

Eran Sharon

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

3,961
citations

236925

25
h-index

197818

49
g-index

51
all docs

51
docs citations

51
times ranked

3464
citing authors

#	ARTICLE	IF	CITATIONS
1	Geometry and Mechanics in the Opening of Chiral Seed Pods. <i>Science</i> , 2011, 333, 1726-1730.	12.6	606
2	Shaping of Elastic Sheets by Prescription of Non-Euclidean Metrics. <i>Science</i> , 2007, 315, 1116-1120.	12.6	524
3	Three-dimensional shape transformations of hydrogel sheets induced by small-scale modulation of internal stresses. <i>Nature Communications</i> , 2013, 4, 1586.	12.8	518
4	Local Crack Branching as a Mechanism for Instability in Dynamic Fracture. <i>Physical Review Letters</i> , 1995, 74, 5096-5099.	7.8	282
5	Confirming the continuum theory of dynamic brittle fracture for fast cracks. <i>Nature</i> , 1999, 397, 333-335.	27.8	238
6	Energy Dissipation in Dynamic Fracture. <i>Physical Review Letters</i> , 1996, 76, 2117-2120.	7.8	233
7	Buckling cascades in free sheets. <i>Nature</i> , 2002, 419, 579-579.	27.8	208
8	The mechanics of non-Euclidean plates. <i>Soft Matter</i> , 2010, 6, 5693.	2.7	148
9	Geometry of Thin Nematic Elastomer Sheets. <i>Physical Review Letters</i> , 2014, 113, 257801.	7.8	104
10	Propagating solitary waves along a rapidly moving crack front. <i>Nature</i> , 2001, 410, 68-71.	27.8	97
11	Leaves, Flowers and Garbage Bags: Making Waves. <i>American Scientist</i> , 2004, 92, 254.	0.1	92
12	Geometrically driven wrinkling observed in free plastic sheets and leaves. <i>Physical Review E</i> , 2007, 75, 046211.	2.1	81
13	Shape selection in chiral ribbons: from seed pods to supramolecular assemblies. <i>Soft Matter</i> , 2014, 10, 2733.	2.7	81
14	Experimental observation of steady inertial wave turbulence in deep rotating flows. <i>Nature Physics</i> , 2014, 10, 510-514.	16.7	75
15	Buckling transition and boundary layer in non-Euclidean plates. <i>Physical Review E</i> , 2009, 80, 016602.	2.1	74
16	The metric description of elasticity in residually stressed soft materials. <i>Soft Matter</i> , 2013, 9, 8187.	2.7	51
17	Experimental Study of Shape Transitions and Energy Scaling in Thin Non-Euclidean Plates. <i>Physical Review Letters</i> , 2011, 106, 118303.	7.8	40
18	Experimental quantification of inverse energy cascade in deep rotating turbulence. <i>Physics of Fluids</i> , 2013, 25, .	4.0	38

#	ARTICLE	IF	CITATIONS
19	Shape transformations of soft matter governed by bi-axial stresses. <i>Soft Matter</i> , 2015, 11, 4600-4605.	2.7	37
20	Geometry and mechanics of two-dimensional defects in amorphous materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 10873-10878.	7.1	35
21	Universal features of the microbranching instability in dynamic fracture. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998, 78, 243-251.	0.6	34
22	Coarsening of Fractal Viscous Fingering Patterns. <i>Physical Review Letters</i> , 2003, 91, 205504.	7.8	32
23	Elastic interactions between two-dimensional geometric defects. <i>Physical Review E</i> , 2015, 92, 062403.	2.1	29
24	Twist renormalization in molecular crystals driven by geometric frustration. <i>Soft Matter</i> , 2019, 15, 116-126.	2.7	27
25	The rheology of a growing leaf: stress-induced changes in the mechanical properties of leaves. <i>Journal of Experimental Botany</i> , 2016, 67, 5509-5515.	4.8	26
26	Mechanical Stress Induces Remodeling of Vascular Networks in Growing Leaves. <i>PLoS Computational Biology</i> , 2016, 12, e1004819.	3.2	25
27	Shape and fluctuations of frustrated self-assembled nano ribbons. <i>Nature Communications</i> , 2019, 10, 3565.	12.8	24
28	Hyperbolic non-Euclidean elastic strips and almost minimal surfaces. <i>Physical Review E</i> , 2011, 83, 046602.	2.1	22
29	Elasticity and Fluctuations of Frustrated Nanoribbons. <i>Physical Review Letters</i> , 2016, 116, 258105.	7.8	20
30	Internal Stresses Lead to Net Forces and Torques on Extended Elastic Bodies. <i>Physical Review Letters</i> , 2016, 117, 124101.	7.8	19
31	Self-Oscillating Membranes: Chemomechanical Sheets Show Autonomous Periodic Shape Transformation. <i>Physical Review Letters</i> , 2020, 125, 178001.	7.8	18
32	Anomalously Soft Non-Euclidean Springs. <i>Physical Review Letters</i> , 2016, 116, 035502.	7.8	17
33	Pattern selection and multiscale behaviour in metrically discontinuous non-Euclidean plates. <i>Nonlinearity</i> , 2013, 26, 3247-3258.	1.4	16
34	Quantitative phenotyping of leaf margins in three dimensions, demonstrated on KNOTTED and TCP transgenics in <i>Arabidopsis</i> . <i>Journal of Experimental Botany</i> , 2014, 65, 2071-2077.	4.8	13
35	Experimental quantification of nonlinear time scales in inertial wave rotating turbulence. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	13
36	Swell Approaches for Changing Polymer Shapes. <i>Science</i> , 2012, 335, 1179-1180.	12.6	10

#	ARTICLE	IF	CITATIONS
37	The Mechanics of Leaf Growth on Large Scales. , 2018, , 109-126.		7
38	Shape and fluctuations of positively curved ribbons. Physical Review E, 2018, 98, 022502.	2.1	6
39	Euclidean Frustrated Ribbons. Physical Review X, 2021, 11, .	8.9	5
40	The multiscale nature of leaf growth fields. Communications Physics, 2021, 4, .	5.3	5
41	Buckling-Fracture Transition and the Geometrical Charge of a Crack. Physical Review Letters, 2021, 127, 105501.	7.8	5
42	Wood Warping Composite by 3D Printing. Polymers, 2022, 14, 733.	4.5	5
43	Frustrated shapes. Nature Materials, 2016, 15, 707-709.	27.5	4
44	Shaping by Internal Material Frustration: Shifting to Architectural Scale. Advanced Science, 2021, 8, e2102171.	11.2	4
45	Packing of stiff rods on ellipsoids: Geometry. Physical Review E, 2021, 103, 013001.	2.1	3
46	Hierarchy of geometrical frustration in elastic ribbons: Shape-transitions and energy scaling obtained from a general asymptotic theory. Journal of the Mechanics and Physics of Solids, 2021, 156, 104579.	4.8	3
47	MicroMotility: State of the art, recent accomplishments and perspectives on the mathematical modeling of bio-motility at microscopic scales. Mathematics in Engineering, 2020, 2, 230-252.	0.9	3
48	Growth and nonlinear response of driven water bells. Physical Review Fluids, 2017, 2, .	2.5	2
49	Measurements of inertial wave packets propagating within steady rotating turbulence. Europhysics Letters, 2019, 125, 24003.	2.0	1
50	Giant fluctuations in strain rate as part of normal leaf growth. European Physical Journal Plus, 2020, 135, 1.	2.6	0