

Wolfgang Losert

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

1,892
citations

257450

24
h-index

289244

40
g-index

67
all docs

67
docs citations

67
times ranked

2756
citing authors

#	ARTICLE	IF	CITATIONS
1	Cell Cycle and Cell Size Dependent Gene Expression Reveals Distinct Subpopulations at Single-Cell Level. <i>Frontiers in Genetics</i> , 2017, 8, 1.	2.3	149
2	Cellular Contact Guidance through Dynamic Sensing of Nanotopography. <i>ACS Nano</i> , 2014, 8, 3546-3555.	14.6	122
3	Automated Manipulation of Biological Cells Using Gripper Formations Controlled By Optical Tweezers. <i>IEEE Transactions on Automation Science and Engineering</i> , 2014, 11, 338-347.	5.2	114
4	Cell Shape Dynamics: From Waves to Migration. <i>PLoS Computational Biology</i> , 2012, 8, e1002392.	3.2	104
5	svclassify: a method to establish benchmark structural variant calls. <i>BMC Genomics</i> , 2016, 17, 64.	2.8	98
6	Developing a Stochastic Dynamic Programming Framework for Optical Tweezer-Based Automated Particle Transport Operations. <i>IEEE Transactions on Automation Science and Engineering</i> , 2010, 7, 218-227.	5.2	87
7	Indirect pushing based automated micromanipulation of biological cells using optical tweezers. <i>International Journal of Robotics Research</i> , 2014, 33, 1098-1111.	8.5	78
8	Real-Time Path Planning for Coordinated Transport of Multiple Particles Using Optical Tweezers. <i>IEEE Transactions on Automation Science and Engineering</i> , 2012, 9, 669-678.	5.2	75
9	Asymmetric nanotopography biases cytoskeletal dynamics and promotes unidirectional cell guidance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 12557-12562.	7.1	70
10	Transient and Oscillatory Granular Shear Flow. <i>Physical Review Letters</i> , 2004, 93, 088001.	7.8	66
11	Onset of irreversibility in cyclic shear of granular packings. <i>Physical Review E</i> , 2012, 85, 021309.	2.1	63
12	Intravital microscopy of collective invasion plasticity in breast cancer. <i>DMM Disease Models and Mechanisms</i> , 2018, 11, .	2.4	62
13	Real-Time Motion Analysis Reveals Cell Directionality as an Indicator of Breast Cancer Progression. <i>PLoS ONE</i> , 2013, 8, e58859.	2.5	50
14	Lamin A and microtubules collaborate to maintain nuclear morphology. <i>Nucleus</i> , 2017, 8, 433-446.	2.2	49
15	3D Imaging of particle motion during penetrometer testing. <i>Granular Matter</i> , 2007, 9, 323-329.	2.2	45
16	Automated Cell Transport in Optical Tweezers-Assisted Microfluidic Chambers. <i>IEEE Transactions on Automation Science and Engineering</i> , 2013, 10, 980-989.	5.2	42
17	Detecting heterogeneity in and between breast cancer cell lines. <i>Cancer Convergence</i> , 2020, 4, 1.	8.0	39
18	Contractility, focal adhesion orientation, and stress fiber orientation drive cancer cell polarity and migration along wavy ECM substrates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	39

#	ARTICLE	IF	CITATIONS
19	Machine learning based methodology to identify cell shape phenotypes associated with microenvironmental cues. <i>Biomaterials</i> , 2016, 104, 104-118.	11.4	38
20	Quantifying stretching and rearrangement in epithelial sheet migration. <i>New Journal of Physics</i> , 2013, 15, 025036.	2.9	34
21	From Cellular Characteristics to Disease Diagnosis: Uncovering Phenotypes with Supercells. <i>PLoS Computational Biology</i> , 2013, 9, e1003215.	3.2	34
22	Collective cell migration has distinct directionality and speed dynamics. <i>Cellular and Molecular Life Sciences</i> , 2017, 74, 3841-3850.	5.4	33
23	The interplay of cell-cell and cell-substrate adhesion in collective cell migration. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140684.	3.4	28
24	Actin Cytoskeleton and Focal Adhesions Regulate the Biased Migration of Breast Cancer Cells on Nanoscale Asymmetric Sawteeth. <i>ACS Nano</i> , 2019, 13, 1454-1468.	14.6	27
25	Geometry-Driven Polarity in Motile Amoeboid Cells. <i>PLoS ONE</i> , 2014, 9, e113382.	2.5	26
26	Quantifying topography-guided actin dynamics across scales using optical flow. <i>Molecular Biology of the Cell</i> , 2020, 31, 1753-1764.	2.1	26
27	Experimental measurements of orientation and rotation of dense 3D packings of spheres. <i>Granular Matter</i> , 2014, 16, 185-191.	2.2	24
28	Coexistence and Transition between Shear Zones in Slow Granular Flows. <i>Physical Review Letters</i> , 2013, 111, 148301.	7.8	22
29	Spatiotemporal relationships between the cell shape and the actomyosin cortex of periodically protruding cells. <i>Cytoskeleton</i> , 2015, 72, 268-281.	2.0	21
30	Replication of biocompatible, nanotopographic surfaces. <i>Scientific Reports</i> , 2018, 8, 564.	3.3	20
31	Gripper synthesis for indirect manipulation of cells using Holographic Optical Tweezers. , 2012, , .		19
32	<i>Leishmania</i> infection inhibits macrophage motility by altering F-actin dynamics and the expression of adhesion complex proteins. <i>Cellular Microbiology</i> , 2017, 19, e12668.	2.1	16
33	<i>Dictyostelium</i> Cells Migrate Similarly on Surfaces of Varying Chemical Composition. <i>PLoS ONE</i> , 2014, 9, e87981.	2.5	14
34	Lysophosphatidic acid regulates the motility of MCF10CA1a breast cancer cell sheets via two opposing signaling pathways. <i>Cellular Signalling</i> , 2018, 45, 1-11.	3.6	12
35	Distinct roles of tumor associated mutations in collective cell migration. <i>Scientific Reports</i> , 2021, 11, 10291.	3.3	12
36	Inferring single-cell behaviour from large-scale epithelial sheet migration patterns. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20170147.	3.4	11

#	ARTICLE	IF	CITATIONS
37	Automated indirect manipulation of irregular shaped cells with Optical Tweezers for studying collective cell migration. , 2013, , .		10
38	Uncovering low-dimensional, miR-based signatures of acute myeloid and lymphoblastic leukemias with a machine-learning-driven network approach. Convergent Science Physical Oncology, 2015, 1, 025002.	2.6	10
39	Reversibility of granular rotations and translations. Physical Review E, 2019, 100, 042905.	2.1	10
40	Automated indirect transport of biological cells with optical tweezers using planar gripper formations. , 2012, , .		9
41	Early time-point cell morphology classifiers successfully predict human bone marrow stromal cell differentiation modulated by fiber density in nanofiber scaffolds. Biomaterials, 2021, 274, 120812.	11.4	9
42	Extracting microtentacle dynamics of tumor cells in a non-adherent environment. Oncotarget, 2017, 8, 111567-111580.	1.8	9
43	Electrically synchronizing and modulating the dynamics of ERK activation to regulate cell fate. IScience, 2021, 24, 103240.	4.1	9
44	Cortical waves mediate the cellular response to electric fields. ELife, 2022, 11, .	6.0	9
45	Label-free cell tracking enables collective motion phenotyping in epithelial monolayers. IScience, 2022, 25, 104678.	4.1	6
46	Consequences of Anomalous Diffusion in Disordered Systems under Cyclic Forcing. Physical Review Letters, 2014, 112, 228001.	7.8	5
47	Dynamics phenotyping across length and time scales in collective cell migration. Seminars in Cell and Developmental Biology, 2019, 93, 69-76.	5.0	5
48	Signaling through polymerization and degradation: Analysis and simulations of T cell activation mediated by Bcl10. PLoS Computational Biology, 2021, 17, e1007986.	3.2	5
49	Memory in three-dimensional cyclically driven granular material. Physical Review E, 2021, 103, 062906.	2.1	4
50	Actin Polymerization in a Thermal Gradient. Macromolecular Symposia, 2005, 227, 231-242.	0.7	3
51	Adenylyl cyclase mRNA localizes to the posterior of polarized DICTYOSTELIUM cells during chemotaxis. BMC Cell Biology, 2017, 18, 23.	3.0	2
52	Influence of hyaluronic acid binding on the actin cortex measured by optical forces. Journal of Biophotonics, 2020, 13, e201960215.	2.3	2
53	Effects of interparticle friction on the response of 3D cyclically compressed granular material. EPJ Web of Conferences, 2021, 249, 10003.	0.3	2
54	The social shape of sperm: using an integrative machine-learning approach to examine sperm ultrastructure and collective motility. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20211553.	2.6	2

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55	Gravity Governs Shear Localization in Confined Dense Granular Flows. Physical Review Letters, 2021, 127, 278003.	7.8	2
56	RefCell: multi-dimensional analysis of image-based high-throughput screens based on "typical cells"™. BMC Bioinformatics, 2018, 19, 427.	2.6	1
57	Spontaneous polarization and cell guidance on asymmetric nanotopography. Communications Physics, 2022, 5, .	5.3	1
58	Analysis of the Kinetics of ASAP1 GAP activity. FASEB Journal, 2007, 21, A616.	0.5	0