

# Jean-Marc Allain

## List of Publications by Year in descending order

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Version: 2024-02-01

40  
papers

1,145  
citations

361296

20  
h-index

395590

33  
g-index

41  
all docs

41  
docs citations

41  
times ranked

1488  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polarization-Resolved Second-Harmonic Generation in Tendon upon Mechanical Stretching. <i>Biophysical Journal</i> , 2012, 102, 2220-2229.	0.2	130
2	Fission of a Multiphase Membrane Tube. <i>Physical Review Letters</i> , 2004, 93, 158104.	2.9	94
3	Ex vivo multiscale quantitation of skin biomechanics in wild-type and genetically-modified mice using multiphoton microscopy. <i>Scientific Reports</i> , 2015, 5, 17635.	1.6	80
4	Monitoring micrometer-scale collagen organization in rat-tail tendon upon mechanical strain using second harmonic microscopy. <i>Journal of Biomechanics</i> , 2011, 44, 2047-2052.	0.9	60
5	Muscle as a Metamaterial Operating Near a Critical Point. <i>Physical Review Letters</i> , 2013, 110, 248103.	2.9	58
6	Study of dural suture watertightness: an in vitro comparison of different sealants. <i>Acta Neurochirurgica</i> , 2011, 153, 2465-2472.	0.9	52
7	Budding and fission of a multiphase vesicle. <i>European Physical Journal E</i> , 2006, 20, 409-420.	0.7	49
8	A novel microstructural interpretation for the biomechanics of mouse skin derived from multiscale characterization. <i>Acta Biomaterialia</i> , 2017, 50, 302-311.	4.1	49
9	Histological and biomechanical study of dura mater applied to the technique of dura splitting decompression in Chiari type I malformation. <i>Neurosurgical Review</i> , 2010, 33, 287-295.	1.2	43
10	How aging impacts skin biomechanics: a multiscale study in mice. <i>Scientific Reports</i> , 2017, 7, 13750.	1.6	43
11	Recent advances in studying single bacteria and biofilm mechanics. <i>Advances in Colloid and Interface Science</i> , 2017, 247, 573-588.	7.0	42
12	Measuring local and global vibration modes in model plants. <i>Comptes Rendus - Mecanique</i> , 2014, 342, 1-7.	2.1	40
13	Simultaneous microstructural and mechanical characterization of human corneas at increasing pressure. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 60, 93-105.	1.5	40
14	Mechanics of collective unfolding. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 76, 237-259.	2.3	35
15	Biphasic vesicle: instability induced by adsorption of proteins. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 337, 531-545.	1.2	31
16	<i>Bacillus subtilis</i> Bacteria Generate an Internal Mechanical Force within a Biofilm. <i>Biophysical Journal</i> , 2015, 109, 2195-2202.	0.2	31
17	Monitoring dynamic collagen reorganization during skin stretching with fast polarization-resolved second harmonic generation imaging. <i>Journal of Biophotonics</i> , 2019, 12, e201800336.	1.1	31
18	Development of human corneal epithelium on organized fibrillated transparent collagen matrices synthesized at high concentration. <i>Acta Biomaterialia</i> , 2015, 22, 50-58.	4.1	28

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19	Increased intra-cortical porosity reduces bone stiffness and strength in pediatric patients with osteogenesis imperfecta. <i>Bone</i> , 2014, 69, 61-67.	1.4	25
20	Cellular transduction of mechanical oscillations in plants by the plasma-membrane mechanosensitive channel MSL10. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	22
21	Mechanical Behavior of a <i>Bacillus subtilis</i> Pellicle. <i>Journal of Physical Chemistry B</i> , 2016, 120, 6080-6088.	1.2	20
22	Affine kinematics in planar fibrous connective tissues: an experimental investigation. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 1459-1473.	1.4	18
23	Calcium and plasma membrane force-gated ion channels behind development. <i>Current Opinion in Plant Biology</i> , 2020, 53, 57-64.	3.5	18
24	Experimental multiscale measurements for the mechanical identification of a cortical bone by digital image correlation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 63, 125-133.	1.5	14
25	MULTISCALE IDENTIFICATION OF THE RANDOM ELASTICITY FIELD AT MESOSCALE OF A HETEROGENEOUS MICROSTRUCTURE USING MULTISCALE EXPERIMENTAL OBSERVATIONS. <i>International Journal for Multiscale Computational Engineering</i> , 2015, 13, 281-295.	0.8	14
26	Stokes Instability in Inhomogeneous Membranes: Application to Lipoprotein Suction of Cholesterol-Enriched Domains. <i>Physical Review Letters</i> , 2007, 99, 044503.	2.9	13
27	Receptor Displacement in the Cell Membrane by Hydrodynamic Force Amplification through Nanoparticles. <i>Biophysical Journal</i> , 2013, 105, 116-126.	0.2	13
28	Root Hair Sizer: an algorithm for high throughput recovery of different root hair and root developmental parameters. <i>Plant Methods</i> , 2019, 15, 104.	1.9	12
29	Periodic lipidic membrane tubes. <i>Europhysics Letters</i> , 2007, 77, 38006.	0.7	11
30	A New Method Combining Finite Element Analysis and Digital Image Correlation to Assess Macroscopic Mechanical Properties of Dentin. <i>Materials</i> , 2015, 8, 535-550.	1.3	11
31	Microstructural deformation observed by Mueller polarimetry during traction assay on myocardium samples. <i>Scientific Reports</i> , 2020, 10, 20531.	1.6	4
32	Multiscale mechanical model based on patient-specific geometry: Application to early keratoconus development. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 129, 105121.	1.5	4
33	Multiscale Characterisation of Skin Mechanics Through In Situ Imaging. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , 2019, , 235-263.	0.7	3
34	Investigating the Cell Membrane via Single Particle Tracking, Bayesian Inference and Hydrodynamic Force Application. <i>Biophysical Journal</i> , 2014, 106, 633a.	0.2	2
35	Improving the experimental protocol for a more accurate identification of a given mechanical behaviour in a single assay: Application to skin. <i>Strain</i> , 2017, 53, e12236.	1.4	2
36	Combination of Traction Assays and Multiphoton Imaging to Quantify Skin Biomechanics. <i>Methods in Molecular Biology</i> , 2019, 1944, 145-155.	0.4	2

#	ARTICLE	IF	CITATIONS
37	La m�canique des biofilms � la surface de liquides. , 2018, , 20-24.	0.1	1
38	Single Molecule Tracking Under an External Force Field Created by Amplifying Hydrodynamic Drag with a Nano-Parachute. Biophysical Journal, 2011, 100, 251a.	0.2	0
39	Evolution of the Skin Microstructural Organization During a Mechanical Assay. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 45-52.	0.3	0
40	A Numerical Study of a Biaxial Sollicitation to Set-Up the Displacement Field Measurement of Ex Vivo Mouse Skin. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 53-60.	0.3	0