Lutz Brusch

List of Publications by Year
in descending order

42 papers	1,503 citations	430874 18 h-index	345221 36 g-index
48 all docs	48 docs citations	48 times ranked	2112 citing authors

#	Article	IF	Citations
1	Morpheus: a user-friendly modeling environment for multiscale and multicellular systems biology. Bioinformatics, 2014, 30, 1331-1332.	4.1	235
2	Ligand-Specific c-Fos Expression Emerges from the Spatiotemporal Control of ErbB Network Dynamics. Cell, 2010, 141, 884-896.	28.9	217
3	Membrane identity and GTPase cascades regulated by toggle and cutâ€out switches. Molecular Systems Biology, 2008, 4, 206.	7.2	117
4	A Predictive 3D Multi-Scale Model of Biliary Fluid Dynamics in the Liver Lobule. Cell Systems, 2017, 4, 277-290.e9.	6.2	79
5	A General Theoretical Framework to Infer Endosomal Network Dynamics from Quantitative Image Analysis. Current Biology, 2012, 22, 1381-1390.	3.9	69
6	Predicting Pancreas Cell Fate Decisions and Reprogramming with a Hierarchical Multi-Attractor Model. PLoS ONE, 2011, 6, e14752.	2.5	63
7	Modulated Amplitude Waves and the Transition from Phase to Defect Chaos. Physical Review Letters, 2000, 85, 86-89.	7.8	59
8	Three-dimensional spatially resolved geometrical and functional models of human liver tissue reveal new aspects of NAFLD progression. Nature Medicine, 2019, 25, 1885-1893.	30.7	58
9	Breakup of spiral waves caused by radial dynamics: Eckhaus and finite wavenumber instabilities. New Journal of Physics, 2004, 6, 5-5.	2.9	56
10	Modulated amplitude waves and defect formation in the one-dimensional complex Ginzburgâ€“Landau equation. Physica D: Nonlinear Phenomena, 2001, 160, 127-148.	2.8	51
11	Antispiral Waves as Sources in Oscillatory Reactionâ˘'Diffusion Mediaâ€. Journal of Physical Chemistry B, 2004, 108, 14733-14740.	2.6	50
12	Liquid-crystal organization of liver tissue. ELife, 2019, 8, .	6.0	42
13	A modular framework for multiscale, multicellular, spatiotemporal modeling of acute primary viral infection and immune response in epithelial tissues and its application to drug therapy timing and effectiveness. PLoS Computational Biology, 2020, 16, e1008451.	3.2	40
14	Accelerated cell divisions drive the outgrowth of the regenerating spinal cord in axolotls. ELife, 2016, 5, .	6.0	32
15	On the role of lateral stabilization during early patterning in the pancreas. Journal of the Royal Society Interface, 2013, 10, 20120766.	3.4	29
16	Bile canaliculi remodeling activates <scp>YAP</scp> via the actin cytoskeleton during liver regeneration. Molecular Systems Biology, 2020, 16, e8985.	7.2	29
17	Mathematical Modeling of Regenerative Processes. Current Topics in Developmental Biology, 2014, 108, 283-317.	2.2	21
18	An environment for sustainable research software in Germany and beyond: current state, open challenges, and call for action. F1000Research, 2020, 9, 295.	1.6	21

#	Article	IF	Citations
19	Dynamic Polarization of the Multiciliated Planarian Epidermis between Body Plan Landmarks. Developmental Cell, 2019, 51, 526-542.e6.	7.0	20
20	Doppler Effect of Nonlinear Waves and Superspirals in Oscillatory Media. Physical Review Letters, 2003, 91, 108302.	7.8	19
21	A model for cyst lumen expansion and size regulation via fluid secretion. Journal of Theoretical Biology, 2010, 264, 1077-1088.	1.7	19
22	Nonlinear analysis of the Eckhaus instability: modulated amplitude waves and phase chaos with nonzero average phase gradient. Physica D: Nonlinear Phenomena, 2003, 174, 152-167.	2.8	18
23	Chevron formation of the zebrafish muscle segments. Journal of Experimental Biology, 2014, 217, 3870-82.	1.7	18
24	An environment for sustainable research software in Germany and beyond: current state, open challenges, and call for action. F1000Research, 2020, 9, 295.	1.6	16
25	Mechanism for Spiral Wave Breakup in Excitable and Oscillatory Media. Physical Review Letters, 2004, 92, 119801.	7.8	15
26	Parameter estimation with a novel gradient-based optimization method for biological lattice-gas cellular automaton models. Journal of Mathematical Biology, 2011, 63, 173-200.	1.9	15
27	Cellular dynamics underlying regeneration of appropriate segment number during axolotl tail regeneration. BMC Developmental Biology, 2015, 15, 48.	2.1	15
28	Phosphorylation of the Smo tail is controlled by membrane localization and is dispensable for clustering. Journal of Cell Science, 2013, 126, 4684-97.	2.0	14
29	Foldâ€"Hopf Bursting in a Model for Calcium Signal Transduction. Zeitschrift Fur Physikalische Chemie, 2002, 216, .	2.8	13
30	BioSimulators: a central registry of simulation engines and services for recommending specific tools. Nucleic Acids Research, 2022, 50, W108-W114.	14.5	11
31	pSSAlib: The partial-propensity stochastic chemical network simulator. PLoS Computational Biology, 2017, 13, e1005865.	3.2	8
32	A Lattice-Gas Cellular Automaton Model for Discrete Excitable Media. The Frontiers Collection, 2019, , 253-264.	0.2	7
33	Mathematical modelling of fluid transport and its regulation at multiple scales. BioSystems, 2015, 130, 1-10.	2.0	6
34	A dynamically diluted alignment model reveals the impact of cell turnover on the plasticity of tissue polarity patterns. Journal of the Royal Society Interface, 2017, 14, 20170466.	3.4	6
35	Quantification of nematic cell polarity in three-dimensional tissues. PLoS Computational Biology, 2020, 16, e1008412.	3.2	6
36	Wet-tip versus dry-tip regimes of osmotically driven fluid flow. Scientific Reports, 2019, 9, 4528.	3.3	3

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37	Simplified replica treatment of various random-energy and random-field models with confinement potential. Physical Review E, 1999, 60, 3573-3579.	2.1	1
38	The coherence of the vesicle theory of protein secretion. Journal of Theoretical Biology, 2008, 252, 370-373.	1.7	1
39	Title is missing!. , 2020, 16, e1008451.		0
40	Title is missing!. , 2020, 16, e1008451.		0
41	Title is missing!. , 2020, 16, e1008451.		0
42	Title is missing!. , 2020, 16, e1008451.		0