Enrique Alvarez-Lacalle

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Noise focusing and the emergence of coherent activity in neuronal cultures. Nature Physics, 2013, 9, 582-590.	16.7	161
2	Minimization of Viscous Fluid Fingering: A Variational Scheme for Optimal Flow Rates. Physical Review Letters, 2012, 109, 144502.	7.8	87
3	Low viscosity contrast fingering in a rotating Hele-Shaw cell. Physics of Fluids, 2004, 16, 908-924.	4.0	82
4	Hierarchical structures induce long-range dynamical correlations in written texts. Proceedings of the United States of America, 2006, 103, 7956-7961.	7.1	56
5	Viscosity contrast effects on fingering formation in rotating Hele-Shaw flows. Physical Review E, 2005, 72, 026306.	2.1	45
6	Relevance of dynamic wetting in viscous fingering patterns. Physical Review E, 2006, 74, 025302.	2.1	39
7	Nonlinear Saffman-Taylor Instability. Physical Review Letters, 2004, 92, 054501.	7.8	38
8	Systematic weakly nonlinear analysis of radial viscous fingering. Physical Review E, 2003, 68, 026308.	2.1	33
9	Dependency of Calcium Alternans on Ryanodine Receptor Refractoriness. PLoS ONE, 2013, 8, e55042.	2.5	32
10	Pattern formation and interface pinch-off in rotating Hele-Shaw flows: A phase-field approach. Physical Review E, 2009, 80, 056305.	2.1	30
11	Calcium Alternans is Due to an Order-Disorder Phase Transition in Cardiac Cells. Physical Review Letters, 2015, 114, 108101.	7.8	30
12	Molecular Model of the Contractile Ring. Physical Review Letters, 2005, 95, 098102.	7.8	28
13	Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 Infection Among Children in Summer Schools Applying Stringent Control Measures in Barcelona, Spain. Clinical Infectious Diseases, 2022, 74, 66-73.	5.8	26
14	Robust estimation of diagnostic rate and real incidence of COVID-19 for European policymakers. PLoS ONE, 2021, 16, e0243701.	2.5	25
15	Slow and fast pulses in 1-D cultures of excitatory neurons. Journal of Computational Neuroscience, 2009, 26, 475-493.	1.0	23
16	Comparative Analysis of Geolocation Information through Mobile-Devices under Different COVID-19 Mobility Restriction Patterns in Spain. ISPRS International Journal of Geo-Information, 2021, 10, 73.	2.9	23
17	Empirical model for short-time prediction of COVID-19 spreading. PLoS Computational Biology, 2020, 16, e1008431.	3.2	23
18	Global coupling in excitable media provides a simplified description of mechanoelectrical feedback in cardiac tissue. Physical Review E, 2009, 79, 031921.	2.1	22

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19	Age-dependency of the Propagation Rate of Coronavirus Disease 2019 Inside School Bubble Groups in Catalonia, Spain. Pediatric Infectious Disease Journal, 2021, 40, 955-961.	2.0	22
20	Detection, Properties, and Frequency of Local Calcium Release from the Sarcoplasmic Reticulum in Teleost Cardiomyocytes. PLoS ONE, 2011, 6, e23708.	2.5	22
21	Systematic weakly nonlinear analysis of interfacial instabilities in Hele-Shaw flows. Physical Review E, 2001, 64, 016302.	2.1	20
22	Ca 2+ -CaM Dependent Inactivation of RyR2 Underlies Ca 2+ Alternans in Intact Heart. Circulation Research, 2021, 128, e63-e83.	4.5	17
23	Multi-Scale Computational Modeling of Spatial Calcium Handling From Nanodomain to Whole-Heart: Overview and Perspectives. Frontiers in Physiology, 2022, 13, 836622.	2.8	14
24	Coriolis effects on fingering patterns under rotation. Physical Review E, 2008, 78, 026305.	2.1	13
25	Characterization of the nonlinear content of the heart rate dynamics during myocardial ischemia. Medical Engineering and Physics, 2009, 31, 660-667.	1.7	13
26	Minimal model for calcium alternans due to SR release refractoriness. Chaos, 2017, 27, 093928.	2.5	11
27	Pinch-off singularities in rotating Hele-Shaw flows at high viscosity contrast. Physical Review E, 2009, 80, 056306.	2.1	9
28	Individual prevention and containment measures in schools in Catalonia, Spain, and community transmission of SARS-CoV-2 after school re-opening. PLoS ONE, 2022, 17, e0263741.	2.5	9
29	Role of connectivity and fluctuations in the nucleation of calcium waves in cardiac cells. Physical Review E, 2015, 92, 052715.	2.1	8
30	Cardiac contraction induces discordant alternans and localized block. Physical Review E, 2015, 91, 022703.	2.1	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. Frontiers in Public Health, 2021, 9, 693956.	2.7	8
32	The Timing Statistics of Spontaneous Calcium Release in Cardiac Myocytes. PLoS ONE, 2013, 8, e62967.	2.5	7
33	Stochastic coupled map model of subcellular calcium cycling in cardiac cells. Chaos, 2019, 29, 023125.	2.5	7
34	The ethical use of high-performance computing and artificial intelligence: fighting COVID-19 at Barcelona Supercomputing Center. Al and Ethics, 2022, 2, 325-340.	6.8	7
35	Monitoring and Analysis of COVID-19 Pandemic: The Need for an Empirical Approach. Frontiers in Public Health, 2021, 9, 633123.	2.7	6
36	Nonlinear signaling on biological networks: The role of stochasticity and spectral clustering. Physical Review E, 2017, 95, 032313.	2.1	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.	3.2	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.	0.7	2
40	Combining Polynomial Chaos Expansions and Genetic Algorithm for the Coupling of Electrophysiological Models. Lecture Notes in Computer Science, 2019, , 116-129.	1.3	2
41	Two-variable nullcline analysis of ionic general equilibrium predicts calcium homeostasis in ventricular myocytes. PLoS Computational Biology, 2020, 16, e1007572.	3.2	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, , .		Ο
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.	0.5	Ο
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.	0.7	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.	2.5	0
49	Title is missing!. , 2020, 16, e1007572.		Ο
50	Title is missing!. , 2020, 16, e1007572.		0
51	Title is missing!. , 2020, 16, e1007572.		Ο
52	Title is missing!. , 2020, 16, e1007572.		0
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