

# Alexandre J Kabla

## List of Publications by Year in descending order

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Version: 2024-02-01

50  
papers

4,698  
citations

126708

33  
h-index

189595

50  
g-index

62  
all docs

62  
docs citations

62  
times ranked

4791  
citing authors

#	ARTICLE	IF	CITATIONS
1	Emerging modes of collective cell migration induced by geometrical constraints. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12974-12979.	3.3	389
2	Strain-Induced Alignment in Collagen Gels. PLoS ONE, 2009, 4, e5902.	1.1	323
3	Characterizing the mechanics of cultured cell monolayers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16449-16454.	3.3	295
4	Tissue tectonics: morphogenetic strain rates, cell shape change and intercalation. Nature Methods, 2009, 6, 458-464.	9.0	241
5	Guidance of collective cell migration by substrate geometry. Integrative Biology (United Kingdom), 2013, 5, 1026.	0.6	241
6	Cell shape changes indicate a role for extrinsic tensile forces in Drosophila germ-band extension. Nature Cell Biology, 2009, 11, 859-864.	4.6	227
7	Collective cell migration: leadership, invasion and segregation. Journal of the Royal Society Interface, 2012, 9, 3268-3278.	1.5	218
8	Elasticity of Floppy and Stiff Random Networks. Physical Review Letters, 2008, 101, 215501.	2.9	182
9	Fractional viscoelastic models for power-law materials. Soft Matter, 2020, 16, 6002-6020.	1.2	178
10	Emergence of homeostatic epithelial packing and stress dissipation through divisions oriented along the long cell axis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5726-5731.	3.3	176
11	Auxetic nuclei in embryonic stem cells exiting pluripotency. Nature Materials, 2014, 13, 638-644.	13.3	145
12	Local Stress Relaxation and Shear Banding in a Dry Foam under Shear. Physical Review Letters, 2003, 90, 258303.	2.9	136
13	Stress relaxation in epithelial monolayers is controlled by the actomyosin cortex. Nature Physics, 2019, 15, 839-847.	6.5	126
14	In vivo collective cell migration requires an LPAR2-dependent increase in tissue fluidity. Journal of Cell Biology, 2014, 206, 113-127.	2.3	125
15	Gap geometry dictates epithelial closure efficiency. Nature Communications, 2015, 6, 7683.	5.8	118
16	Myosin II Controls Junction Fluctuations to Guide Epithelial Tissue Ordering. Developmental Cell, 2017, 43, 480-492.e6.	3.1	109
17	The role of single-cell mechanical behaviour and polarity in driving collective cell migration. Nature Physics, 2020, 16, 802-809.	6.5	109
18	A one-piece 3D printed flexure translation stage for open-source microscopy. Review of Scientific Instruments, 2016, 87, 025104.	0.6	108

#	ARTICLE	IF	CITATIONS
19	Leader Cells Define Directionality of Trunk, but Not Cranial, Neural Crest Cell Migration. <i>Cell Reports</i> , 2016, 15, 2076-2088.	2.9	100
20	A microfluidic chip and its use in characterising the particle-scale behaviour of microbial-induced calcium carbonate precipitation (MICP). <i>Geotechnique</i> , 2019, 69, 1086-1094.	2.2	90
21	Nonlinear mechanics of soft fibrous networks. <i>Journal of the Royal Society Interface</i> , 2007, 4, 99-106.	1.5	87
22	Microscale Visualization of Microbial-Induced Calcium Carbonate Precipitation Processes. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2019, 145, .	1.5	85
23	Nonautonomous contact guidance signaling during collective cell migration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 1807-1812.	3.3	70
24	Mapping forces in a 3D elastic assembly of grains. <i>Journal of the Mechanics and Physics of Solids</i> , 2012, 60, 55-66.	2.3	65
25	Actomyosin controls planarity and folding of epithelia in response to compression. <i>Nature Materials</i> , 2020, 19, 109-117.	13.3	60
26	Pressure sensing through Piezo channels controls whether cells migrate with blebs or pseudopods. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2506-2512.	3.3	57
27	Quasi-static rheology of foams. Part 2. Continuous shear flow. <i>Journal of Fluid Mechanics</i> , 2007, 587, 45-72.	1.4	52
28	Generating suspended cell monolayers for mechanobiological studies. <i>Nature Protocols</i> , 2013, 8, 2516-2530.	5.5	50
29	Dilatancy in Slow Granular Flows. <i>Physical Review Letters</i> , 2009, 102, 228301.	2.9	49
30	Curling of epithelial monolayers reveals coupling between active bending and tissue tension. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 9377-9383.	3.3	49
31	Effects of Bacterial Density on Growth Rate and Characteristics of Microbial-Induced CaCO <sub>3</sub> Precipitates: Particle-Scale Experimental Study. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2021, 147, .	1.5	44
32	The dynamic mechanical properties of cellularised aggregates. <i>Current Opinion in Cell Biology</i> , 2016, 42, 113-120.	2.6	38
33	A unified rheological model for cells and cellularised materials. <i>Royal Society Open Science</i> , 2020, 7, 190920.	1.1	38
34	Contact Dynamics in a Gently Vibrated Granular Pile. <i>Physical Review Letters</i> , 2004, 92, 035501.	2.9	37
35	In vivo dynamics of the internal fibrous structure in smooth adhesive pads of insects. <i>Acta Biomaterialia</i> , 2012, 8, 2730-2736.	4.1	35
36	Tumour heterogeneity promotes collective invasion and cancer metastatic dissemination. <i>Royal Society Open Science</i> , 2017, 4, 161007.	1.1	35

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37	X-ray observation of micro-failures in granular piles approaching an avalanche. Europhysics Letters, 2005, 71, 932-937.	0.7	29
38	Quasi-static rheology of foams. Part 1. Oscillating strain. Journal of Fluid Mechanics, 2007, 587, 23-44.	1.4	26
39	Use of microfluidic experiments to optimize MICP treatment protocols for effective strength enhancement of MICP-treated sandy soils. Acta Geotechnica, 2022, 17, 3817-3838.	2.9	24
40	A kinetic mechanism for cell sorting based on local variations in cell motility. Interface Focus, 2014, 4, 20140013.	1.5	22
41	Method to study cell migration under uniaxial compression. Molecular Biology of the Cell, 2017, 28, 809-816.	0.9	20
42	Fracture in living tissues. Trends in Cell Biology, 2022, 32, 537-551.	3.6	18
43	Real-Time Tracking and Shape Analysis of Atrial Septal Defects in 3D Echocardiography. Academic Radiology, 2007, 14, 1298-1309.	1.3	10
44	RHEOS.jl -- A Julia Package for Rheology Data Analysis. Journal of Open Source Software, 2019, 4, 1700.	2.0	10
45	Spatial heterogeneity of cell-matrix adhesive forces predicts human glioblastoma migration. Neuro-Oncology Advances, 2020, 2, vdaa081.	0.4	6
46	Strain maps characterize the symmetry of convergence and extension patterns during zebrafish gastrulation. Scientific Reports, 2021, 11, 19357.	1.6	6
47	Tug-of-war between stretching and bending in living cell sheets. Physical Review E, 2020, 102, 012401.	0.8	5
48	REAL-TIME BLOCK FLOW TRACKING OF ATRIAL SEPTAL DEFECT MOTION IN 4D CARDIAC ULTRASOUND. , 2007, , .		3
49	Emergent patterns from probabilistic generalizations of lateral activation and inhibition. Journal of the Royal Society Interface, 2016, 13, 20151077.	1.5	2
50	autohaem: 3D printed devices for automated preparation of blood smears. Review of Scientific Instruments, 2022, 93, 014104.	0.6	2