

Basile Audoly

List of Publications by Year in descending order

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Version: 2024-02-01

66
papers

3,328
citations

186265

28
h-index

149698

56
g-index

69
all docs

69
docs citations

69
times ranked

2613
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Symmetry and Asymmetry in the Fluid Mechanical Sewing Machine. <i>Symmetry</i> , 2022, 14, 772. | 2.2 | 3 |
| 2 | Effective continuum models for the buckling of non-periodic architected sheets that display quasi-mechanism behaviors. <i>Journal of the Mechanics and Physics of Solids</i> , 2022, 166, 104934. | 4.8 | 6 |
| 3 | Asymptotic derivation of high-order rod models from non-linear 3D elasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 148, 104264. | 4.8 | 12 |
| 4 | Bending Response of a Book with Internal Friction. <i>Physical Review Letters</i> , 2021, 126, 218004. | 7.8 | 16 |
| 5 | A one-dimensional model for elastic ribbons: A little stretching makes a big difference. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 153, 104457. | 4.8 | 21 |
| 6 | A convenient formulation of Sadowsky's model for elastic ribbons. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, . | 2.1 | 0 |
| 7 | Asymptotically exact strain-gradient models for nonlinear slender elastic structures: A systematic derivation method. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 136, 103730. | 4.8 | 13 |
| 8 | Localization in spherical shell buckling. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 136, 103720. | 4.8 | 35 |
| 9 | A discrete, geometrically exact method for simulating nonlinear, elastic and inelastic beams. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 361, 112741. | 6.6 | 24 |
| 10 | A one-dimensional model for elasto-capillary necking. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, . | 2.1 | 12 |
| 11 | A nonlinear beam model of photomobile structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 9762-9770. | 7.1 | 60 |
| 12 | One-dimensional modeling of necking in rate-dependent materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 123, 149-171. | 4.8 | 25 |
| 13 | Shape-morphing architected sheets with non-periodic cut patterns. <i>Soft Matter</i> , 2018, 14, 9744-9749. | 2.7 | 72 |
| 14 | Cracks in Tension-Field Elastic Sheets. <i>Physical Review Letters</i> , 2018, 121, 144301. | 7.8 | 7 |
| 15 | Buckling of a spinning elastic cylinder: linear, weakly nonlinear and post-buckling analyses. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2018, 474, 20180242. | 2.1 | 6 |
| 16 | Selection of hexagonal buckling patterns by the elastic Rayleigh-Taylor instability. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 121, 234-257. | 4.8 | 27 |
| 17 | Elastic rods with incompatible strain: Macroscopic versus microscopic buckling. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 103, 40-71. | 4.8 | 15 |
| 18 | Buckling of an Elastic Ridge: Competition between Wrinkles and Creases. <i>Physical Review Letters</i> , 2017, 118, 165501. | 7.8 | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | Shape Transformations of Epithelial Shells. <i>Biophysical Journal</i> , 2016, 110, 1670-1678. | 0.5 | 55 |
| 20 | The viscous curtain: General formulation and finite-element solution for the stability of flowing viscous sheets. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 96, 291-311. | 4.8 | 3 |
| 21 | The surprising dynamics of a chain on a pulley: lift off and snapping. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20160187. | 2.1 | 7 |
| 22 | Equilibrium physics breakdown reveals the active nature of red blood cell flickering. <i>Nature Physics</i> , 2016, 12, 513-519. | 16.7 | 231 |
| 23 | Analysis of necking based on a one-dimensional model. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 97, 68-91. | 4.8 | 53 |
| 24 | Buckling of Naturally Curved Elastic Strips: The Ribbon Model Makes a Difference. , 2016, , 293-320. | | 2 |
| 25 | Wunderlich, Meet Kirchhoff A General and Unified Description of Elastic Ribbons and Thin Rods. , 2016, , 49-66. | | 2 |
| 26 | Wunderlich, Meet Kirchhoff A General and Unified Description of Elastic Ribbons and Thin Rods. <i>Journal of Elasticity</i> , 2015, 119, 49-66. | 1.9 | 66 |
| 27 | From Discrete to Continuum Models of Three-Dimensional Deformations in Epithelial Sheets. <i>Biophysical Journal</i> , 2015, 109, 154-163. | 0.5 | 84 |
| 28 | Liquid Ropes: A Geometrical Model for Thin Viscous Jet Instabilities. <i>Physical Review Letters</i> , 2015, 114, 174501. | 7.8 | 71 |
| 29 | Buckling of Naturally Curved Elastic Strips: The Ribbon Model Makes a Difference. <i>Journal of Elasticity</i> , 2015, 119, 293-320. | 1.9 | 26 |
| 30 | Untangling the Mechanics and Topology in the Frictional Response of Long Overhand Elastic Knots. <i>Physical Review Letters</i> , 2015, 115, 118302. | 7.8 | 46 |
| 31 | CHAPTER 1. Introduction to the Elasticity of Rods. <i>RSC Soft Matter</i> , 2015, , 1-24. | 0.4 | 1 |
| 32 | An introduction to the mechanics of the lasso. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014, 470, 20140512. | 2.1 | 5 |
| 33 | Furrow Constriction in Animal Cell Cytokinesis. <i>Biophysical Journal</i> , 2014, 106, 114-123. | 0.5 | 163 |
| 34 | A non-linear rod model for folded elastic strips. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 62, 57-80. | 4.8 | 57 |
| 35 | Solid Drops: Large Capillary Deformations of Immersed Elastic Rods. <i>Physical Review Letters</i> , 2013, 111, 114301. | 7.8 | 71 |
| 36 | Influence of Stratum Corneum on the entire skin mechanical properties, as predicted by a computational skin model. <i>Skin Research and Technology</i> , 2013, 19, 42-46. | 1.6 | 27 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | A discrete geometric approach for simulating the dynamics of thin viscous threads. Journal of Computational Physics, 2013, 253, 18-49. | 3.8 | 61 |
| 38 | Capillary buckling of a thin film adhering to a sphere. Journal of the Mechanics and Physics of Solids, 2013, 61, 450-471. | 4.8 | 14 |
| 39 | Shape of an elastic loop strongly bent by surface tension: Experiments and comparison with theory. Physical Review E, 2012, 86, 026119. | 2.1 | 16 |
| 40 | Discrete viscous sheets. ACM Transactions on Graphics, 2012, 31, 1-7. | 7.2 | 64 |
| 41 | Self-Similar Curling of a Naturally Curved Elastica. Physical Review Letters, 2012, 108, 174302. | 7.8 | 14 |
| 42 | Linear and nonlinear stability of floating viscous sheets. Journal of Fluid Mechanics, 2011, 683, 112-148. | 3.4 | 8 |
| 43 | Instant fabrication and selection of folded structures using drop impact. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10400-10404. | 7.1 | 74 |
| 44 | Discrete viscous threads. ACM Transactions on Graphics, 2010, 29, 1-10. | 7.2 | 201 |
| 45 | Matched asymptotic expansions for twisted elastic knots: A self-contact problem with non-trivial contact topology. Journal of the Mechanics and Physics of Solids, 2009, 57, 1623-1656. | 4.8 | 25 |
| 46 | Elasticity and Electrostatics of Plectonemic DNA. Biophysical Journal, 2009, 96, 3716-3723. | 0.5 | 36 |
| 47 | Buckling of a stiff film bound to a compliant substrate—Part III. Journal of the Mechanics and Physics of Solids, 2008, 56, 2444-2458. | 4.8 | 76 |
| 48 | Buckling of a stiff film bound to a compliant substrate—Part II. Journal of the Mechanics and Physics of Solids, 2008, 56, 2422-2443. | 4.8 | 81 |
| 49 | Buckling of a stiff film bound to a compliant substrate—Part I. Journal of the Mechanics and Physics of Solids, 2008, 56, 2401-2421. | 4.8 | 202 |
| 50 | Discrete elastic rods. ACM Transactions on Graphics, 2008, 27, 1-12. | 7.2 | 393 |
| 51 | Mechanical Response of Plectonemic DNA: An Analytical Solution. Macromolecules, 2008, 41, 4479-4483. | 4.8 | 44 |
| 52 | Cracking sheets: Oscillatory fracture paths in thin elastic sheets. Chaos, 2008, 18, 041108. | 2.5 | 1 |
| 53 | Discrete elastic rods. , 2008, , . | | 11 |
| 54 | Elastic Knots. Physical Review Letters, 2007, 99, 164301. | 7.8 | 46 |

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|----|--|-----|-----------|
| 55 | Analytical results for the plectonemic response of supercoiled DNA. Journal of Computer-Aided Materials Design, 2007, 14, 95-101. | 0.7 | 2 |
| 56 | Super-helices for predicting the dynamics of natural hair. , 2006, , . | | 54 |
| 57 | Super-helices for predicting the dynamics of natural hair. ACM Transactions on Graphics, 2006, 25, 1180-1187. | 7.2 | 189 |
| 58 | Fragmentation of Rods by Cascading Cracks: Why Spaghetti Does Not Break in Half. Physical Review Letters, 2005, 95, 095505. | 7.8 | 68 |
| 59 | Rupture des tiges en flexion. Mecanique Et Industries, 2005, 6, 365-368. | 0.2 | 1 |
| 60 | The self-similar rippling of leaf edges and torn plastic sheets. Europhysics News, 2004, 35, 145-148. | 0.3 | 2 |
| 61 | The elastic torus: anomalous stiffness of shells with mixed type. Comptes Rendus - Mecanique, 2002, 330, 425-432. | 2.1 | 7 |
| 62 | “Ruban À godets”™: an elastic model for ripples in plant leaves. Comptes Rendus - Mecanique, 2002, 330, 831-836. | 2.1 | 16 |
| 63 | Mode-dependent toughness and the delamination of compressed thin films. Journal of the Mechanics and Physics of Solids, 2000, 48, 2315-2332. | 4.8 | 32 |
| 64 | Asymptotic study of the interfacial crack with friction. Journal of the Mechanics and Physics of Solids, 2000, 48, 1851-1864. | 4.8 | 30 |
| 65 | Courbes rigidifiant les surfaces. Comptes Rendus Mathematique, 1999, 328, 313-316. | 0.5 | 5 |
| 66 | Stability of Straight Delamination Blisters. Physical Review Letters, 1999, 83, 4124-4127. | 7.8 | 195 |