface shapes by uniform heating **2014**,		26
40	Self-folding shape memory laminates for automated fabrication **2013**,		26
39	Jellyfish-Inspired Soft Robot Driven by Fluid Electrode Dielectric Organic Robotic Actuators. *Frontiers in Robotics and AI*, **2019**, 6, 126	2.8	23
38	Self-assembling sensors for printable machines **2014**,		22

37	Morphing Structure for Changing Hydrodynamic Characteristics of a Soft Underwater Walking Robot. *IEEE Robotics and Automation Letters*, **2019**, 4, 4163-4169	4.2	20
36	Simple passive valves for addressable pneumatic actuation **2014**,		20
35	Hydrodynamically tunable affinities for fluidic assembly. *Langmuir*, **2009**, 25, 3769-74	4	18
34	Hard questions for soft robotics. *Science Robotics*, **2021**, 6,	18.6	17
33	Fluidic manipulation for scalable stochastic 3D assembly of modular robots **2010**,		16
32	. *IEEE Robotics and Automation Magazine*, **2015**, 22, 27-36	3.4	14
31	Soft Robot Actuation Strategies for Locomotion in Granular Substrates. *IEEE Robotics and Automation Letters*, **2019**, 4, 2630-2636	4.2	13
30	Reversible actuation for self-folding modular machines using liquid crystal elastomer. *Smart Materials and Structures*, **2020**, 29, 105003	3.4	13
29	Feedback-controlled self-folding of autonomous robot collectives **2016**,		13
28	An End-to-End Approach to Self-Folding Origami Structures. *IEEE Transactions on Robotics*, **2018**, 34, 1409-1424	6.5	13
27	Cephalopod-inspired robot capable of cyclic jet propulsion through shape change. *Bioinspiration and Biomimetics*, **2020**,	2.6	12
26	Bio-inspired geotechnical engineering: principles, current work, opportunities and challenges. *Geotechnique*,1-19	3.4	11
25	Granular Jamming Feet Enable Improved Foot-Ground Interactions for Robot Mobility on Deformable Ground. *IEEE Robotics and Automation Letters*, **2020**, 5, 3975-3981	4.2	10
24	. *IEEE Robotics and Automation Letters*, **2018**, 3, 4201-4208	4.2	10
23	Hydrodynamically driven docking of blocks for 3D fluidic assembly. *Microfluidics and Nanofluidics*, **2010**, 9, 551-558	2.8	10
22	Variable Stiffness Devices Using Fiber Jamming for Application in Soft Robotics and Wearable Haptics. *Soft Robotics*, **2021**,	9.2	10
21	Towards rapid mechanical customization of cm-scale self-folding agents **2017**,		7
20	3D printed resistive soft sensors **2018**,		6

19	Programmable 3D Stochastic Fluidic Assembly of cm-scale modules **2011**,		6
18	Increased robustness for fluidic self-assembly. *Physics of Fluids*, **2008**, 20, 073304	4.4	6
17	Toward Bioinspired Wet Adhesives: Lessons from Assessing Surface Structures of the Suction Disc of Intertidal Clingfish. *ACS Applied Materials & Interfaces*, **2020**, 12, 45460-45475	9.5	6
16	Elastomeric diaphragm pump driven by fluid electrode dielectric elastomer actuators (FEDEAs) **2018**,		5
15	Mechanically programmed self-folding at the millimeter scale **2014**,		4
14	What Is the Path Ahead for Soft Robotics?. *Soft Robotics*, **2016**, 3, 159-160	9.2	4
13	Evolutionary Design and Assembly Planning for Stochastic Modular Robots. *Studies in Computational Intelligence*, **2011**, 211-225	0.8	3
12	Gas-Lubricated Vibration-Based Adhesion for Robotics. *Advanced Intelligent Systems*, **2021**, 3, 2100001	6	3
11	High Strength Inflatable Pouch Anchors. *IEEE Robotics and Automation Letters*, **2020**, 5, 3761-3767	4.2	2
10	Shear Strengthened Granular Jamming Feet for Improved Performance over Natural Terrain **2020**,		1
9	Versatile rotary actuators for small-scale robotic systems **2020**,		1
8	Bioinspired Shape-Changing Soft Robots for Underwater Locomotion: Actuation and Optimization for Crawling and Swimming **2021**, 7-39		1
7	Scale and size effects on the mechanical properties of bioinspired 3D printed two-phase composites. *Journal of Materials Research and Technology*, **2020**, 9, 14944-14960	5.5	1
6	Optimal control and design of an underactuated ball-pitching robotic arm using large-scale multidisciplinary optimization **2019**,		1
5	Combining suction and friction to stabilize a soft gripper to shear and normal forces, for manipulation of soft objects in wet environments. *IEEE Robotics and Automation Letters*, **2022**, 1-1	4.2	0
4	Digital Programming of Liquid Crystal Elastomers to Achieve High-Fidelity Surface Morphing. *Applied Materials Today*, **2022**, 27, 101501	6.6	0
3	New Developments in Soft Robotics: An Interview with Nicholas W. Bartlett and Michael T. Tolley. *Soft Robotics*, **2015**, 2, 93-95	9.2	
2	Power Amplification for Jumping Soft Robots Actuated by Artificial Muscles.. *Frontiers in Robotics and AI*, **2022**, 9, 844282	2.8	

1 Branching Vine Robots for Unmapped Environments.. *Frontiers in Robotics and AI*, **2022**, 9, 838913 2.8