

Athanasius F M Mar

List of Publications by Year in descending order

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53
papers

5,047
citations

109321

35
h-index

175258

52
g-index

56
all docs

56
docs citations

56
times ranked

5959
citing authors

#	ARTICLE	IF	CITATIONS
1	Auxin transport is sufficient to generate a maximum and gradient guiding root growth. <i>Nature</i> , 2007, 449, 1008-1013.	27.8	761
2	Root System Architecture from Coupling Cell Shape to Auxin Transport. <i>PLoS Biology</i> , 2008, 6, e307.	5.6	353
3	A Bistable Circuit Involving SCARECROW-RETINOBLASTOMA Integrates Cues to Inform Asymmetric Stem Cell Division. <i>Cell</i> , 2012, 150, 1002-1015.	28.9	273
4	Tissue-resident memory CD8 ⁺ T cells continuously patrol skin epithelia to quickly recognize local antigen. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 19739-19744.	7.1	230
5	How amoeboids self-organize into a fruiting body: Multicellular coordination in <i>Dictyostelium discoideum</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 3879-3883.	7.1	223
6	Analysing immune cell migration. <i>Nature Reviews Immunology</i> , 2009, 9, 789-798.	22.7	216
7	Polarization and Movement of Keratocytes: A Multiscale Modelling Approach. <i>Bulletin of Mathematical Biology</i> , 2006, 68, 1169-1211.	1.9	208
8	Lymph node topology dictates T cell migration behavior. <i>Journal of Experimental Medicine</i> , 2007, 204, 771-780.	8.5	203
9	Auxin minimum triggers the developmental switch from cell division to cell differentiation in the <i>Arabidopsis</i> root. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E7641-E7649.	7.1	193
10	The role of fluctuations and stress on the effective viscosity of cell aggregates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 17271-17275.	7.1	183
11	Cell adhesion and cortex contractility determine cell patterning in the <i>Drosophila</i> retina. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18549-18554.	7.1	177
12	Prevention of diabetes by manipulation of anti-IGRP autoimmunity: high efficiency of a low-affinity peptide. <i>Nature Medicine</i> , 2005, 11, 645-652.	30.7	132
13	Mathematical Model for Spatial Segregation of the Rho-Family GTPases Based on Inhibitory Crosstalk. <i>Bulletin of Mathematical Biology</i> , 2007, 69, 1943-1978.	1.9	130
14	How Cells Integrate Complex Stimuli: The Effect of Feedback from Phosphoinositides and Cell Shape on Cell Polarization and Motility. <i>PLoS Computational Biology</i> , 2012, 8, e1002402.	3.2	103
15	An intracellular partitioning-based framework for tissue cell polarity in plants and animals. <i>Development (Cambridge)</i> , 2013, 140, 2061-2074.	2.5	98
16	Estimating Relative Fitness in Viral Competition Experiments. <i>Journal of Virology</i> , 2000, 74, 11067-11072.	3.4	85
17	The Cellular Potts Model and Biophysical Properties of Cells, Tissues and Morphogenesis. , 2007, , 107-136.		81
18	Spatiotemporal coordination of cell division and growth during organ morphogenesis. <i>PLoS Biology</i> , 2018, 16, e2005952.	5.6	79

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19	Ethylene-induced differential petiole growth in <i>Arabidopsis thaliana</i> involves local microtubule reorientation and cell expansion. <i>New Phytologist</i> , 2012, 193, 339-348.	7.3	74
20	The biophysical nature of cells: potential cell behaviours revealed by analytical and computational studies of cell surface mechanics. <i>BMC Biophysics</i> , 2015, 8, 8.	4.4	70
21	A multi-layered mechanistic modelling approach to understand how effector genes extend beyond phytoplasma to modulate plant hosts, insect vectors and the environment. <i>Current Opinion in Plant Biology</i> , 2018, 44, 39-48.	7.1	67
22	Migration and Thermotaxis of <i>Dictyostelium discoideum</i> Slugs, a Model Study. <i>Journal of Theoretical Biology</i> , 1999, 199, 297-309.	1.7	65
23	Small variations in multiple parameters account for wide variations in HIV-1 set-points: a novel modelling approach. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2001, 268, 235-242.	2.6	52
24	Spatial modelling of brief and long interactions between T cells and dendritic cells. <i>Immunology and Cell Biology</i> , 2007, 85, 306-314.	2.3	51
25	Formation of polarity convergences underlying shoot outgrowths. <i>ELife</i> , 2016, 5, .	6.0	51
26	Quantifying macrophage defects in type 1 diabetes. <i>Journal of Theoretical Biology</i> , 2005, 233, 533-551.	1.7	50
27	A General Functional Response of Cytotoxic T Lymphocyte-Mediated Killing of Target Cells. <i>Biophysical Journal</i> , 2014, 106, 1780-1791.	0.5	50
28	Phototaxis during the slug stage of <i>Dictyostelium discoideum</i> : a model study. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 1999, 266, 1351-1360.	2.6	49
29	Deterministic Versus Stochastic Cell Polarisation Through Wave-Pinning. <i>Bulletin of Mathematical Biology</i> , 2012, 74, 2570-99.	1.9	49
30	Modelling the onset of Type 1 diabetes: can impaired macrophage phagocytosis make the difference between health and disease?. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2006, 364, 1267-1282.	3.4	46
31	Morphogengineering roots: comparing mechanisms of morphogen gradient formation. <i>BMC Systems Biology</i> , 2012, 6, 37.	3.0	45
32	Modelling <i>Dictyostelium discoideum</i> Morphogenesis: the Culmination. <i>Bulletin of Mathematical Biology</i> , 2002, 64, 327-353.	1.9	44
33	A quantitative comparison of rates of phagocytosis and digestion of apoptotic cells by macrophages from normal (BALB/c) and diabetes-prone (NOD) mice. <i>Journal of Applied Physiology</i> , 2008, 104, 157-169.	2.5	43
34	Pavement cells and the topology puzzle. <i>Development (Cambridge)</i> , 2017, 144, 4386-4397.	2.5	41
35	The RNA Silencing Pathway: The Bits and Pieces That Matter. <i>PLoS Computational Biology</i> , 2005, 1, e21.	3.2	39
36	Moving Forward Moving Backward: Directional Sorting of Chemotactic Cells due to Size and Adhesion Differences. <i>PLoS Computational Biology</i> , 2006, 2, e56.	3.2	39

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37	Towards estimating the true duration of dendritic cell interactions with T cells. <i>Journal of Immunological Methods</i> , 2009, 347, 54-69.	1.4	39
38	Parsimonious Model of Vascular Patterning Links Transverse Hormone Fluxes to Lateral Root Initiation: Auxin Leads the Way, while Cytokinin Levels Out. <i>PLoS Computational Biology</i> , 2015, 11, e1004450.	3.2	38
39	Chemotactic Migration of T Cells towards Dendritic Cells Promotes the Detection of Rare Antigens. <i>PLoS Computational Biology</i> , 2012, 8, e1002763.	3.2	37
40	Bistability, wave pinning and localisation in natural reactionâ€“diffusion systems. <i>Physica D: Nonlinear Phenomena</i> , 2021, 416, 132735.	2.8	35
41	Mathematical Modeling and Experimental Validation of the Spatial Distribution of Boron in the Root of <i>Arabidopsis thaliana</i> Identify High Boron Accumulation in the Tip and Predict a Distinct Root Tip Uptake Function. <i>Plant and Cell Physiology</i> , 2015, 56, 620-630.	3.1	34
42	Morphometrics of complex cell shapes: Lobe Contribution Elliptic Fourier Analysis (LOCO-EFA). <i>Development (Cambridge)</i> , 2018, 145, .	2.5	34
43	Shaping of a three-dimensional carnivorous trap through modulation of a planar growth mechanism. <i>PLoS Biology</i> , 2019, 17, e3000427.	5.6	26
44	Responses of Complex Cells in Area 17 of the Cat to Bi-vectorial Transparent Motion. <i>Vision Research</i> , 1996, 36, 2805-2813.	1.4	24
45	Release of Virus from Lymphoid Tissue Affects Human Immunodeficiency Virus Type 1 and Hepatitis C Virus Kinetics in the Blood. <i>Journal of Virology</i> , 2001, 75, 2597-2603.	3.4	24
46	Ethylene-Mediated Regulation of A2-Type CYCLINs Modulates Hyponastic Growth in <i>Arabidopsis</i> Â. <i>Plant Physiology</i> , 2015, 169, 194-208.	4.8	22
47	Juicy Stories on Female Reproductive Tissue Development: Coordinating the Hormone Flows. <i>Journal of Integrative Plant Biology</i> , 2013, 55, 847-863.	8.5	16
48	Modeling competition among autoreactive CD8+ T cells in autoimmune diabetes: implications for antigen-specific therapy. <i>International Immunology</i> , 2006, 18, 1067-1077.	4.0	15
49	A Sigmoid Functional Response Emerges When Cytotoxic T Lymphocytes Start Killing Fresh Targetâ€“Cells. <i>Biophysical Journal</i> , 2017, 112, 1221-1235.	0.5	14
50	Tissue Dimensionality Influences the Functional Response of Cytotoxic T Lymphocyte-Mediated Killing of Targets. <i>Frontiers in Immunology</i> , 2016, 7, 668.	4.8	14
51	Rapid transporter regulation prevents substrate flow traffic jams in boron transport. <i>ELife</i> , 2017, 6, .	6.0	14
52	Systems Biology Approach Pinpoints Minimum Requirements for Auxin Distribution during Fruit Opening. <i>Molecular Plant</i> , 2019, 12, 863-878.	8.3	6
53	Lymph node topology dictates T cell migration behavior. <i>Journal of Cell Biology</i> , 2007, 177, i2-i2.	5.2	1