

# Luca Giomi

## List of Publications by Year in descending order

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58  
papers

3,087  
citations

186265

28  
h-index

161849

54  
g-index

62  
all docs

62  
docs citations

62  
times ranked

2130  
citing authors

#	ARTICLE	IF	CITATIONS
1	Theory of defect-mediated morphogenesis. <i>Science Advances</i> , 2022, 8, eabk2712.	10.3	41
2	Self-regulation of phenotypic noise synchronizes emergent organization and active transport in confluent microbial environments. <i>Nature Physics</i> , 2022, 18, 945-951.	16.7	9
3	Faceting and Flattening of Emulsion Droplets: A Mechanical Model. <i>Physical Review Letters</i> , 2021, 126, 038001.	7.8	22
4	García-Aguilar <i>et al.</i> Reply. <i>Physical Review Letters</i> , 2021, 126, 259802.	7.8	3
5	Topology-Driven Ordering of Flocking Matter. <i>Physical Review X</i> , 2021, 11, .	8.9	8
6	Confinement-induced self-organization in growing bacterial colonies. <i>Science Advances</i> , 2021, 7, .	10.3	26
7	Orientational Correlations in Active and Passive Nematic Defects. <i>Physical Review Letters</i> , 2021, 127, 197801.	7.8	14
8	Chiral stresses in nematic cell monolayers. <i>Soft Matter</i> , 2020, 16, 764-774.	2.7	15
9	Dislocation screening in crystals with spherical topology. <i>Physical Review E</i> , 2020, 101, 063005.	2.1	8
10	Mechanical interplay between cell shape and actin cytoskeleton organization. <i>Soft Matter</i> , 2020, 16, 6328-6343.	2.7	30
11	Measuring Gaussian Rigidity Using Curved Substrates. <i>Physical Review Letters</i> , 2020, 125, 188002.	7.8	3
12	Geometric pinning and antimixing in scaffolded lipid vesicles. <i>Nature Communications</i> , 2020, 11, 4314.	12.8	17
13	Topotaxis of active Brownian particles. <i>Physical Review E</i> , 2020, 101, 032602.	2.1	23
14	Lipid exchange enhances geometric pinning in multicomponent membranes on patterned substrates. <i>Soft Matter</i> , 2020, 16, 4932-4940.	2.7	0
15	Mono- to Multilayer Transition in Growing Bacterial Colonies. <i>Physical Review Letters</i> , 2019, 123, 178001.	7.8	28
16	Thermodynamic equilibrium of binary mixtures on curved surfaces. <i>Physical Review E</i> , 2019, 100, 032604.	2.1	7
17	Geometrical Control of Active Turbulence in Curved Topographies. <i>Physical Review Letters</i> , 2019, 122, 168002.	7.8	34
18	Statistical properties of autonomous flows in 2D active nematics. <i>Soft Matter</i> , 2019, 15, 3264-3272.	2.7	53

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19	Contour Models of Cellular Adhesion. <i>Advances in Experimental Medicine and Biology</i> , 2019, 1146, 13-29.	1.6	3
20	Curvature-induced defect unbinding and dynamics in active nematic toroids. <i>Nature Physics</i> , 2018, 14, 85-90.	16.7	93
21	Cellular geometry controls the efficiency of motile sperm aggregates. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20180702.	3.4	16
22	Geometry and Mechanics of Microdomains in Growing Bacterial Colonies. <i>Physical Review X</i> , 2018, 8, .	8.9	37
23	Cytoskeletal Anisotropy Controls Geometry and Forces of Adherent Cells. <i>Physical Review Letters</i> , 2018, 121, 178101.	7.8	17
24	Interface geometry of binary mixtures on curved substrates. <i>Physical Review E</i> , 2018, 98, .	2.1	14
25	Turbulent Dynamics of Epithelial Cell Cultures. <i>Physical Review Letters</i> , 2018, 120, 208101.	7.8	107
26	Cross-talk between topological defects in different fields revealed by nematic microfluidics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E5771-E5777.	7.1	52
27	Linear response to leadership, effective temperature, and decision making in flocks. <i>Physical Review E</i> , 2016, 94, 022612.	2.1	12
28	Orientational properties of nematic disclinations. <i>Soft Matter</i> , 2016, 12, 6490-6495.	2.7	67
29	One ring to rule them all: tuning bacteria collective motion via geometric confinement. <i>New Journal of Physics</i> , 2016, 18, 081001.	2.9	3
30	Geometry and Topology of Turbulence in Active Nematics. <i>Physical Review X</i> , 2015, 5, .	8.9	108
31	On shape dependence of holographic mutual information in AdS4. <i>Journal of High Energy Physics</i> , 2015, 2015, 1.	4.7	38
32	Defect dynamics in active nematics. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20130365.	3.4	170
33	The dynamics of sperm cooperation in a competitive environment. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2014, 281, 20140296.	2.6	60
34	Spontaneous Division and Motility in Active Nematic Droplets. <i>Physical Review Letters</i> , 2014, 112, 147802.	7.8	101
35	Topology and dynamics of active nematic vesicles. <i>Science</i> , 2014, 345, 1135-1139.	12.6	450
36	Softly constrained films. <i>Soft Matter</i> , 2013, 9, 8121.	2.7	16

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37	Polymorphism and bistability in adherent cells. <i>Soft Matter</i> , 2013, 9, 5251.	2.7	13
38	Defect Annihilation and Proliferation in Active Nematics. <i>Physical Review Letters</i> , 2013, 110, 228101.	7.8	250
39	Swarming, swirling and stasis in sequestered bristle-bots. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2013, 469, 20120637.	2.1	92
40	Multi-stability of free spontaneously curved anisotropic strips. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012, 468, 511-530.	2.1	30
41	Minimal surfaces bounded by elastic lines. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012, 468, 1851-1864.	2.1	49
42	Molecular tilt on monolayer-protected nanoparticles. <i>Europhysics Letters</i> , 2012, 97, 36005.	2.0	6
43	Polar patterns in active fluids. <i>Soft Matter</i> , 2012, 8, 129-139.	2.7	41
44	Hyperbolic Interfaces. <i>Physical Review Letters</i> , 2012, 109, 136101.	7.8	12
45	Banding, excitability and chaos in active nematic suspensions. <i>Nonlinearity</i> , 2012, 25, 2245-2269.	1.4	76
46	Excitable Patterns in Active Nematics. <i>Physical Review Letters</i> , 2011, 106, 218101.	7.8	100
47	Giomi and Mahadevan Reply:. <i>Physical Review Letters</i> , 2011, 107, .	7.8	2
48	Statistical Mechanics of Developable Ribbons. <i>Physical Review Letters</i> , 2010, 104, 238104.	7.8	39
49	Sheared active fluids: Thickening, thinning, and vanishing viscosity. <i>Physical Review E</i> , 2010, 81, 051908.	2.1	117
50	Pak3 inhibits local actin filament formation to regulate global cell polarity. <i>HFSP Journal</i> , 2009, 3, 194-203.	2.5	26
51	Two-dimensional matter: order, curvature and defects. <i>Advances in Physics</i> , 2009, 58, 449-563.	14.4	287
52	Elastic theory of defects in toroidal crystals. <i>European Physical Journal E</i> , 2008, 27, 275-296.	1.6	18
53	Defective ground states of toroidal crystals. <i>Physical Review E</i> , 2008, 78, 010601.	2.1	29
54	Bubble-raft model for a paraboloidal crystal. <i>Physical Review E</i> , 2008, 77, 021602.	2.1	29

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55	Complex Spontaneous Flows and Concentration Banding in Active Polar Films. Physical Review Letters, 2008, 101, 198101.	7.8	97
56	Paraboloidal crystals. Chaos, 2007, 17, 041104.	2.5	1
57	Crystalline order on Riemannian manifolds with variable Gaussian curvature and boundary. Physical Review B, 2007, 76, .	3.2	42
58	The mean-field infinite range $p = 3$ spin glass: Equilibrium landscape and correlation time scales. Europhysics Letters, 2005, 71, 824-830.	2.0	17