Jan Lammerding

List of Publications by Year in Descending Order

104 papers	10,794 citations	49 h-index	103 g-index
150 ext. papers	12,828 ext. citations	10 avg, IF	6.68 L-index

#	Paper	IF	Citations
104	Assembly and Use of a Microfluidic Device to Study Nuclear Mechanobiology During Confined Migration.. *Methods in Molecular Biology*, **2022**, 2502, 329-349	1.4	
103	Mechanics and functional consequences of nuclear deformations.. *Nature Reviews Molecular Cell Biology*, **2022**,	48.7	4
102	Tunable 3D Hydrogel Microchannel Networks to Study Confined Mammalian Cell Migration. *Advanced Healthcare Materials*, **2021**, 10, e2100625	10.1	2
101	Quantifying force transmission through fibroblasts: changes of traction forces under external shearing. *European Biophysics Journal*, **2021**, 1	1.9	0
100	Nuclear Deformation Causes DNA Damage by Increasing Replication Stress. *Current Biology*, **2021**, 31, 753-765.e6	6.3	35
99	Nuclear Deformation Lets Cells Gauge Their Physical Confinement. *Developmental Cell*, **2021**, 56, 156-158	10.2	3
98	Genetically engineered and enucleated human mesenchymal stromal cells for the targeted delivery of therapeutics to diseased tissue.. *Nature Biomedical Engineering*, **2021**,	19	4
97	Feeling Stressed? Piezo1-Mediated Loss of Heterochromatin Buys Time for Long-Term Adaptation. *Cell*, **2020**, 181, 760-762	56.2	1
96	Mutant lamins cause nuclear envelope rupture and DNA damage in skeletal muscle cells. *Nature Materials*, **2020**, 19, 464-473	27	76
95	Cell Mechanical and Physiological Behavior in the Regime of Rapid Mechanical Compressions that Lead to Cell Volume Change. *Small*, **2020**, 16, e1903857	11	13
94	Hydroxyapatite mineral enhances malignant potential in a tissue-engineered model of ductal carcinoma in situ (DCIS). *Biomaterials*, **2019**, 224, 119489	15.6	12
93	High-throughput microfluidic micropipette aspiration device to probe time-scale dependent nuclear mechanics in intact cells. *Lab on A Chip*, **2019**, 19, 3652-3663	7.2	27
92	Myosin IIA suppresses glioblastoma development in a mechanically sensitive manner. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 15550-15559	11.5	26
91	The Driving Force: Nuclear Mechanotransduction in Cellular Function, Fate, and Disease. *Annual Review of Biomedical Engineering*, **2019**, 21, 443-468	12	81
90	Cell migration through three-dimensional confining pores: speed accelerations by deformation and recoil of the nucleus. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2019**, 374, 20180225	5.8	32
89	Engineering approaches to studying cancer cell migration in three-dimensional environments. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2019**, 374, 20180219	5.8	8
88	Confinement hinders motility by inducing RhoA-mediated nuclear influx, volume expansion, and blebbing. *Journal of Cell Biology*, **2019**, 218, 4093-4111	7.3	29

87	Local, transient tensile stress on the nuclear membrane causes membrane rupture. *Molecular Biology of the Cell*, **2019**, 30, 899-906	3.5	31
86	Emerging views of the nucleus as a cellular mechanosensor. *Nature Cell Biology*, **2018**, 20, 373-381	23.4	252
85	Frontline Science: Elevated nuclear lamin A is permissive for granulocyte transendothelial migration but not for motility through collagen I barriers. *Journal of Leukocyte Biology*, **2018**, 104, 239-251	6.5	22
84	Chromosomal instability drives metastasis through a cytosolic DNA response. *Nature*, **2018**, 553, 467-472	50.4	536
83	Beyond Tissue Stiffness and Bioadhesivity: Advanced Biomaterials to Model Tumor Microenvironments and Drug Resistance. *Trends in Cancer*, **2018**, 4, 281-291	12.5	19
82	Automated analysis of cell migration and nuclear envelope rupture in confined environments. *PLoS ONE*, **2018**, 13, e0195664	3.7	17
81	Assembly and Use of a Microfluidic Device to Study Cell Migration in Confined Environments. *Methods in Molecular Biology*, **2018**, 1840, 101-118	1.4	6
80	Bursting the Bubble - Nuclear Envelope Rupture as a Path to Genomic Instability?. *Trends in Cell Biology*, **2017**, 27, 546-555	18.3	66
79	Integrin-mediated traction force enhances paxillin molecular associations and adhesion dynamics that increase the invasiveness of tumor cells into a three-dimensional extracellular matrix. *Molecular Biology of the Cell*, **2017**, 28, 1467-1488	3.5	84
78	Consequences of a tight squeeze: Nuclear envelope rupture and repair. *Nucleus*, **2017**, 8, 268-274	3.9	36
77	Connecting the plasma membrane to the nucleus by intermediate filaments. *Molecular Biology of the Cell*, **2017**, 28, 695-696	3.5	6
76	Aberrant Compartment Formation by HSPB2 Mislocalizes Lamin A and Compromises Nuclear Integrity and Function. *Cell Reports*, **2017**, 20, 2100-2115	10.6	25
75	Cellular Nanomechanics. *Springer Handbooks*, **2017**, 1069-1100	1.3	2
74	Cell mechanotransduction: Stretch to express. *Nature Materials*, **2016**, 15, 1227-1229	27	9
73	Causes and consequences of nuclear envelope alterations in tumour progression. *European Journal of Cell Biology*, **2016**, 95, 449-464	6.1	60
72	Squish and squeeze-the nucleus as a physical barrier during migration in confined environments. *Current Opinion in Cell Biology*, **2016**, 40, 32-40	9	119
71	Nuclear envelope rupture and repair during cancer cell migration. *Science*, **2016**, 352, 353-8	33.3	710
70	Cellular and molecular remodelling of a host cell for vertical transmission of bacterial symbionts. *Proceedings of the Royal Society B: Biological Sciences*, **2016**, 283,	4.4	40

69	Cell Microharpooning to Study Nucleo-Cytoskeletal Coupling. *Methods in Molecular Biology*, **2016**, 1411, 241-54	1.4	8
68	A Chemomechanical Model for Nuclear Morphology and Stresses during Cell Transendothelial Migration. *Biophysical Journal*, **2016**, 111, 1541-1552	2.9	82
67	Nuclear envelope rupture: Actin fibers are putting the squeeze on the nucleus. *Journal of Cell Biology*, **2016**, 215, 5-8	7.3	37
66	Myopathic lamin mutations cause reductive stress and activate the nrf2/keap-1 pathway. *PLoS Genetics*, **2015**, 11, e1005231	6	59
65	Non-muscle myosin IIB is critical for nuclear translocation during 3D invasion. *Journal of Cell Biology* , **2015**, 210, 583-94	7.3	85
64	Altering lamina assembly reveals lamina-dependent and -independent functions for A-type lamins. *Journal of Cell Science*, **2015**, 128, 3607-20	5.3	29
63	Design of a microfluidic device to quantify dynamic intra-nuclear deformation during cell migration through confining environments. *Integrative Biology (United Kingdom)*, **2015**, 7, 1534-46	3.7	83
62	Lamin A/C deficiency reduces circulating tumor cell resistance to fluid shear stress. *American Journal of Physiology - Cell Physiology*, **2015**, 309, C736-46	5.4	61
61	Nuclear mechanics in cancer. *Advances in Experimental Medicine and Biology*, **2014**, 773, 435-70	3.6	89
60	Broken nuclei--lamins, nuclear mechanics, and disease. *Trends in Cell Biology*, **2014**, 24, 247-56	18.3	193
59	Cellular mechanosensing: getting to the nucleus of it all. *Progress in Biophysics and Molecular Biology*, **2014**, 115, 76-92	4.7	120
58	Nuclear deformability constitutes a rate-limiting step during cell migration in 3-D environments. *Cellular and Molecular Bioengineering*, **2014**, 7, 293-306	3.9	184
57	The cellular mastermind(?)-mechanotransduction and the nucleus. *Progress in Molecular Biology and Translational Science*, **2014**, 126, 157-203	4	20
56	Nuclear mechanics and mechanotransduction in health and disease. *Current Biology*, **2013**, 23, R1113-21	6.3	251
55	Lamin A/C and emerin regulate MKL1-SRF activity by modulating actin dynamics. *Nature*, **2013**, 497, 507-11	10.4	315
54	Myopathic lamin mutations impair nuclear stability in cells and tissue and disrupt nucleo-cytoskeletal coupling. *Human Molecular Genetics*, **2013**, 22, 2335-49	5.6	124
53	Nuclear envelope composition determines the ability of neutrophil-type cells to passage through micron-scale constrictions. *Journal of Biological Chemistry*, **2013**, 288, 8610-8618	5.4	216
52	Novel insights into the disease etiology of laminopathies. *Rare Diseases (Austin, Tex)*, **2013**, 1, e27002		9

51	Lamins at a glance. *Journal of Cell Science*, **2012**, 125, 2087-93	5.3	142
50	Assays to measure nuclear mechanics in interphase cells. *Current Protocols in Cell Biology*, **2012**, Chapter 22, Unit22.16	2.3	14
49	Cell-surface sensors for real-time probing of cellular environments. *Nature Nanotechnology*, **2011**, 6, 524-31	28.7	167
48	Mechanics of the nucleus. *Comprehensive Physiology*, **2011**, 1, 783-807	7.7	100
47	Nuclear mechanics in disease. *Annual Review of Biomedical Engineering*, **2011**, 13, 397-428	12	97
46	Keeping the LINC: the importance of nucleocytoskeletal coupling in intracellular force transmission and cellular function. *Biochemical Society Transactions*, **2011**, 39, 1729-34	5.1	91
45	Biophysical assays to probe the mechanical properties of the interphase cell nucleus: substrate strain application and microneedle manipulation. *Journal of Visualized Experiments*, **2011**,	1.6	14
44	Nuclear mechanics during cell migration. *Current Opinion in Cell Biology*, **2011**, 23, 55-64	9	329
43	Nonlinear microrheology of an aging, yield stress fluid using magnetic tweezers. *Soft Matter*, **2011**, 7, 9933	3.6	49
42	Protein farnesylation inhibitors cause donut-shaped cell nuclei attributable to a centrosome separation defect. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 4997-5002	11.5	58
41	The interaction between nesprins and sun proteins at the nuclear envelope is critical for force transmission between the nucleus and cytoskeleton. *Journal of Biological Chemistry*, **2011**, 286, 26743-53	5.4	340
40	An accumulation of non-farnesylated prelamin A causes cardiomyopathy but not progeria. *Human Molecular Genetics*, **2010**, 19, 2682-94	5.6	72
39	Another broken heart: loss of lamina-associated polypeptide 2alpha causes systolic dysfunction. *Circulation Research*, **2010**, 106, 234-7	15.7	1
38	Direct synthesis of lamin A, bypassing prelamin a processing, causes misshapen nuclei in fibroblasts but no detectable pathology in mice. *Journal of Biological Chemistry*, **2010**, 285, 20818-26	5.4	59
37	Attenuated hypertrophic response to pressure overload in a lamin A/C haploinsufficiency mouse. *Journal of Molecular and Cellular Cardiology*, **2010**, 48, 1290-7	5.8	48
36	Altered mechanical properties of the nucleus in disease. *Methods in Cell Biology*, **2010**, 98, 121-41	1.8	19
35	Cellular Nanomechanics **2010**, 1171-1200		12
34	Biochemical and mechanical dysfunction in a mouse model of desmin-related myopathy. *Circulation Research*, **2009**, 104, 1021-8	15.7	42

33	Three-dimensional cardiac architecture determined by two-photon microtomy. *Journal of Biomedical Optics*, **2009**, 14, 044029	3.5	7
32	Thioredoxin-independent regulation of metabolism by the alpha-arrestin proteins. *Journal of Biological Chemistry*, **2009**, 284, 24996-5003	5.4	136
31	Mechanotransduction gone awry. *Nature Reviews Molecular Cell Biology*, **2009**, 10, 63-73	48.7	901
30	Mechanical properties of interphase nuclei probed by cellular strain application. *Methods in Molecular Biology*, **2009**, 464, 13-26	1.4	16
29	Increased mechanosensitivity and nuclear stiffness in Hutchinson-Gilford progeria cells: effects of farnesyltransferase inhibitors. *Aging Cell*, **2008**, 7, 383-93	9.9	151
28	Nuclear shape, mechanics, and mechanotransduction. *Circulation Research*, **2008**, 102, 1307-18	15.7	498
27	The Nuclear Membrane and Mechanotransduction: Impaired Nuclear Mechanics and Mechanotransduction in Lamin A/C Deficient Cells. *Novartis Foundation Symposium*, **2008**, 264-278		24
26	Experimental techniques for study of chromatin mechanics in intact nuclei and living cells. *Chromosome Research*, **2008**, 16, 499-510	4.4	19
25	Towards an integrated understanding of the structure and mechanics of the cell nucleus. *BioEssays*, **2008**, 30, 226-36	4.1	95
24	Cell nuclei spin in the absence of lamin b1. *Journal of Biological Chemistry*, **2007**, 282, 20015-26	5.4	72
23	Nuclear mechanics and methods. *Methods in Cell Biology*, **2007**, 83, 269-94	1.8	45
22	Torn apart: membrane rupture in muscular dystrophies and associated cardiomyopathies. *Journal of Clinical Investigation*, **2007**, 117, 1749-52	15.9	14
21	Lamins A and C but not lamin B1 regulate nuclear mechanics. *Journal of Biological Chemistry*, **2006**, 281, 25768-80	5.4	448
20	Mechanical properties of the cell nucleus and the effect of emerin deficiency. *Biophysical Journal*, **2006**, 91, 4649-64	2.9	175
19	Prelamin A and lamin A appear to be dispensable in the nuclear lamina. *Journal of Clinical Investigation*, **2006**, 116, 743-52	15.9	175
18	Abnormal nuclear shape and impaired mechanotransduction in emerin-deficient cells. *Journal of Cell Biology*, **2005**, 170, 781-91	7.3	279
17	Focal adhesion kinase signaling regulates cardiogenesis of embryonic stem cells. *Journal of Biological Chemistry*, **2005**, 280, 39534-44	5.4	61
16	The nuclear membrane and mechanotransduction: impaired nuclear mechanics and mechanotransduction in lamin A/C deficient cells. *Novartis Foundation Symposium*, **2005**, 264, 264-73; discussion 273-8		18

15	Mechanotransduction in cardiac myocytes. *Annals of the New York Academy of Sciences*, **2004**, 1015, 53-70	0.5	153
14	Lamin A/C deficiency causes defective nuclear mechanics and mechanotransduction. *Journal of Clinical Investigation*, **2004**, 113, 370-8	15.9	436
13	Lamin A/C deficiency causes defective nuclear mechanics and mechanotransduction. *Journal of Clinical Investigation*, **2004**, 113, 370-378	15.9	712
12	Tetraspanin CD151 regulates alpha6beta1 integrin adhesion strengthening. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 7616-21	11.5	140
11	Quantitative measurements of active and passive mechanical properties of adult cardiac myocytes. *IEEE Engineering in Medicine and Biology Magazine*, **2003**, 22, 124-7		10
10	A three-dimensional viscoelastic model for cell deformation with experimental verification. *Biophysical Journal*, **2003**, 85, 3336-49	2.9	157
9	Signaling pathways that influence extracellular remodeling. *Journal of Cardiac Failure*, **2002**, 8, S339-43	3.3	5
8	High-throughput microfluidic micropipette aspiration device to probe time-scale dependent nuclear mechanics in intact cells		1
7	Chemical-Genetic Interrogation of Nuclear Size Control Reveals Cancer-Specific Effects on Cell Migration and Invasion		1
6	Lamin B2 follows lamin A/C- mediated nuclear mechanics and cancer cell invasion efficacy		7
5	Nuclear deformation causes DNA damage by increasing replication stress		5
4	Mutant lamins cause nuclear envelope rupture and DNA damage in skeletal muscle cells		3
3	PP2A inhibitor PME-1 suppresses anoikis, and is associated with therapy relapse of PTEN-deficient prostate cancers		2
2	Low lamin A levels enhance confined cell migration and metastatic capacity in breast cancer		2
1	Confined Migration Induces Heterochromatin Formation and Alters Chromatin Accessibility		3