

Benoit Roman

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3100775/publications.pdf>

Version: 2024-02-01

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	Capillary Origami: Spontaneous Wrapping of a Droplet with an Elastic Sheet. <i>Physical Review Letters</i> , 2007, 98, 156103.	7.8	388
2	Elastocapillary coalescence in wet hair. <i>Nature</i> , 2004, 432, 690-690.	27.8	374
3	Elasto-capillarity: deforming an elastic structure with a liquid droplet. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 493101.	1.8	266
4	Bio-inspired pneumatic shape-morphing elastomers. <i>Nature Materials</i> , 2019, 18, 24-28.	27.5	226
5	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
6	Buckling cascades in free sheets. <i>Nature</i> , 2002, 419, 579-579.	27.8	208
7	Elastocapillarity: When Surface Tension Deforms Elastic Solids. <i>Annual Review of Fluid Mechanics</i> , 2018, 50, 629-659.	25.0	198
8	Wrinkling Hierarchy in Constrained Thin Sheets from Suspended Graphene to Curtains. <i>Physical Review Letters</i> , 2011, 106, 224301.	7.8	171
9	3D aggregation of wet fibers. <i>Europhysics Letters</i> , 2007, 77, 44005.	2.0	87
10	Time-reversal in an ultrasonic waveguide. <i>Applied Physics Letters</i> , 1997, 70, 1811-1813.	3.3	84
11	Geometrically driven wrinkling observed in free plastic sheets and leaves. <i>Physical Review E</i> , 2007, 75, 046211.	2.1	81
12	Self-Replicating Cracks: A Collaborative Fracture Mode in Thin Films. <i>Physical Review Letters</i> , 2014, 113, 085502.	7.8	68
13	Wrapping an Adhesive Sphere with an Elastic Sheet. <i>Physical Review Letters</i> , 2011, 106, 174301.	7.8	67
14	Capillary origami controlled by an electric field. <i>Soft Matter</i> , 2010, 6, 4491.	2.7	65
15	Tearing as a test for mechanical characterization of thin adhesive films. <i>Nature Materials</i> , 2008, 7, 386-390.	27.5	64
16	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
17	Postbuckling of bilaterally constrained rectangular thin plates. <i>Journal of the Mechanics and Physics of Solids</i> , 2002, 50, 2379-2401.	4.8	57
18	Theory of edges of leaves. <i>Europhysics Letters</i> , 2003, 62, 498-504.	2.0	57

#	ARTICLE	IF	CITATIONS
19	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
20	Capillary buckling of a floating annulus. <i>Soft Matter</i> , 2013, 9, 10985.	2.7	47
21	Stamping and Wrinkling of Elastic Plates. <i>Physical Review Letters</i> , 2012, 109, 054302.	7.8	46
22	Capillarity induced folding of elastic sheets. <i>European Physical Journal: Special Topics</i> , 2009, 166, 67-71.	2.6	43
23	Buckling cascade of thin plates: Forms, constraints and similarity. <i>Europhysics Letters</i> , 1999, 46, 602-608.	2.0	42
24	Cracks in Thin Sheets: When Geometry Rules the Fracture Path. <i>Physical Review Letters</i> , 2005, 95, 025502.	7.8	41
25	Localization through Surface Folding in Solid Foams under Compression. <i>Physical Review Letters</i> , 2009, 103, 045501.	7.8	38
26	Secondary buckling patterns of a thin plate under in-plane compression. <i>European Physical Journal B</i> , 2002, 27, 7-10.	1.5	35
27	Elastocapillary coalescence: Aggregation and fragmentation with a maximal size. <i>Physical Review E</i> , 2007, 76, 060102.	2.1	34
28	Piercing an interface with a brush: Collaborative stiffening. <i>Europhysics Letters</i> , 2010, 90, 44006.	2.0	34
29	Fracture path in brittle thin sheets: a unifying review on tearing. <i>International Journal of Fracture</i> , 2013, 182, 209-237.	2.2	34
30	Computational inverse design of surface-based inflatables. <i>ACM Transactions on Graphics</i> , 2021, 40, 1-14.	7.2	34
31	Effect of friction on the peeling test at zero-degrees. <i>Soft Matter</i> , 2015, 11, 9281-9290.	2.7	33
32	Uniqueness of solutions for constrained Elastica. <i>Physica D: Nonlinear Phenomena</i> , 2004, 192, 161-186.	2.8	31
33	Density variations in a one-dimensional granular system. <i>Physics of Fluids</i> , 1996, 8, 3218-3228.	4.0	27
34	Noise Induced Bistability of Parametric Surface Waves. <i>Physical Review Letters</i> , 2001, 88, 024502.	7.8	27
35	Programming stiff inflatable shells from planar patterned fabrics. <i>Soft Matter</i> , 2020, 16, 7898-7903.	2.7	27
36	Stretch-induced wrinkles in reinforced membranes: From out-of-plane to in-plane structures. <i>Europhysics Letters</i> , 2011, 96, 64001.	2.0	25

#	ARTICLE	IF	CITATIONS
37	Buckling of elastomer sheets under non-uniform electro-actuation. <i>Soft Matter</i> , 2017, 13, 2876-2885.	2.7	25
38	Oscillatory fracture paths in thin elastic sheets. <i>Comptes Rendus - Mecanique</i> , 2003, 331, 811-816.	2.1	24
39	Effect of multiplicative noise on parametric instabilities. <i>Physica D: Nonlinear Phenomena</i> , 2003, 174, 84-99.	2.8	24
40	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
41	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
42	An analog experiment of the parametric instability. <i>American Journal of Physics</i> , 2002, 70, 744-749.	0.7	18
43	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
44	Spiral tearing of thin films. <i>Soft Matter</i> , 2013, 9, 8282.	2.7	16
45	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
46	Random blisters on stickers: metrology through defects. <i>Soft Matter</i> , 2010, 6, 5720.	2.7	14
47	Dynamics of developable cones under shear. <i>Physical Review E</i> , 2004, 70, 026607.	2.1	13
48	Stress Defocusing in Anisotropic Compaction of Thin Sheets. <i>Physical Review Letters</i> , 2012, 108, 074301.	7.8	13
49	Intertwined Multiple Spiral Fracture in Perforated Sheets. <i>Physical Review Letters</i> , 2016, 116, 165501.	7.8	12
50	Unzip instabilities: Straight to oscillatory transitions in the cutting of thin polymer sheets. <i>Europhysics Letters</i> , 2008, 82, 64002.	2.0	10
51	Geometry and mechanics of inextensible curvilinear balloons. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 143, 104068.	4.8	8
52	Shape Programming by Modulating Actuation over Hierarchical Length Scales. <i>Advanced Materials</i> , 2020, 32, e2004515.	21.0	7
53	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
54	Elastocapillary adhesion of a soft cap on a rigid sphere. <i>Soft Matter</i> , 2020, 16, 1961-1966.	2.7	5

#	ARTICLE	IF	CITATIONS
55	Predicting tearing paths in thin sheets. <i>Physical Review E</i> , 2019, 100, 023002.	2.1	3
56	Reversibility of crumpling on compressed thin sheets. <i>European Physical Journal E</i> , 2014, 37, 28.	1.6	2
57	Nature of Crack Path Instabilities in Thin Sheets Cut by Blunt Objects. <i>Physical Review Letters</i> , 2020, 124, 174101.	7.8	2
58	Collaborative Oscillatory Fracture. <i>Physical Review Letters</i> , 2020, 124, 174102.	7.8	2
59	Stretch-Induced Bending of Soft Ribbed Strips. <i>Physical Review Letters</i> , 2021, 127, 168002.	7.8	2
60	Cracking sheets: Oscillatory fracture paths in thin elastic sheets. <i>Chaos</i> , 2008, 18, 041108.	2.5	1
61	Guided tearing: The ruler test. <i>Physical Review Materials</i> , 2021, 5, .	2.4	1
62	Morphogenesis through elastic phase separation in a pneumatic surface. <i>Comptes Rendus - Mecanique</i> , 2020, 348, 649-657.	0.7	1
63	Mechanics and Energetics of Electromembranes. <i>Soft Robotics</i> , 2020, 7, 675-687.	8.0	0
64	Computational inverse design of surface-based inflatables. <i>ACM Transactions on Graphics</i> , 2021, 40, 1-14.	7.2	0
65	A Unifying View of Thin-Plate Fracture. <i>Physics Magazine</i> , 0, 14, .	0.1	0
66	Rupture et délamination de films minces. , 2016, , 26-29.	0.1	0
67	Cracks in Thin Sheets: When Geometry Rules the Fracture Path. , 2006, , 119-120.		0