Jonathan B Hopkins

List of Publications by Year
in descending order

35 papers	1,757 citations	394286 19 h-index	377752 34 g-index
35 all docs	35 docs citations	35 times ranked	1393 citing authors

#	Article	IF	Citations
1	Sequential metamaterials with alternating Poissonâ€™s ratios. Nature Communications, 2022, 13, 1041.	5.8	48
2	Hexblade positioner: A fast large-range six-axis motion stage. Precision Engineering, 2022, 76, 199-207.	1.8	7
3	Current challenges and potential directions towards precision microscale additive manufacturing â€“ Part II: Laser-based curing, heating, and trapping processes. Precision Engineering, 2021, 68, 301-318.	1.8	21
4	Combining cross-pivot flexures to generate improved kinematically equivalent flexure systems. Precision Engineering, 2021, 72, 237-249.	1.8	6
5	Design and fabrication of a three-dimensional meso-sized robotic metamaterial with actively controlled properties. Materials Horizons, 2020, 7, 229-235.	6.4	16
6	Automated Opticalâ€Tweezers Assembly of Engineered Microgranular Crystals. Small, 2020, 16, e2000314.	5.2	9
7	Effects of polymer residue on the pull-in of suspended graphene. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, 023001.	0.6	2
8	Multiscale modeling and optimization of the mechanics of hierarchical metamaterials. MRS Bulletin, 2019, 44, 773-781.	1.7	40
9	Phaseâ€Changing Metamaterial Capable of Variable Stiffness and Shape Morphing. Advanced Engineering Materials, 2019, 21, 1900802.	1.6	21
10	Simultaneous printing and deformation of microsystems via two-photon lithography and holographic optical tweezers. Materials Horizons, 2019, 6, 350-355.	6.4	22
11	Computationally efficient design of directionally compliant metamaterials. Nature Communications, 2019, 10, 291.	5.8	36
12	Additively manufacturable micro-mechanical logic gates. Nature Communications, 2019, 10, 882.	5.8	93
13	A review of micromirror arrays. Precision Engineering, 2018, 51, 729-761.	1.8	51
14	Compliant rolling-contact architected materials for shape reconfigurability. Nature Communications, 2018, 9, 4594.	5.8	30
15	Optimizing the Geometry of Flexure System Topologies Using the Boundary Learning Optimization Tool. Mathematical Problems in Engineering, 2018, 2018, 1-14.	0.6	4
16	Improving the throughput of automated holographic optical tweezers. Applied Optics, 2018, 57, 6396.	0.9	6
17	Mobility and Constraint Analysis of Interconnected Hybrid Flexure Systems Via Screw Algebra and Graph Theory. Journal of Mechanisms and Robotics, 2017, 9, .	1.5	14
18	A High-Speed Large-Range Tip-Tilt-Piston Micromirror Array. Journal of Microelectromechanical Systems, 2017, 26, 196-205.	1.7	23

#	Article	IF	Citations
19	Synthesizing multi-axis flexure systems with decoupled actuators. Precision Engineering, 2016, 46, 206-220.	1.8	19
20	Architected Materials: Multistable Shape-Reconfigurable Architected Materials (Adv. Mater. 36/2016). Advanced Materials, 2016, 28, 8065-8065.	11.1	15
21	Multistable Shapeâ€Reconfigurable Architected Materials. Advanced Materials, 2016, 28, 7915-7920.	11.1	292
22	Lightweight Mechanical Metamaterials with Tunable Negative Thermal Expansion. Physical Review Letters, 2016, 117, 175901.	2.9	337
23	Programmable Elastic Metamaterials. Advanced Engineering Materials, 2016, 18, 643-649.	1.6	44
24	An Active Microarchitectured Material that Utilizes Piezo Actuators to Achieve Programmable Properties. Advanced Engineering Materials, 2016, 18, 1113-1117.	1.6	9
25	An Actively Controlled Shape-Morphing Compliant Microarchitectured Material. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	11
26	Design of Nonperiodic Microarchitectured Materials That Achieve Graded Thermal Expansions. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	7
27	A Visualization Approach for Analyzing and Synthesizing Serial Flexure Elements. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	11
28	Synthesis and Analysis of Soft Parallel Robots Comprised of Active Constraints. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	23
29	Eliminating Underconstraint in Double Parallelogram Flexure Mechanisms. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	1.7	32
30	Modeling and generating parallel flexure elements. Precision Engineering, 2014, 38, 525-537.	1.8	13
31	Optimal Actuation of Dynamically Driven Serial and Hybrid Flexure Systems. , 2014, , .		2
32	Designing Microstructural Architectures With Thermally Actuated Properties Using Freedom, Actuation, and Constraint Topologies. Journal of Mechanical Design, Transactions of the ASME, 2013, 135, .	1.7	46
33	Synthesis of precision serial flexure systems using freedom and constraint topologies (FACT). Precision Engineering, 2011, 35, 638-649.	1.8	68
34	Synthesis of multi-degree of freedom, parallel flexure system concepts via freedom and constraint topology (FACT). Part II: Practice. Precision Engineering, 2010, 34, 271-278.	1.8	151
35	Synthesis of multi-degree of freedom, parallel flexure system concepts via Freedom and Constraint Topology (FACT) â€“ Part I: Principles. Precision Engineering, 2010, 34, 259-270.	1.8	228