

William T M Irvine

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

5,146
citations

136950

32
h-index

182427

51
g-index

54
all docs

54
docs citations

54
times ranked

5179
citing authors

#	ARTICLE	IF	CITATIONS
1	Spatters and spills: Spreading dynamics for partially wetting droplets. <i>Physics of Fluids</i> , 2022, 34, 012112.	4.0	3
2	Motile dislocations knead odd crystals into whorls. <i>Nature Physics</i> , 2022, 18, 212-218.	16.7	35
3	Numerical Investigation of the Stability of Straight Twisted Vortices. , 2021, , .		0
4	Real-space origin of topological band gaps, localization, and reentrant phase transitions in gyroscopic metamaterials. <i>Physical Review E</i> , 2021, 104, 025007.	2.1	8
5	Transmembrane transport in inorganic colloidal cell-mimics. <i>Nature</i> , 2021, 597, 220-224.	27.8	29
6	Rectification in Nonequilibrium Parity Violating Metamaterials. <i>Physical Review X</i> , 2020, 10, .	8.9	7
7	Non-Hermitian Band Topology and Skin Modes in Active Elastic Media. <i>Physical Review Letters</i> , 2020, 125, 118001.	7.8	107
8	Odd elasticity. <i>Nature Physics</i> , 2020, 16, 475-480.	16.7	142
9	Starting Flow Past an Airfoil and its Acquired Lift in a Superfluid. <i>Physical Review Letters</i> , 2019, 123, 154502.	7.8	11
10	The odd free surface flows of a colloidal chiral fluid. <i>Nature Physics</i> , 2019, 15, 1188-1194.	16.7	174
11	Self-organization in dipolar cube fluids constrained by competing anisotropies. <i>Soft Matter</i> , 2018, 14, 1080-1087.	2.7	52
12	When do knots in light stay knotted?. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 025204.	2.1	8
13	Amorphous topological insulators constructed from random point sets. <i>Nature Physics</i> , 2018, 14, 380-385.	16.7	208
14	Realization of a topological phase transition in a gyroscopic lattice. <i>Physical Review B</i> , 2018, 97, .	3.2	26
15	Emergent Geometry of Inhomogeneous Planar Crystals. <i>Physical Review X</i> , 2018, 8, .	8.9	16
16	Tunable band topology in gyroscopic lattices. <i>Physical Review B</i> , 2018, 98, .	3.2	32
17	Helicity in superfluids: Existence and the classical limit. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	12
18	Complete measurement of helicity and its dynamics in vortex tubes. <i>Science</i> , 2017, 357, 487-491.	12.6	102

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19	Fracture in sheets draped on curved surfaces. Nature Materials, 2017, 16, 89-93.	27.5	59
20	Weaving Knotted Vector Fields with Tunable Helicity. Physical Review Letters, 2016, 117, 274501.	7.8	37
21	Spatiotemporal order and emergent edge currents in active spinner materials. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12919-12924.	7.1	111
22	How superfluid vortex knots untie. Nature Physics, 2016, 12, 650-655.	16.7	87
23	Shape-sensitive crystallization in colloidal superball fluids. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5286-5290.	7.1	108
24	Topological mechanics of gyroscopic metamaterials. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14495-14500.	7.1	611
25	Orientation-Dependent Handedness and Chiral Design. Physical Review X, 2014, 4, .	8.9	31
26	Soft epitaxy of nanocrystal superlattices. Nature Communications, 2014, 5, 5045.	12.8	40
27	Tangled loops and knots. Nature Materials, 2014, 13, 229-231.	27.5	13
28	Helicity conservation by flow across scales in reconnecting vortex links and knots. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15350-15355.	7.1	85
29	The geometry and topology of soft materials. Soft Matter, 2013, 9, 8086.	2.7	7
30	Tying Knots in Light Fields. Physical Review Letters, 2013, 111, 150404.	7.8	139
31	Dislocation reactions, grain boundaries, and irreversibility in two-dimensional lattices using topological tweezers. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15544-15548.	7.1	57
32	Creation and dynamics of knotted vortices. Nature Physics, 2013, 9, 253-258.	16.7	304
33	Geometric background charge: dislocations on capillary bridges. Soft Matter, 2012, 8, 10123.	2.7	17
34	Fractionalization of interstitials in curved colloidal crystals. Nature Materials, 2012, 11, 948-951.	27.5	91
35	Lock and key colloids through polymerization-induced buckling of monodisperse silicon oil droplets. Soft Matter, 2011, 7, 1631-1634.	2.7	103
36	Cubic crystals from cubic colloids. Soft Matter, 2011, 7, 4139-4142.	2.7	316

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37	Lock and key colloids. <i>Nature</i> , 2010, 464, 575-578.	27.8	699
38	Pleats in crystals on curved surfaces. <i>Nature</i> , 2010, 468, 947-951.	27.8	293
39	Diffraction-limited high-finesse optical cavities. <i>Physical Review A</i> , 2010, 81, .	2.5	48
40	Polychromatic Photonic Quasicrystal Cavities. <i>Physical Review Letters</i> , 2010, 104, 243901.	7.8	18
41	Linked and knotted beams of light, conservation of helicity and the flow of null electromagnetic fields. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 385203.	2.1	39
42	Strong coupling through optical positioning of a quantum dot in a photonic crystal cavity. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	112
43	Linked and knotted beams of light. <i>Nature Physics</i> , 2008, 4, 716-720.	16.7	158
44	Strong Coupling between Single Photons in Semiconductor Microcavities. <i>Physical Review Letters</i> , 2006, 96, 057405.	7.8	58
45	High Finesse Opto-Mechanical Cavity with a Movable Thirty-Micron-Size Mirror. <i>Physical Review Letters</i> , 2006, 96, 173901.	7.8	60
46	Bloch theory of entangled photon generation in nonlinear photonic crystals. <i>Physical Review A</i> , 2005, 72, .	2.5	19
47	Realization of Hardy's Thought Experiment with Photons. <i>Physical Review Letters</i> , 2005, 95, 030401.	7.8	27
48	Optimal Quantum Cloning on a Beam Splitter. <i>Physical Review Letters</i> , 2004, 92, 047902.	7.8	74
49	Nonlinear Photonic Crystals as a Source of Entangled Photons. <i>Physical Review Letters</i> , 2004, 93, 040504.	7.8	49
50	Robust Long-Distance Entanglement and a Loophole-Free Bell Test with Ions and Photons. <i>Physical Review Letters</i> , 2003, 91, 110405.	7.8	289