

# Christian D Santangelo

## List of Publications by Year in descending order

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36  
papers

2,579  
citations

430874

18  
h-index

414414

32  
g-index

37  
all docs

37  
docs citations

37  
times ranked

2670  
citing authors

#	ARTICLE	IF	CITATIONS
1	Using origami design principles to fold reprogrammable mechanical metamaterials. <i>Science</i> , 2014, 345, 647-650.	12.6	714
2	Origami structures with a critical transition to bistability arising from hidden degrees of freedom. <i>Nature Materials</i> , 2015, 14, 389-393.	27.5	382
3	Programming Reversibly Self-Folding Origami with Micropatterned Photo-Crosslinkable Polymer Trilayers. <i>Advanced Materials</i> , 2015, 27, 79-85.	21.0	381
4	Thermally responsive rolling of thin gel strips with discrete variations in swelling. <i>Soft Matter</i> , 2012, 8, 2375.	2.7	179
5	Topological Mechanics of Origami and Kirigami. <i>Physical Review Letters</i> , 2016, 116, 135501.	7.8	156
6	Swelling-driven rolling and anisotropic expansion of striped gel sheets. <i>Soft Matter</i> , 2013, 9, 8264.	2.7	77
7	Topological kinematics of origami metamaterials. <i>Nature Physics</i> , 2018, 14, 811-815.	16.7	74
8	Geometrically controlled snapping transitions in shells with curved creases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 11175-11180.	7.1	67
9	Lattice mechanics of origami tessellations. <i>Physical Review E</i> , 2015, 92, 013205.	2.1	65
10	Optimal wrapping of liquid droplets with ultrathin sheets. <i>Nature Materials</i> , 2015, 14, 1206-1209.	27.5	62
11	Extreme Mechanics: Self-Folding Origami. <i>Annual Review of Condensed Matter Physics</i> , 2017, 8, 165-183.	14.5	55
12	Mesophases of soft-sphere aggregates. <i>Soft Matter</i> , 2009, 5, 3629.	2.7	42
13	Biasing Buckling Direction in Shape-Programmable Hydrogel Sheets with Through-Thickness Gradients. <i>Advanced Functional Materials</i> , 2019, 29, 1905273.	14.9	39
14	Buckling thin disks and ribbons with non-Euclidean metrics. <i>Europhysics Letters</i> , 2009, 86, 34003.	2.0	35
15	Enabling Robust Self-Folding Origami by Pre-Biasing Vertex Buckling Direction. <i>Advanced Materials</i> , 2019, 31, e0193006.	21.0	32
16	Self-assembly on a cylinder: a model system for understanding the constraint of commensurability. <i>Soft Matter</i> , 2013, 9, 10016.	2.7	23
17	Programmable and reversible assembly of soft capillary multipoles. <i>Materials Horizons</i> , 2017, 4, 228-235.	12.2	20
18	Subjamming transition in binary sphere mixtures. <i>Physical Review E</i> , 2017, 96, 052905.	2.1	19

#	ARTICLE	IF	CITATIONS
19	Energetic rigidity. I. A unifying theory of mechanical stability. <i>Physical Review E</i> , 2022, 105, 025003.	2.1	19
20	Mechanics of large folds in thin interfacial films. <i>Physical Review E</i> , 2014, 90, 042401.	2.1	18
21	Theory and practice of origami in science. <i>Soft Matter</i> , 2020, 16, 94-101.	2.7	17
22	Hidden symmetries generate rigid folding mechanisms in periodic origami. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30252-30259.	7.1	17
23	Branches of Triangulated Origami Near the Unfolded State. <i>Physical Review X</i> , 2018, 8, .	8.9	15
24	Topology in Nonlinear Mechanical Systems. <i>Physical Review Letters</i> , 2021, 127, 076802.	7.8	14
25	Energetic rigidity. II. Applications in examples of biological and underconstrained materials. <i>Physical Review E</i> , 2022, 105, 025004.	2.1	14
26	Topological transitions in the configuration space of non-Euclidean origami. <i>Physical Review E</i> , 2020, 101, 043003.	2.1	13
27	Nambuâ€“Goldstone modes and diffuse deformations in elastic shells. <i>Soft Matter</i> , 2013, 9, 8246.	2.7	7
28	Apolipoprotein Mimetic Peptide Inhibits Neutrophil-Driven Inflammatory Damage via Membrane Remodeling and Suppression of Cell Lysis. <i>ACS Nano</i> , 2021, 15, 15930-15939.	14.6	7
29	Growth of form in thin elastic structures. <i>Soft Matter</i> , 2018, 14, 8361-8371.	2.7	6
30	Membrane fluctuations around inclusions. <i>Journal of Computer-Aided Materials Design</i> , 2007, 14, 103-109.	0.7	5
31	Mechanics of Metric Frustration in Contorted Filament Bundles: From Local Symmetry to Columnar Elasticity. <i>Physical Review Letters</i> , 2021, 127, 218002.	7.8	2
32	Geometric Mechanics of Curved Crease Origami. , 0, .		1
33	Thermal Fluctuations of Singular Bar-Joint Mechanisms. <i>Physical Review Letters</i> , 2022, 128, .	7.8	1
34	The Geometry and Topology of Liquid Crystals. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0
35	Mapping curved wrinkles. <i>Nature Materials</i> , 2015, 14, 266-267.	27.5	0
36	Nonlinear mechanics of rigidifying curves. <i>Physical Review E</i> , 2017, 96, 013003.	2.1	0