

Sergio Alonso Muñoz

List of Publications by Year in descending order

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Version: 2024-02-01

73
papers

1,516
citations

304743

22
h-index

345221

36
g-index

74
all docs

74
docs citations

74
times ranked

1086
citing authors

#	ARTICLE	IF	CITATIONS
1	Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 Infection Among Children in Summer Schools Applying Stringent Control Measures in Barcelona, Spain. <i>Clinical Infectious Diseases</i> , 2022, 74, 66-73.	5.8	26
2	From Single to Collective Motion of Social Amoebae: A Computational Study of Interacting Cells. <i>Frontiers in Physics</i> , 2022, 9, .	2.1	4
3	Individual prevention and containment measures in schools in Catalonia, Spain, and community transmission of SARS-CoV-2 after school re-opening. <i>PLoS ONE</i> , 2022, 17, e0263741.	2.5	9
4	An ensemble of parameters from a robust Markov-based model reproduces L-type calcium currents from different human cardiac myocytes. <i>PLoS ONE</i> , 2022, 17, e0266233.	2.5	0
5	Mass-Conservation Increases Robustness in Stochastic Reaction-Diffusion Models of Cell Crawling. <i>Frontiers in Physics</i> , 2022, 10, .	2.1	0
6	Diffusivity Estimation for Activator-Inhibitor Models: Theory and Application to Intracellular Dynamics of the Actin Cytoskeleton. <i>Journal of Nonlinear Science</i> , 2021, 31, 1.	2.1	9
7	Risk Diagrams Based on Primary Care Electronic Medical Records and Linked Real-Time PCR Data to Monitor Local COVID-19 Outbreaks During the Summer 2020: A Prospective Study Including 7,671,862 People in Catalonia. <i>Frontiers in Public Health</i> , 2021, 9, 693956.	2.7	8
8	Age-dependency of the Propagation Rate of Coronavirus Disease 2019 Inside School Bubble Groups in Catalonia, Spain. <i>Pediatric Infectious Disease Journal</i> , 2021, 40, 955-961.	2.0	22
9	Monitoring and Analysis of COVID-19 Pandemic: The Need for an Empirical Approach. <i>Frontiers in Public Health</i> , 2021, 9, 633123.	2.7	6
10	Robust estimation of diagnostic rate and real incidence of COVID-19 for European policymakers. <i>PLoS ONE</i> , 2021, 16, e0243701.	2.5	25
11	A reaction-diffusion model to understand granulomas formation inside secondary lobule during tuberculosis infection. <i>PLoS ONE</i> , 2020, 15, e0239289.	2.5	3
12	Modelling the dynamics of tuberculosis lesions in a virtual lung: Role of the bronchial tree in endogenous reinfection. <i>PLoS Computational Biology</i> , 2020, 16, e1007772.	3.2	8
13	How cortical waves drive fission of motile cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 6330-6338.	7.1	40
14	Modeling cell crawling strategies with a bistable model: From amoeboid to fan-shaped cell motion. <i>Physica D: Nonlinear Phenomena</i> , 2020, 412, 132591.	2.8	17
15	Empirical model for short-time prediction of COVID-19 spreading. <i>PLoS Computational Biology</i> , 2020, 16, e1008431.	3.2	23
16	Combining Polynomial Chaos Expansions and Genetic Algorithm for the Coupling of Electrophysiological Models. <i>Lecture Notes in Computer Science</i> , 2019, , 116-129.	1.3	2
17	Onset of Mechanochemical Pattern Formation in Poroviscoelastic Models of Active Cytoplasm. <i>SEMA SIMAI Springer Series</i> , 2019, , 87-106.	0.7	0
18	Modelling the Electrical Activity of the Heart. <i>Series in Bioengineering</i> , 2019, , 211-229.	0.6	1

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19	Discretization-dependent model for weakly connected excitable media. <i>Physical Review E</i> , 2018, 97, 032214.	2.1	2
20	Ectopic beats arise from micro-reentries near infarct regions in simulations of a patient-specific heart model. <i>Scientific Reports</i> , 2018, 8, 16392.	3.3	32
21	Can systems immunology lead tuberculosis eradication?. <i>Current Opinion in Systems Biology</i> , 2018, 12, 53-60.	2.6	6
22	Modeling random crawling, membrane deformation and intracellular polarity of motile amoeboid cells. <i>PLoS ONE</i> , 2018, 13, e0201977.	2.5	36
23	Killing Many Birds With Two Stones: Hypoxia and Fibrosis Can Generate Ectopic Beats in a Human Ventricular Model. <i>Frontiers in Physiology</i> , 2018, 9, 764.	2.8	15
24	Development of a Computational Model of Abscess Formation. <i>Frontiers in Microbiology</i> , 2018, 9, 1355.	3.5	3
25	Mechanochemical pattern formation in simple models of active viscoelastic fluids and solids. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 434004.	2.8	19
26	Control of electrical turbulence by periodic excitation of cardiac tissue. <i>Chaos</i> , 2017, 27, 113110.	2.5	11
27	Reentry produced by small-scale heterogeneities in a discrete model of cardiac tissue. <i>Journal of Physics: Conference Series</i> , 2016, 727, 012002.	0.4	4
28	Nonlinear physics of electrical wave propagation in the heart: a review. <i>Reports on Progress in Physics</i> , 2016, 79, 096601.	20.1	58
29	Pattern Formation at Cellular Membranes by Phosphorylation and Dephosphorylation of Proteins. <i>SEMA SIMAI Springer Series</i> , 2016, , 63-82.	0.7	0
30	Oscillations and uniaxial mechanochemical waves in a model of an active poroelastic medium: Application to deformation patterns in protoplasmic droplets of <i>Physarum polycephalum</i> . <i>Physica D: Nonlinear Phenomena</i> , 2016, 318-319, 58-69.	2.8	21
31	Reentry and Ectopic Pacemakers Emerge in a Three-Dimensional Model for a Slab of Cardiac Tissue with Diffuse Microfibrosis near the Percolation Threshold. <i>PLoS ONE</i> , 2016, 11, e0166972.	2.5	49
32	Dynamics of <i>Physarum</i> Microdroplets – an Example for Mechanochemical Pattern Formation in Active Biological Matter. , 2016, , .		0
33	Reactive Interstitial and Reparative Fibrosis as Substrates for Cardiac Ectopic Pacemakers and Reentries. <i>Lecture Notes in Computer Science</i> , 2016, , 346-357.	1.3	1
34	Simulations of Heart Function. <i>BioMed Research International</i> , 2015, 2015, 1-3.	1.9	1
35	Simulation of Ectopic Pacemakers in the Heart: Multiple Ectopic Beats Generated by Reentry inside Fibrotic Regions. <i>BioMed Research International</i> , 2015, 2015, 1-18.	1.9	23
36	Spatio-temporal dynamics induced by competing instabilities in two asymmetrically coupled nonlinear evolution equations. <i>Chaos</i> , 2014, 24, 043142.	2.5	8

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37	Dynamics of reaction-diffusion patterns controlled by asymmetric nonlocal coupling as a limiting case of differential advection. <i>Physical Review E</i> , 2014, 89, 052909.	2.1	18
38	Traveling waves and global oscillations triggered by attractive molecular interactions in an excitable system. <i>Physical Review E</i> , 2014, 90, 052913.	2.1	3
39	Modeling domain formation of MARCKS and protein kinase C at cellular membranes. <i>EPJ Nonlinear Biomedical Physics</i> , 2014, 2, .	0.8	6
40	Intracellular Mechanochemical Waves in an Active Poroelastic Model. <i>Physical Review Letters</i> , 2013, 110, 138102.	7.8	64
41	Negative Tension of Scroll Wave Filaments and Turbulence in Three-Dimensional Excitable Media and Application in Cardiac Dynamics. <i>Bulletin of Mathematical Biology</i> , 2013, 75, 1351-1376.	1.9	24
42	Wave Propagation in Excitable Media Through Randomly Distributed Heterogeneities: Simulations and Comparison to the Effective Medium Theory. <i>ESAIM: Proceedings and Surveys</i> , 2013, 39, 7-14.	0.4	0
43	Twists of Opposite Handedness on a Scroll Wave. <i>Physical Review Letters</i> , 2013, 110, 234102.	7.8	12
44	Reentry Near the Percolation Threshold in a Heterogeneous Discrete Model for Cardiac Tissue. <i>Physical Review Letters</i> , 2013, 110, 158101.	7.8	68
45	Oscillations in the Lateral Pressure of Lipid Monolayers Induced by Nonlinear Chemical Dynamics of the Second Messengers MARCKS and Protein Kinase C. <i>Biophysical Journal</i> , 2011, 100, 939-947.	0.5	12
46	Effects of reduced discrete coupling on filament tension in excitable media. <i>Chaos</i> , 2011, 21, 013118.	2.5	13
47	Surfactant-induced gradients in the three-dimensional Belousov-Zhabotinsky reaction. <i>Physical Review E</i> , 2011, 84, 056210.	2.1	15
48	Complex wave patterns in an effective reaction-diffusion model for chemical reactions in microemulsions. <i>Journal of Chemical Physics</i> , 2011, 134, 094117.	3.0	16
49	Wave propagation in heterogeneous bistable and excitable media. <i>European Physical Journal: Special Topics</i> , 2010, 187, 31-40.	2.6	12
50	Self-organization processes at active interfaces. <i>European Physical Journal: Special Topics</i> , 2010, 191, 131-145.	2.6	2
51	Phase separation and bistability in a three-dimensional model for protein domain formation at biomembranes. <i>Physical Biology</i> , 2010, 7, 046012.	1.8	23
52	Effective medium approach for heterogeneous reaction-diffusion media. <i>Journal of Chemical Physics</i> , 2009, 131, 214102.	3.0	14
53	Towards active microfluidics: Interface turbulence in thin liquid films with floating molecular machines. <i>Physical Review E</i> , 2009, 79, 061906.	2.1	13
54	Effects of external global noise on the catalytic CO oxidation on Pt(110). <i>Journal of Chemical Physics</i> , 2009, 130, 084704.	3.0	15

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55	Noise-reversed stability of Turing patterns versus Hopf oscillations near codimension-two conditions. <i>Physical Review E</i> , 2009, 80, 035203.	2.1	5
56	Effective Medium Theory for Reaction Rates and Diffusion Coefficients of Heterogeneous Systems. <i>Physical Review Letters</i> , 2009, 102, 238302.	7.8	29
57	Differential susceptibility to noise of mixed Turing and Hopf modes in a photosensitive chemical medium. <i>Europhysics Letters</i> , 2008, 81, 30006.	2.0	6
58	Negative Filament Tension at High Excitability in a Model of Cardiac Tissue. <i>Physical Review Letters</i> , 2008, 100, 218101.	7.8	46
59	Negative filament tension in the Luo-Rudy model of cardiac tissue. <i>Chaos</i> , 2007, 17, 015102.	2.5	32
60	Experimental Evidence of Localized Oscillations in the Photosensitive Chlorine Dioxide-Iodine-Malonic Acid Reaction. <i>Physical Review Letters</i> , 2006, 97, 178301.	7.8	35
61	Negative-Tension Instability of Scroll Waves and Winfree Turbulence in the Oregonator Model. <i>Journal of Physical Chemistry A</i> , 2006, 110, 12063-12071.	2.5	26
62	Periodic forcing of scroll rings and control of Winfree turbulence in excitable media. <i>Chaos</i> , 2006, 16, 023124.	2.5	23
63	Scroll wave instability controlled by external fluctuations. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005, 351, 159-166.	2.6	1
64	Suppression of scroll wave turbulence by noise. <i>Physical Review E</i> , 2004, 70, 067201.	2.1	15
65	Expanding scroll rings and negative tension turbulence in a model of excitable media. <i>Physical Review E</i> , 2004, 70, 056201.	2.1	41
66	Taming Winfree Turbulence of Scroll Waves in Excitable Media. <i>Science</i> , 2003, 299, 1722-1725.	12.6	227
67	Excitability transitions and wave dynamics under spatiotemporal structured noise. <i>Physical Review E</i> , 2002, 65, 066107.	2.1	22
68	WAVE PATTERN DYNAMICS IN FLUCTUATING MEDIA. <i>International Journal of Modern Physics C</i> , 2002, 13, 1243-1252.	1.7	1
69	Noise-induced Brownian motion of spiral waves. <i>Physical Review E</i> , 2001, 63, 046205.	2.1	9
70	Regular Wave Propagation Out of Noise in Chemical Active Media. <i>Physical Review Letters</i> , 2001, 87, 078302.	7.8	91
71	Brownian Motion of Spiral Waves Driven by Spatiotemporal Structured Noise. <i>Physical Review Letters</i> , 2000, 84, 2734-2737.	7.8	73
72	Unravelling the Role of the Mandatory Use of Face Covering Masks for the Control of SARS-CoV-2 in Schools: A Quasi-Experimental Study Nested in a Population-Based Cohort in Catalonia (Spain). <i>SSRN Electronic Journal</i> , 0, , .	0.4	1

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73	Unravelling the Role of the Mandatory Use of Face Covering Masks for the Control of SARS-CoV-2 in Schools: A Quasi-Experimental Study Nested in a Population-Based Cohort in Catalonia (Spain). SSRN Electronic Journal, 0, , .	0.4	2