Tomas Alarcon

List of Publications by Year
in descending order

97 papers	3,056 citations	201575 27 h-index	175177 52 g-index
106 all docs	106 docs citations	106 times ranked	3198 citing authors

#	Article	IF	Citations
1	Critical slowing down close to a global bifurcation of a curve of quasi-neutral equilibria. Communications in Nonlinear Science and Numerical Simulation, 2022, 104, 106032.	1.7	1
2	Membrane rigidity regulates E. coli proliferation rates. Scientific Reports, 2022, 12, 933.	1.6	7
3	A Method to Coarse-Grain MultiAgent Stochastic Systems with Regions of Multistability. Multiscale Modeling and Simulation, 2022, 20, 404-432.	0.6	0
4	A multiscale model of complex endothelial cell dynamics in early angiogenesis. PLoS Computational Biology, 2021, 17, e1008055.	1.5	31
5	Microrheometer for Biofluidic Analysis: Electronic Detection of the Fluid-Front Advancement. Micromachines, 2021, 12, 726.	1.4	8
6	Bivalent chromatin as a therapeutic target in cancer: An in silico predictive approach for combining epigenetic drugs. PLoS Computational Biology, 2021, 17, e1008408.	1.5	8
7	Blood Rheological Characterization of Î²-Thalassemia Trait and Iron Deficiency Anemia Using Front Microrheometry. Frontiers in Physiology, 2021, 12, 761411.	1.3	8
8	Spatiotemporal Dynamics of Cancer Phenotypic Quasispecies Under Targeted Therapy. SEMA SIMAI Springer Series, 2021, , 1-20.	0.4	0
9	Pitting of malaria parasites in microfluidic devices mimicking spleen interendothelial slits. Scientific Reports, 2021, 11, 22099.	1.6	7
10	A multiscale model of complex endothelial cell dynamics in early angiogenesis. , 2021, 17, e1008055.		0
11	A multiscale model of complex endothelial cell dynamics in early angiogenesis. , 2021, 17, e1008055.		0
12	A multiscale model of complex endothelial cell dynamics in early angiogenesis. , 2021, 17, e1008055.		0
13	A multiscale model of complex endothelial cell dynamics in early angiogenesis. , 2021, 17, e1008055.		0
14	Abnormal morphology biases hematocrit distribution in tumor vasculature and contributes to heterogeneity in tissue oxygenation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27811-27819.	3.3	40
15	An integrated detection method for flow viscosity measurements in microdevices. IEEE Transactions on Biomedical Engineering, 2020, 68, 1-1.	2.5	4
16	Tumor Cell-Intrinsic Immunometabolism and Precision Nutrition in Cancer Immunotherapy. Cancers, 2020, 12, 1757.	1.7	17
17	The dynamics of shapes of vesicle membranes with time dependent spontaneous curvature. PLoS ONE, 2020, 15, e0227562.	1.1	6
18	Noise-induced stabilization of saddle-node ghosts. New Journal of Physics, 2020, 22, 093064.	1.2	6

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19	The LSD1 inhibitor iadademstat (ORY-1001) targets SOX2-driven breast cancer stem cells: a potential epigenetic therapy in luminal-B and HER2-positive breast cancer subtypes. Aging, 2020, 12, 4794-4814.	1.4	38
20	Age Structure Can Account for Delayed Logistic Proliferation of Scratch Assays. Bulletin of Mathematical Biology, 2019, 81, 2706-2724.	0.9	5
21	A multiscale model of epigenetic heterogeneity-driven cell fate decision-making. PLoS Computational Biology, 2019, 15, e1006592.	1.5	28
22	de la Cruz etÂal. Reply. Physical Review Letters, 2019, 122, 059802.	2.9	0
23	<i>In vitro</i> cell migration quantification method for scratch assays. Journal of the Royal Society Interface, 2019, 16, 20180709.	1.5	76
24	Viral replication modes in single-peak fitness landscapes: A dynamical systems analysis. Journal of Theoretical Biology, 2019, 460, 170-183.	0.8	7
25	In silico clinical trials for anti-aging therapies. Aging, 2019, 11, 6591-6601.	1.4	3
26	Noise-induced bistability in the fate of cancer phenotypic quasispecies: a bit-strings approach. Scientific Reports, 2018, 8, 1027.	1.6	14
27	Minimum Action Path Theory Reveals the Details of Stochastic Transitions Out of Oscillatory States. Physical Review Letters, 2018, 120, 128102.	2.9	15
28	Noise-induced bistability in the quasi-neutral coexistence of viral RNAs under different replication modes. Journal of the Royal Society Interface, 2018, 15, 20180129.	1.5	4
29	Mitostemness. Cell Cycle, 2018, 17, 918-926.	1.3	15
30	Epigenetic regulation of cell fate reprogramming in aging and disease: A predictive computational model. PLoS Computational Biology, 2018, 14, e1006052.	1.5	23
31	3D hybrid modelling of vascular network formation. Journal of Theoretical Biology, 2017, 414, 254-268.	0.8	63
32	Front microrheology of the non-Newtonian behaviour of blood: scaling theory of erythrocyte aggregation by aging. Soft Matter, 2017, 13, 3042-3047.	1.2	12
33	Coarse-graining and hybrid methods for efficient simulation of stochastic multi-scale models of tumour growth. Journal of Computational Physics, 2017, 350, 974-991.	1.9	11
34	Senescence-Inflammatory Regulation of Reparative Cellular Reprogramming in Aging and Cancer. Frontiers in Cell and Developmental Biology, 2017, 5, 49.	1.8	23
35	Capillary Filling at the Microscale: Control of Fluid Front Using Geometry. PLoS ONE, 2016, 11, e0153559.	1.1	10
36	Growth rate and shape as possible control mechanisms for the selection of mode development in optimal biological branching processes. European Physical Journal: Special Topics, 2016, 225, 2581-2589.	1.2	1

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37	Nuclear reprogramming of cancer stem cells: Corrupting the epigenetic code of cell identity with oncometabolites. Molecular and Cellular Oncology, 2016, 3, e1160854.	0.3	3
38	Stochastic multi-scale models of competition within heterogeneous cellular populations: Simulation methods and mean-field analysis. Journal of Theoretical Biology, 2016, 407, 161-183.	0.8	6
39	Stochastic modelling of the eradication of the HIV-1 infection by stimulation of latently infected cells in patients under highly active anti-retroviral therapy. Journal of Mathematical Biology, 2016, 73, 919-946.	0.8	12
40	Oncometabolic Nuclear Reprogramming of Cancer Stemness. Stem Cell Reports, 2016, 6, 273-283.	2.3	34
41	Evolutionary escape on complex genotypeâ€“phenotype networks. Journal of Theoretical Biology, 2016, 394, 18-31.	0.8	1
42	Surviving evolutionary escape on complex genotypeâ€“phenotype networks. Journal of Mathematical Biology, 2016, 72, 623-647.	0.8	1
43	From invasion to latency: intracellular noise and cell motility as key controls of the competition between resource-limited cellular populations. Journal of Mathematical Biology, 2016, 72, 123-156.	0.8	9
44	Activation of the methylation cycle in cells reprogrammed into a stem cell-like state. Oncoscience, 2016, 2, 958-967.	0.9	30
45	Accelerated geroncogenesis in hereditary breast-ovarian cancer syndrome. Oncotarget, 2016, 7, 11959-11971.	0.8	9
46	Suppression of endogenous lipogenesis induces reversion of the malignant phenotype and normalized differentiation in breast cancer. Oncotarget, 2016, 7, 71151-71168.	0.8	40
47	Germline <i>BRCA1</i> mutation reprograms breast epithelial cell metabolism towards mitochondrial-dependent biosynthesis: evidence for metformin-based â€œstarvationâ€•strategies in <i>BRCA1</i> carriers. Oncotarget, 2016, 7, 52974-52992.	0.8	26
48	The effects of intrinsic noise on the behaviour of bistable cell regulatory systems under quasi-steady state conditions. Journal of Chemical Physics, 2015, 143, 074105.	1.2	13
49	Stochastic Multiscale Models of Cell Population Dynamics: Asymptotic and Numerical Methods. Mathematical Modelling of Natural Phenomena, 2015, 10, 64-93.	0.9	7
50	Stochastic modelling of viral blips in HIV-1-infected patients: Effects of inhomogeneous density fluctuations. Journal of Theoretical Biology, 2015, 371, 79-89.	0.8	12
51	Phase-field modelling of the dynamics of Z-ring formation in liposomes: Onset of constriction and coarsening. European Physical Journal E, 2015, 38, 61.	0.7	2
52	Hybrid approaches for multiple-species stochastic reactionâ€“diffusion models. Journal of Computational Physics, 2015, 299, 429-445.	1.9	26
53	Mesoscopic and continuum modelling of angiogenesis. Journal of Mathematical Biology, 2015, 70, 485-532.	0.8	64
54	Robustness of differentiation cascades with symmetric stem cell division. Journal of the Royal Society Interface, 2014, 11, 20140264.	1.5	4

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55	Stochastic quasi-steady state approximations for asymptotic solutions of the chemical master equation. Journal of Chemical Physics, 2014, 140, 184109.	1.2	9
56	Xenopatients 2.0: Reprogramming the epigenetic landscapes of patient-derived cancer genomes. Cell Cycle, 2014, 13, 358-370.	1.3	14
57	Gerometabolites: The pseudohypoxic aging side of cancer oncometabolites. Cell Cycle, 2014, 13, 699-709.	1.3	33
58	Metabostemness: A New Cancer Hallmark. Frontiers in Oncology, 2014, 4, 262.	1.3	95
59	Stability Analysis of a Renewal Equation for Cell Population Dynamics with Quiescence. SIAM Journal on Applied Mathematics, 2014, 74, 1266-1297.	0.8	8
60	The topology of robustness and evolvability in evolutionary systems with genotypeâ€"phenotype map. Journal of Theoretical Biology, 2014, 356, 144-162.	0.8	16
61	Metabostemness: Metaboloepigenetic reprogramming of cancer stem-cell functions. Oncoscience, 2014, 1, 803-806.	0.9	31
62	Comment on â€œMorphogenetic action through flux-limited spreadingâ€•by Verbeni, SÃ¡nchez, Mollica, Siegl-Cachedenier, Carleton, Guerrero, Ruiz i Altaba, and Soler. Physics of Life Reviews, 2013, 10, 493-494.	1.5	1
63	The Warburg effect version 2.0: Metabolic reprogramming of cancer stem cells. Cell Cycle, 2013, 12, 1166-1179.	1.3	146
64	Nuclear reprogramming of luminal-like breast cancer cells generates Sox2-overexpressing cancer stem-like cellular states harboring transcriptional activation of the mTOR pathway. Cell Cycle, 2013, 12, 3109-3124.	1.3	90
65	What Can Be Learnt about Disease Progression in Breast Cancer Dormancy from Relapse Data?. PLoS ONE, 2013, 8, e62320.	1.1	12
66	Stability analysis of multi-compartment models for cell production systems. Journal of Biological Dynamics, 2012, 6, 2-18.	0.8	48
67	Invasion in multi-type populations: the role of phenotypic robustness and fluctuations. Mathematical Medicine and Biology, 2012, 29, 3-20.	0.8	2
68	Mathematical Modeling of the VEGF Receptor. , 2012, , 3-35.		0
69	Quiescence: a mechanism for escaping the effects of drug on cell populations. Journal of the Royal Society Interface, 2011, 8, 99-106.	1.5	22
70	Multiscale Modelling of Vascular Tumour Growth in 3D: The Roles of Domain Size and Boundary Conditions. PLoS ONE, 2011, 6, e14790.	1.1	150
71	Breast Cancer Dormancy Can Be Maintained by Small Numbers of Micrometastases. Cancer Research, 2010, 70, 4310-4317.	0.4	42
72	Angiogenesis and vascular remodelling in normal and cancerous tissues. Journal of Mathematical Biology, 2009, 58, 689-721.	0.8	178

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73	Multiscale Modelling of Solid Tumour Growth. , 2008, , 1-25.		5
74	Mathematical models of the VEGF receptor and its role in cancer therapy. Journal of the Royal Society Interface, 2007, 4, 283-304.	1.5	24
75	Modelling Cell Growth and its Modulation of the G1/S Transition. Bulletin of Mathematical Biology, 2007, 69, 197-214.	0.9	8
76	Structural Adaptation in Normal and Cancerous Vasculature. , 2007, , 165-178.		1
77	Stochastic models of receptor oligomerization by bivalent ligand. Journal of the Royal Society Interface, 2006, 3, 545-559.	1.5	18
78	Mathematical models of the fate of lymphoma B cells after antigen receptor ligation with specific antibodies. Journal of Theoretical Biology, 2006, 240, 54-71.	0.8	7
79	Multiscale Modelling of Tumour Growth and Therapy: The Influence of Vessel Normalisation on Chemotherapy. Computational and Mathematical Methods in Medicine, 2006, 7, 85-119.	0.7	71
80	MODELLING THE RESPONSE OF VASCULAR TUMOURS TO CHEMOTHERAPY: A MULTISCALE APPROACH. Mathematical Models and Methods in Applied Sciences, 2006, 16, 1219-1241.	1.7	52
81	Modelling aspects of cancer dynamics: a review. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 1563-1578.	1.6	211
82	The impact of cell crowding and active cell movement on vascular tumour growth. Networks and Heterogeneous Media, 2006, 1, 515-535.	0.5	26
83	MODELLING ASPECTS OF VASCULAR CANCER DEVELOPMENT. , 2006, , .		0
84	20 Mathematical modelling of angiogenesis and vascular adaptation. Studies in Multidisciplinarity, 2005, , 369-387.	0.0	13
85	A mathematical model of Doxorubicin treatment efficacy for non-Hodgkin?s lymphoma: investigation of the current protocol through theoretical modelling results. Bulletin of Mathematical Biology, 2005, 67, 79-99.	0.9	55
86	A Multiple Scale Model for Tumor Growth. Multiscale Modeling and Simulation, 2005, 3, 440-475.	0.6	165
87	A design principle for vascular beds: the effects of complex blood rheology. Microvascular Research, 2005, 69, 156-172.	1.1	34
88	Towards whole-organ modelling of tumour growth. Progress in Biophysics and Molecular Biology, 2004, 85, 451-472.	1.4	95
89	A mathematical model of the effects of hypoxia on the cell-cycle of normal and cancer cells. Journal of Theoretical Biology, 2004, 229, 395-411.	0.8	128
90	A cellular automaton model for tumour growth in inhomogeneous environment. Journal of Theoretical Biology, 2003, 225, 257-274.	0.8	392

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91	Vorticity ratchet. Physica A: Statistical Mechanics and Its Applications, 2003, 325, 55-61.	1.2	0
92	Stochastic resonance in a suspension of magnetic dipoles under shear flow. Physical Review E, 2001, 63, 041112.	0.8	3
93	Energy Transduction in Periodically Driven Non-Hermitian Systems. Physical Review Letters, 2000, 85, 3995-3998.	2.9	6
94	A mesoscopic approach to the â€œnegativeâ€•viscosity effect in ferrofluids. Physica A: Statistical Mechanics and Its Applications, 1999, 270, 403-412.	1.2	12
95	Periodic modulation induced increase of reaction rates in autocatalytic systems. Journal of Chemical Physics, 1998, 108, 7367-7374.	1.2	3
96	Stochastic resonance in nonpotential systems. Physical Review E, 1998, 57, 4979-4985.	0.8	33
97	Low temperature viscosity in elongated ferrofluids. Journal of Chemical Physics, 1997, 107, 10253-10259.	1.2	2