

Jaume Casademunt

List of Publications by Year in descending order

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124
papers

3,395
citations

136885

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182361

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131
all docs

131
docs citations

131
times ranked

2410
citing authors

#	ARTICLE	IF	CITATIONS
1	Active Turbulence. Annual Review of Condensed Matter Physics, 2022, 13, 143-170.	5.2	106
2	Collective durotaxis of cohesive cell clusters on a stiffness gradient. European Physical Journal E, 2022, 45, 7.	0.7	6
3	Stochastic quorum percolation and noise focusing in neuronal networks. Europhysics Letters, 2021, 133, 48002.	0.7	2
4	Scaling Regimes of Active Turbulence with External Dissipation. Physical Review X, 2021, 11, .	2.8	18
5	Controlled Generation of Vapor/Liquid Slug Flows by Local Boiling in Microgravity. AIAA Journal, 2020, 58, 4017-4027.	1.5	0
6	Universal scaling of active nematic turbulence. Nature Physics, 2020, 16, 682-688.	6.5	85
7	Unraveling the hidden complexity of quasideterministic ratchets: Random walks, graphs, and circle maps. Physical Review E, 2020, 101, 012203.	0.8	0
8	Motility and morphodynamics of confined cells. Physical Review E, 2020, 101, 022404.	0.8	13
9	A Brownian Ratchet Model Explains the Biased Sidestepping of Single-Headed Kinesin-3 KIF1A. Biophysical Journal, 2019, 116, 2266-2274.	0.2	11
10	Active Fingering Instability in Tissue Spreading. Physical Review Letters, 2019, 122, 088104.	2.9	56
11	Role of Substrate Stiffness in Tissue Spreading: Wetting Transition and Tissue Durotaxis. Langmuir, 2019, 35, 7571-7577.	1.6	25
12	Active wetting of epithelial tissues. Nature Physics, 2019, 15, 79-88.	6.5	148
13	Selection mechanism at the onset of active turbulence. Nature Physics, 2019, 15, 362-366.	6.5	66
14	Generation and control of monodisperse bubble suspensions in microgravity. Aerospace Science and Technology, 2018, 77, 344-352.	2.5	5
15	Bubble Dynamics in Turbulent Duct Flows: Lattice-Boltzmann Simulations and Drop Tower Experiments. Microgravity Science and Technology, 2018, 30, 525-534.	0.7	5
16	Nonlinear amplitude dynamics in flagellar beating. Royal Society Open Science, 2017, 4, 160698.	1.1	41
17	Fluidization and Active Thinning by Molecular Kinetics in Active Gels. Physical Review Letters, 2017, 118, 088002.	2.9	16
18	Noise focusing in neuronal tissues: Symmetry breaking and localization in excitable networks with quenched disorder. Physical Review E, 2017, 95, 052304.	0.8	4

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19	Mixed-order phase transition in a colloidal crystal. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12906-12909.	3.3	15
20	Fluid front morphologies in gap-modulated Hele-Shaw cells. Physical Review Fluids, 2017, 2, .	1.0	3
21	Formation of metastable phases by spinodal decomposition. Nature Communications, 2016, 7, 13067.	5.8	36
22	Bleb Nucleation through Membrane Peeling. Physical Review Letters, 2016, 116, 068101.	2.9	17
23	Turbulent Bubble Jets in Microgravity. Spatial Dispersion and Velocity Fluctuations. Microgravity Science and Technology, 2015, 27, 207-220.	0.7	5
24	Model for Probing Membrane-Cortex Adhesion by Micropipette Aspiration and Fluctuation Spectroscopy. Biophysical Journal, 2015, 108, 1878-1886.	0.2	38
25	Formation of helical membrane tubes around microtubules by single-headed kinesin KIF1A. Nature Communications, 2015, 6, 8025.	5.8	21
26	Subharmonic oscillations of collective molecular motors. Europhysics Letters, 2014, 107, 18002.	0.7	10
27	Cooperative action of KIF1A Brownian motors with finite dwell time. Physical Review E, 2014, 89, 032722.	0.8	5
28	Landscape-Inversion Phase Transition in Dipolar Colloids: Tuning the Structure and Dynamics of 2D Crystals. Physical Review Letters, 2014, 113, 198301.	2.9	25
29	Morphology and growth of polarized tissues. European Physical Journal E, 2014, 37, 41.	0.7	11
30	Noise focusing and the emergence of coherent activity in neuronal cultures. Nature Physics, 2013, 9, 582-590.	6.5	161
31	Cooperative Force Generation of KIF1A Brownian Motors. Physical Review Letters, 2013, 111, 048103.	2.9	21
32	The emergence of spontaneous activity in neuronal cultures. , 2013, , .		0
33	Spontaneous Motility of Actin Lamellar Fragments. Physical Review Letters, 2013, 110, 078102.	2.9	59
34	Intrinsic oscillations of polymerizing antiparallel microtubules in a motor bath. Europhysics Letters, 2012, 98, 68005.	0.7	4
35	Impact of stochastic accelerations on dopant segregation in microgravity semiconductor crystal growth. Journal of Crystal Growth, 2012, 355, 88-100.	0.7	3
36	Exploring topological singularities with phase-field methods. European Physical Journal Plus, 2011, 126, 1.	1.2	7

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37	Dynamics and Mechanical Stability of the Developing Dorsoventral Organizer of the Wing Imaginal Disc. <i>PLoS Computational Biology</i> , 2011, 7, e1002153.	1.5	32
38	Characterization of the performance of a minibubble generator in conditions relevant to microgravity. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2010, 365, 52-55.	2.3	16
39	Dynamical organization of the cytoskeletal cortex probed by micropipette aspiration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 15415-15420.	3.3	69
40	Cooperativity of self-organized Brownian motors pulling on soft cargoes. <i>Physical Review E</i> , 2010, 82, 061903.	0.8	17
41	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
42	Self-Organization and Cooperativity of Weakly Coupled Molecular Motors under Unequal Loading. <i>Physical Review Letters</i> , 2009, 102, 118104.	2.9	36
43	Pinch-off singularities in rotating Hele-Shaw flows at high viscosity contrast. <i>Physical Review E</i> , 2009, 80, 056306.	0.8	9
44	Experimental Study of a Microchannel Bubble Injector for Microgravity Applications. <i>Microgravity Science and Technology</i> , 2009, 21, 107-111.	0.7	24
45	Coordination of Kinesin Motors Pulling on Fluid Membranes. <i>Biophysical Journal</i> , 2008, 94, 5009-5017.	0.2	74
46	Dynamic stability of spindles controlled by molecular motor kinetics. <i>Europhysics Letters</i> , 2008, 81, 48003.	0.7	6
47	Generation of a Monodisperse Microbubble Jet in Microgravity. <i>AIAA Journal</i> , 2008, 46, 2010-2019.	1.5	16
48	Probing Elastic Anisotropy from Defect Dynamics in Langmuir Monolayers. <i>Physical Review Letters</i> , 2008, 100, 037801.	2.9	19
49	Dynamics of Domain Walls in Pattern Formation with Traveling-Wave Forcing. <i>Physical Review Letters</i> , 2007, 99, 028302.	2.9	7
50	Lorenz Kramer, in memoriam. <i>Physics Reports</i> , 2007, 447, 69-70.	10.3	0
51	Theory of pattern forming systems under traveling-wave forcing. <i>Physics Reports</i> , 2007, 447, 73-111.	10.3	34
52	Collective Dynamics of Interacting Molecular Motors. <i>Physical Review Letters</i> , 2006, 97, 038101.	2.9	95
53	Relevance of dynamic wetting in viscous fingering patterns. <i>Physical Review E</i> , 2006, 74, 025302.	0.8	39
54	Bifurcations and chaos in single-roll natural convection with low Prandtl number. <i>Physics of Fluids</i> , 2005, 17, 104108.	1.6	28

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55	Kinks in stripe forming systems under traveling wave forcing. Discrete and Continuous Dynamical Systems - Series B, 2005, 5, 1027-1042.	0.5	3
56	Multiplicative white-noise-induced phase transitions: the role of the stochastic interpretation. , 2004, , ,		0
57	Travelling-stripe forcing of Turing patterns. Physica D: Nonlinear Phenomena, 2004, 199, 235-242.	1.3	17
58	Viscous fingering as a paradigm of interfacial pattern formation: Recent results and new challenges. Chaos, 2004, 14, 809-824.	1.0	135
59	Traveling-Stripe Forcing Generates Hexagonal Patterns. Physical Review Letters, 2004, 93, 048303.	2.9	46
60	Nonlinear Saffman-Taylor Instability. Physical Review Letters, 2004, 92, 054501.	2.9	38
61	Low viscosity contrast fingering in a rotating Hele-Shaw cell. Physics of Fluids, 2004, 16, 908-924.	1.6	82
62	Dynamics of Turing Patterns under Spatiotemporal Forcing. Physical Review Letters, 2003, 90, 128301.	2.9	81
63	Systematic weakly nonlinear analysis of radial viscous fingering. Physical Review E, 2003, 68, 026308.	0.8	33
64	Kinetic Roughening in Two-Phase Fluid Flow through a Random Hele-Shaw Cell. Physical Review Letters, 2003, 90, 144504.	2.9	27
65	Intrinsic noise-induced phase transitions: Beyond the noise interpretation. Physical Review E, 2003, 67, 046110.	0.8	54
66	Effects of small surface tension in Hele-Shaw multifinger dynamics: An analytical and numerical study. Physical Review E, 2002, 66, 046205.	0.8	10
67	Dynamical systems approach to Saffman-Taylor fingering: Dynamical solvability scenario. Physical Review E, 2002, 65, 056213.	0.8	7
68	Kinematic reduction of reaction-diffusion fronts with multiplicative noise: Derivation of stochastic sharp-interface equations. Physical Review E, 2002, 65, 056116.	0.8	12
69	Dynamics of finger arrays in a diffusion-limited growth model with a drift. Physica D: Nonlinear Phenomena, 2002, 164, 127-151.	1.3	9
70	Numerical Studies of Fluid Flow in Microgravity Conditions for Confined Crystal Growth. Astrophysics and Space Science, 2001, 276, 135-140.	0.5	4
71	Stochastic Modeling of the Residual Acceleration Field in a Microgravity Environment. , 2001, 276, 123-133.		2
72	Diffusion coefficient of propagating fronts with multiplicative noise. Physical Review E, 2001, 65, 012102.	0.8	23

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73	Sidebranching induced by external noise in solutal dendritic growth. Physical Review E, 2001, 63, 051602.	0.8	16
74	Reply to "Comment on "Two-finger selection theory in the Saffman-Taylor problem" ". Physical Review E, 2001, 63, .	0.8	2
75	Systematic weakly nonlinear analysis of interfacial instabilities in Hele-Shaw flows. Physical Review E, 2001, 64, 016302.	0.8	20
76	Periodic forcing in viscous fingering of a nematic liquid crystal. Physical Review E, 2001, 64, 056225.	0.8	7
77	Universality Class of Fluctuating Pulled Fronts. Physical Review Letters, 2001, 86, 5215-5218.	2.9	22
78	Numerical Studies of Fluid Flow in Microgravity Conditions for Confined Crystal Growth. , 2001, , 135-140.		0
79	Stochastic Modeling of the Residual Acceleration Field in a Microgravity Environment. , 2001, , 123-133.		0
80	Dynamics and selection of fingering patterns. Recent developments in the Saffman-Taylor problem. Physics Reports, 2000, 337, 1-35.	10.3	27
81	Pattern forming instabilities of the nematic smectic-B interface. Physics Reports, 2000, 337, 37-65.	10.3	6
82	Interface dynamics in Hele-Shaw flows with centrifugal forces: Preventing cusp singularities with rotation. Physical Review E, 2000, 62, R5887-R5890.	0.8	22
83	Brownian Motion of Spiral Waves Driven by Spatiotemporal Structured Noise. Physical Review Letters, 2000, 84, 2734-2737.	2.9	73
84	Viscous fingering in liquid crystals: Anisotropy and morphological transitions. Physical Review E, 2000, 61, 6632-6638.	0.8	13
85	EFFECTS OF A QUENCHED DISORDER ON WAVE PROPAGATION IN EXCITABLE MEDIA. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 2353-2361.	0.7	2
86	Phase-field model for Hele-Shaw flows with arbitrary viscosity contrast. I. Theoretical approach. Physical Review E, 1999, 60, 1724-1733.	0.8	135
87	Two-finger selection theory in the Saffman-Taylor problem. Physical Review E, 1999, 60, R5013-R5016.	0.8	7
88	Phase-field model for Hele-Shaw flows with arbitrary viscosity contrast. II. Numerical study. Physical Review E, 1999, 60, 1734-1740.	0.8	65
89	Propagating fronts in reaction-diffusion systems. Journal of Mathematical Chemistry, 1998, 23, 239-260.	0.7	3
90	Heat diffusion anisotropy in dendritic growth:. Journal of Crystal Growth, 1998, 193, 712-719.	0.7	18

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91	Ballistic and diffusive corrections to front propagation in the presence of multiplicative noise. <i>Physical Review E</i> , 1998, 58, 5494-5500.	0.8	60
92	Surface tension and dynamics of fingering patterns. <i>Physical Review E</i> , 1998, 57, R3707-R3710.	0.8	16
93	Wave Propagation in a Medium with Disordered Excitability. <i>Physical Review Letters</i> , 1998, 80, 5437-5440.	2.9	47
94	Comment on "Selection of the Saffman-Taylor Finger Width in the Absence of Surface Tension: An Exact Result". <i>Physical Review Letters</i> , 1998, 81, 5950-5950.	2.9	7
95	Growth of unstable interfaces in disordered media. <i>Physical Review E</i> , 1998, 57, 5754-5760.	0.8	2
96	Percolation thresholds in chemical disordered excitable media. <i>Physical Review E</i> , 1998, 58, R1183-R1186.	0.8	15
97	Wave competition in excitable modulated media. <i>Physical Review E</i> , 1997, 56, 6298-6301.	0.8	18
98	Front propagation in spatially modulated media. <i>Physical Review E</i> , 1997, 56, 5405-5412.	0.8	7
99	Coarsening of solid-liquid mixtures in a random acceleration field. <i>Physics of Fluids</i> , 1997, 9, 1336-1343.	1.6	19
100	Phase-field simulations and experiments of faceted growth in liquid crystals. <i>Physica D: Nonlinear Phenomena</i> , 1996, 99, 359-368.	1.3	18
101	External Fluctuations in Front Propagation. <i>Physical Review Letters</i> , 1996, 76, 3045-3048.	2.9	53
102	Pattern formation during mesophase growth in a homologous series. <i>Physical Review E</i> , 1996, 54, 1574-1583.	0.8	22
103	Experiments in a rotating Hele-Shaw cell. <i>Physical Review E</i> , 1996, 54, 6260-6267.	0.8	91
104	Pattern and velocity selection of fronts propagating in modulated media. <i>Europhysics Letters</i> , 1996, 33, 429-434.	0.7	10
105	Cavity flow induced by a fluctuating acceleration field. <i>Physics of Fluids</i> , 1995, 7, 292-301.	1.6	13
106	Finger competition and viscosity contrast in viscous fingering. A topological approach. <i>Physica D: Nonlinear Phenomena</i> , 1994, 79, 387-408.	1.3	14
107	Non-linear relaxation time for stochastic processes driven by non-Gaussian noises. Decay of unstable states. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1993, 195, 163-173.	1.2	1
108	Stability of a fluid surface in a microgravity environment. <i>AIAA Journal</i> , 1993, 31, 2027-2032.	1.5	23

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109	Study of the parametric oscillator driven by narrow-band noise to model the response of a fluid surface to time-dependent accelerations. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993, 5, 3147-3161.	1.6	43
110	Perturbing Hele-Shaw flow with a small gap gradient. <i>Physical Review A</i> , 1992, 45, 2455-2460.	1.0	45
111	INTERFACE EQUATION AND VISCOSITY CONTRAST IN HELE-SHAW FLOW. <i>International Journal of Modern Physics B</i> , 1992, 06, 1647-1656.	1.0	11
112	Defect dynamics in viscous fingering. <i>Physical Review Letters</i> , 1991, 67, 3677-3680.	2.9	22
113	Intensity correlation functions of dye lasers: Comparison of colored-gain-noise and colored-loss-noise models. <i>Physical Review A</i> , 1991, 44, 2094-2101.	1.0	20
114	Theory for correlation functions of processes driven by external colored noise. <i>Physical Review A</i> , 1991, 43, 1744-1753.	1.0	20
115	Relaxation from a marginal state in optical bistability. <i>Physical Review A</i> , 1989, 39, 149-156.	1.0	44
116	Decay of unstable states in the presence of colored noise and random initial conditions. II. Analog experiments and digital simulations. <i>Physical Review A</i> , 1989, 40, 5915-5921.	1.0	12
117	Decay of unstable states in the presence of colored noise and random initial conditions. I. Theory of nonlinear relaxation times. <i>Physical Review A</i> , 1989, 40, 5905-5914.	1.0	26
118	Transient and preparation colored-noise effects: The nonlinear relaxation-time approach. <i>Physical Review A</i> , 1989, 39, 4915-4918.	1.0	10
119	Correlation functions near instabilities in systems driven by parametric noise. <i>European Physical Journal B</i> , 1989, 76, 403-411.	0.6	8
120	NLRT formalism for transient stochastic dynamics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1989, 156, 628-650.	1.2	18
121	Linear relaxation times of stochastic processes driven by non-Gaussian noises. <i>Journal of Statistical Physics</i> , 1989, 56, 911-929.	0.5	3
122	Characteristic times of relaxation processes. Unstable state. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988, 133, 364-368.	0.9	16
123	Relaxation times of non-Markovian processes. <i>Physical Review A</i> , 1987, 35, 5183-5190.	1.0	29
124	Relaxation times in the presence of external dichotomous noise. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987, 123, 271-275.	0.9	4