

Enrique Álvarez-Lacalle

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

1,034
citations

394286

19
h-index

434063

31
g-index

63
all docs

63
docs citations

63
times ranked

987
citing authors

#	ARTICLE	IF	CITATIONS
1	Noise focusing and the emergence of coherent activity in neuronal cultures. <i>Nature Physics</i> , 2013, 9, 582-590.	6.5	161
2	Minimization of Viscous Fluid Fingering: A Variational Scheme for Optimal Flow Rates. <i>Physical Review Letters</i> , 2012, 109, 144502.	2.9	87
3	Low viscosity contrast fingering in a rotating Hele-Shaw cell. <i>Physics of Fluids</i> , 2004, 16, 908-924.	1.6	82
4	Hierarchical structures induce long-range dynamical correlations in written texts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 7956-7961.	3.3	56
5	Viscosity contrast effects on fingering formation in rotating Hele-Shaw flows. <i>Physical Review E</i> , 2005, 72, 026306.	0.8	45
6	Relevance of dynamic wetting in viscous fingering patterns. <i>Physical Review E</i> , 2006, 74, 025302.	0.8	39
7	Nonlinear Saffman-Taylor Instability. <i>Physical Review Letters</i> , 2004, 92, 054501.	2.9	38
8	Systematic weakly nonlinear analysis of radial viscous fingering. <i>Physical Review E</i> , 2003, 68, 026308.	0.8	33
9	Dependency of Calcium Alternans on Ryanodine Receptor Refractoriness. <i>PLoS ONE</i> , 2013, 8, e55042.	1.1	32
10	Pattern formation and interface pinch-off in rotating Hele-Shaw flows: A phase-field approach. <i>Physical Review E</i> , 2009, 80, 056305.	0.8	30
11	Calcium Alternans is Due to an Order-Disorder Phase Transition in Cardiac Cells. <i>Physical Review Letters</i> , 2015, 114, 108101.	2.9	30
12	Molecular Model of the Contractile Ring. <i>Physical Review Letters</i> , 2005, 95, 098102.	2.9	28
13	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.	2.9	26
14	Robust estimation of diagnostic rate and real incidence of COVID-19 for European policymakers. <i>PLoS ONE</i> , 2021, 16, e0243701.	1.1	25
15	Slow and fast pulses in 1-D cultures of excitatory neurons. <i>Journal of Computational Neuroscience</i> , 2009, 26, 475-493.	0.6	23
16	Comparative Analysis of Geolocation Information through Mobile-Devices under Different COVID-19 Mobility Restriction Patterns in Spain. <i>ISPRS International Journal of Geo-Information</i> , 2021, 10, 73.	1.4	23
17	Empirical model for short-time prediction of COVID-19 spreading. <i>PLoS Computational Biology</i> , 2020, 16, e1008431.	1.5	23
18	Global coupling in excitable media provides a simplified description of mechano-electrical feedback in cardiac tissue. <i>Physical Review E</i> , 2009, 79, 031921.	0.8	22

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19	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.	1.1	22
20	Detection, Properties, and Frequency of Local Calcium Release from the Sarcoplasmic Reticulum in Teleost Cardiomyocytes. <i>PLoS ONE</i> , 2011, 6, e23708.	1.1	22
21	Systematic weakly nonlinear analysis of interfacial instabilities in Hele-Shaw flows. <i>Physical Review E</i> , 2001, 64, 016302.	0.8	20
22	Ca ²⁺ -CaM Dependent Inactivation of RyR2 Underlies Ca ²⁺ Alternans in Intact Heart. <i>Circulation Research</i> , 2021, 128, e63-e83.	2.0	17
23	Multi-Scale Computational Modeling of Spatial Calcium Handling From Nanodomain to Whole-Heart: Overview and Perspectives. <i>Frontiers in Physiology</i> , 2022, 13, 836622.	1.3	14
24	Coriolis effects on fingering patterns under rotation. <i>Physical Review E</i> , 2008, 78, 026305.	0.8	13
25	Characterization of the nonlinear content of the heart rate dynamics during myocardial ischemia. <i>Medical Engineering and Physics</i> , 2009, 31, 660-667.	0.8	13
26	Minimal model for calcium alternans due to SR release refractoriness. <i>Chaos</i> , 2017, 27, 093928.	1.0	11
27	Pinch-off singularities in rotating Hele-Shaw flows at high viscosity contrast. <i>Physical Review E</i> , 2009, 80, 056306.	0.8	9
28	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.	1.1	9
29	Role of connectivity and fluctuations in the nucleation of calcium waves in cardiac cells. <i>Physical Review E</i> , 2015, 92, 052715.	0.8	8
30	Cardiac contraction induces discordant alternans and localized block. <i>Physical Review E</i> , 2015, 91, 022703.	0.8	8
31	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.	1.3	8
32	The Timing Statistics of Spontaneous Calcium Release in Cardiac Myocytes. <i>PLoS ONE</i> , 2013, 8, e62967.	1.1	7
33	Stochastic coupled map model of subcellular calcium cycling in cardiac cells. <i>Chaos</i> , 2019, 29, 023125.	1.0	7
34	The ethical use of high-performance computing and artificial intelligence: fighting COVID-19 at Barcelona Supercomputing Center. <i>AI and Ethics</i> , 2022, 2, 325-340.	4.6	7
35	Monitoring and Analysis of COVID-19 Pandemic: The Need for an Empirical Approach. <i>Frontiers in Public Health</i> , 2021, 9, 633123.	1.3	6
36	Nonlinear signaling on biological networks: The role of stochasticity and spectral clustering. <i>Physical Review E</i> , 2017, 95, 032313.	0.8	5

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37	Buffering and total calcium levels determine the presence of oscillatory regimes in cardiac cells. PLoS Computational Biology, 2020, 16, e1007728.	1.5	3
38	Oscillatory regime in excitatory media with global coupling: Application to cardiac dynamics. , 2008, , .		2
39	Mechanisms Underlying Electro-Mechanical Cardiac Alternans. SEMA SIMAI Springer Series, 2016, , 113-128.	0.4	2
40	Combining Polynomial Chaos Expansions and Genetic Algorithm for the Coupling of Electrophysiological Models. Lecture Notes in Computer Science, 2019, , 116-129.	1.0	2
41	Two-variable nullcline analysis of ionic general equilibrium predicts calcium homeostasis in ventricular myocytes. PLoS Computational Biology, 2020, 16, e1007572.	1.5	2
42	Identification of intracellular calcium dynamics in stimulated cardiomyocytes. , 2010, 2010, 68-71.		1
43	The emergence of spontaneous activity in neuronal cultures. , 2013, , .		0
44	Calcium alternans is a global order-disorder phase transition. Robustness on Ryanodine Receptor release dynamics. , 2015, , .		0
45	Nucleation of Calcium Waves in Cardiac Cells: The Role of Network Connectivity. Biophysical Journal, 2016, 110, 435a.	0.2	0
46	Effects of Small Conductance Calcium Activated Potassium Channels in Cardiac Myocytes. , 2017, , .		0
47	Electrophysiological Effects of Small Conductance Ca^{2+} -Activated K^{+} Channels in Atrial Myocytes. SEMA SIMAI Springer Series, 2019, , 19-37.	0.4	0
48	An ensemble of parameters from a robust Markov-based model reproduces L-type calcium currents from different human cardiac myocytes. PLoS ONE, 2022, 17, e0266233.	1.1	0
49	Title is missing!. , 2020, 16, e1007572.		0
50	Title is missing!. , 2020, 16, e1007572.		0
51	Title is missing!. , 2020, 16, e1007572.		0
52	Title is missing!. , 2020, 16, e1007572.		0
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58	Buffering and total calcium levels determine the presence of oscillatory regimes in cardiac cells. , 2020, 16, e1007728.		0