

# Benoit Roman

## List of Publications by Year in descending order

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67  
papers

3,701  
citations

147801

31  
h-index

128289

60  
g-index

70  
all docs

70  
docs citations

70  
times ranked

3395  
citing authors

#	ARTICLE	IF	CITATIONS
1	Guided tearing: The ruler test. <i>Physical Review Materials</i> , 2021, 5, .	2.4	1
2	Computational inverse design of surface-based inflatables. <i>ACM Transactions on Graphics</i> , 2021, 40, 1-14.	7.2	0
3	Computational inverse design of surface-based inflatables. <i>ACM Transactions on Graphics</i> , 2021, 40, 1-14.	7.2	34
4	Stretch-Induced Bending of Soft Ribbed Strips. <i>Physical Review Letters</i> , 2021, 127, 168002.	7.8	2
5	Shape Programming by Modulating Actuation over Hierarchical Length Scales. <i>Advanced Materials</i> , 2020, 32, e2004515.	21.0	7
6	Geometry and mechanics of inextensible curvilinear balloons. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 143, 104068.	4.8	8
7	Programming stiff inflatable shells from planar patterned fabrics. <i>Soft Matter</i> , 2020, 16, 7898-7903.	2.7	27
8	Mechanics and Energetics of Electromembranes. <i>Soft Robotics</i> , 2020, 7, 675-687.	8.0	0
9	Elastocapillary adhesion of a soft cap on a rigid sphere. <i>Soft Matter</i> , 2020, 16, 1961-1966.	2.7	5
10	Nature of Crack Path Instabilities in Thin Sheets Cut by Blunt Objects. <i>Physical Review Letters</i> , 2020, 124, 174101.	7.8	2
11	Collaborative Oscillatory Fracture. <i>Physical Review Letters</i> , 2020, 124, 174102.	7.8	2
12	Morphogenesis through elastic phase separation in a pneumatic surface. <i>Comptes Rendus - Mecanique</i> , 2020, 348, 649-657.	0.7	1
13	Predicting tearing paths in thin sheets. <i>Physical Review E</i> , 2019, 100, 023002.	2.1	3
14	Programming curvilinear paths of flat inflatables. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 16692-16696.	7.1	23
15	Bio-inspired pneumatic shape-morphing elastomers. <i>Nature Materials</i> , 2019, 18, 24-28.	27.5	226
16	Elastocapillarity: When Surface Tension Deforms Elastic Solids. <i>Annual Review of Fluid Mechanics</i> , 2018, 50, 629-659.	25.0	198
17	A variational model of fracture for tearing brittle thin sheets. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 119, 334-348.	4.8	21
18	Buckling of elastomer sheets under non-uniform electro-actuation. <i>Soft Matter</i> , 2017, 13, 2876-2885.	2.7	25

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19	Intertwined Multiple Spiral Fracture in Perforated Sheets. <i>Physical Review Letters</i> , 2016, 116, 165501.	7.8	12
20	The tearing path in a thin anisotropic sheet from two pulling points: Wulff's view. <i>Soft Matter</i> , 2016, 12, 5979-5985.	2.7	18
21	Rupture et délamination de films minces. , 2016, , 26-29.	0.1	0
22	A new failure mechanism in thin film by collaborative fracture and delamination: Interacting duos of cracks. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 84, 214-229.	4.8	16
23	Effect of friction on the peeling test at zero-degrees. <i>Soft Matter</i> , 2015, 11, 9281-9290.	2.7	33
24	Reversibility of crumpling on compressed thin sheets. <i>European Physical Journal E</i> , 2014, 37, 28.	1.6	2
25	Self-Replicating Cracks: A Collaborative Fracture Mode in Thin Films. <i>Physical Review Letters</i> , 2014, 113, 085502.	7.8	68
26	Capillary buckling of a floating annulus. <i>Soft Matter</i> , 2013, 9, 10985.	2.7	47
27	Fracture path in brittle thin sheets: a unifying review on tearing. <i>International Journal of Fracture</i> , 2013, 182, 209-237.	2.2	34
28	Spiral tearing of thin films. <i>Soft Matter</i> , 2013, 9, 8282.	2.7	16
29	Forbidden Directions for the Fracture of Thin Anisotropic Sheets: An Analogy with the Wulff Plot. <i>Physical Review Letters</i> , 2013, 110, 144301.	7.8	55
30	Stress Defocusing in Anisotropic Compaction of Thin Sheets. <i>Physical Review Letters</i> , 2012, 108, 074301.	7.8	13
31	Stamping and Wrinkling of Elastic Plates. <i>Physical Review Letters</i> , 2012, 109, 054302.	7.8	46
32	Wrinkling Hierarchy in Constrained Thin Sheets from Suspended Graphene to Curtains. <i>Physical Review Letters</i> , 2011, 106, 224301.	7.8	171
33	Wrapping an Adhesive Sphere with an Elastic Sheet. <i>Physical Review Letters</i> , 2011, 106, 174301.	7.8	67
34	Stretch-induced wrinkles in reinforced membranes: From out-of-plane to in-plane structures. <i>Europhysics Letters</i> , 2011, 96, 64001.	2.0	25
35	Piercing an interface with a brush: Collaborative stiffening. <i>Europhysics Letters</i> , 2010, 90, 44006.	2.0	34
36	Elasto-capillarity: deforming an elastic structure with a liquid droplet. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 493101.	1.8	266

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37	Capillary origami controlled by an electric field. <i>Soft Matter</i> , 2010, 6, 4491.	2.7	65
38	Random blisters on stickers: metrology through defects. <i>Soft Matter</i> , 2010, 6, 5720.	2.7	14
39	Localization through Surface Folding in Solid Foams under Compression. <i>Physical Review Letters</i> , 2009, 103, 045501.	7.8	38
40	The macroscopic delamination of thin films from elastic substrates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 10901-10906.	7.1	225
41	Capillarity induced folding of elastic sheets. <i>European Physical Journal: Special Topics</i> , 2009, 166, 67-71.	2.6	43
42	Tearing as a test for mechanical characterization of thin adhesive films. <i>Nature Materials</i> , 2008, 7, 386-390.	27.5	64
43	Unzip instabilities: Straight to oscillatory transitions in the cutting of thin polymer sheets. <i>Europhysics Letters</i> , 2008, 82, 64002.	2.0	10
44	Cracking sheets: Oscillatory fracture paths in thin elastic sheets. <i>Chaos</i> , 2008, 18, 041108.	2.5	1
45	Capillary Origami: Spontaneous Wrapping of a Droplet with an Elastic Sheet. <i>Physical Review Letters</i> , 2007, 98, 156103.	7.8	388
46	Elastocapillary coalescence: Aggregation and fragmentation with a maximal size. <i>Physical Review E</i> , 2007, 76, 060102.	2.1	34
47	Geometrically driven wrinkling observed in free plastic sheets and leaves. <i>Physical Review E</i> , 2007, 75, 046211.	2.1	81
48	Piercing a liquid surface with an elastic rod: Buckling under capillary forces. <i>Journal of the Mechanics and Physics of Solids</i> , 2007, 55, 1212-1235.	4.8	58
49	3D aggregation of wet fibers. <i>Europhysics Letters</i> , 2007, 77, 44005.	2.0	87
50	Cracks in Thin Sheets: When Geometry Rules the Fracture Path. , 2006, , 119-120.		0
51	Cracks in Thin Sheets: When Geometry Rules the Fracture Path. <i>Physical Review Letters</i> , 2005, 95, 025502.	7.8	41
52	Comment on "Crack Street: The Cycloidal Wake of a Cylinder Tearing through a Thin Sheet". <i>Physical Review Letters</i> , 2005, 94, 129601; author reply 129602.	7.8	5
53	Dynamics of developable cones under shear. <i>Physical Review E</i> , 2004, 70, 026607.	2.1	13
54	Elastocapillary coalescence in wet hair. <i>Nature</i> , 2004, 432, 690-690.	27.8	374

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55	Uniqueness of solutions for constrained Elastica. <i>Physica D: Nonlinear Phenomena</i> , 2004, 192, 161-186.	2.8	31
56	Oscillatory fracture paths in thin elastic sheets. <i>Comptes Rendus - Mecanique</i> , 2003, 331, 811-816.	2.1	24
57	Effect of multiplicative noise on parametric instabilities. <i>Physica D: Nonlinear Phenomena</i> , 2003, 174, 84-99.	2.8	24
58	Theory of edges of leaves. <i>Europhysics Letters</i> , 2003, 62, 498-504.	2.0	57
59	An analog experiment of the parametric instability. <i>American Journal of Physics</i> , 2002, 70, 744-749.	0.7	18
60	Postbuckling of bilaterally constrained rectangular thin plates. <i>Journal of the Mechanics and Physics of Solids</i> , 2002, 50, 2379-2401.	4.8	57
61	Buckling cascades in free sheets. <i>Nature</i> , 2002, 419, 579-579.	27.8	208
62	Secondary buckling patterns of a thin plate under in-plane compression. <i>European Physical Journal B</i> , 2002, 27, 7-10.	1.5	35
63	Noise Induced Bistability of Parametric Surface Waves. <i>Physical Review Letters</i> , 2001, 88, 024502.	7.8	27
64	Buckling cascade of thin plates: Forms, constraints and similarity. <i>Europhysics Letters</i> , 1999, 46, 602-608.	2.0	42
65	Time-reversal in an ultrasonic waveguide. <i>Applied Physics Letters</i> , 1997, 70, 1811-1813.	3.3	84
66	Density variations in a one-dimensional granular system. <i>Physics of Fluids</i> , 1996, 8, 3218-3228.	4.0	27
67	A Unifying View of Thin-Plate Fracture. <i>Physics Magazine</i> , 0, 14, .	0.1	0