

Marcel Clerc

List of Publications by Year in descending order

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170
papers

3,143
citations

136950

32
h-index

214800

47
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171
all docs

171
docs citations

171
times ranked

1507
citing authors

#	ARTICLE	IF	CITATIONS
1	Localized states with nontrivial symmetries: Localized labyrinthine patterns. Physical Review E, 2022, 105, L012202.	2.1	0
2	Vortices nucleation by inherent fluctuations in nematic liquid crystal cells. Nonlinear Dynamics, 2022, 108, 3209-3218.	5.2	4
3	Localized dissipative vortices in chiral nematic liquid crystal cells. Physical Review Research, 2022, 4, .	3.6	7
4	Finger front propagation in smectic- A transition. Physical Review E, 2022, 105, .	2.1	1
5	Influence of stimulated Raman scattering on Kerr domain walls and localized structures. Physical Review A, 2021, 103, .	2.5	29
6	Spatiotemporal Complexity Mediated by Higher-Order Peregrine-Like Extreme Events. Frontiers in Physics, 2021, 9, .	2.1	0
7	Nonreciprocal Coupling Induced Self-Assembled Localized Structures. Physical Review Letters, 2021, 126, 194102.	7.8	2
8	Light beam induced finger instability in a photosensitive liquid crystal cell. Physical Review Research, 2021, 3, .	3.6	0
9	Light-Induced Ring Pattern in a Dye-Doped Nematic Liquid Crystal. Applied Sciences (Switzerland), 2021, 11, 5285.	2.5	2
10	Moving spiral wave chimeras. Physical Review E, 2021, 104, L022203.	2.1	11
11	Cholestric bubbles as localized vortices: theory and experiments. , 2021, , .		0
12	Nonlinear Localization of Dissipative Modulation Instability. Physical Review Letters, 2021, 127, 123901.	7.8	12
13	Localised labyrinthine patterns in ecosystems. Scientific Reports, 2021, 11, 18331.	3.3	5
14	A quasi-periodic route to chaos in a parametrically driven nonlinear medium. Chaos, Solitons and Fractals, 2021, 151, 111089.	5.1	3
15	Localized standing waves induced by spatiotemporal forcing. Physical Review E, 2021, 104, 044209.	2.1	3
16	Chaos on a saturable optical dimer. Chaos, Solitons and Fractals, 2021, 153, 111488.	5.1	0
17	Photonic Computing With Single and Coupled Spiking Micropillar Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-7.	2.9	47
18	Patchy landscapes in arid environments: Nonlinear analysis of the interaction-redistribution model. Chaos, 2020, 30, 093136.	2.5	7

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19	Colorimetry characterization of molecular reorientation transition in thin nematic cells. <i>Chaos</i> , 2020, 30, 073102.	2.5	4
20	Pulse propagation in a 1D array of excitable semiconductor lasers. <i>Chaos</i> , 2020, 30, 083136.	2.5	4
21	Gradient theory of domain walls in thin, nematic liquid crystals films. <i>Communications in Contemporary Mathematics</i> , 2020, 22, 1950063.	1.2	1
22	Nonlocal Raman response in Kerr resonators: Moving temporal localized structures and bifurcation structure. <i>Chaos</i> , 2020, 30, 083111.	2.5	13
23	Topological transitions in an oscillatory driven liquid crystal cell. <i>Scientific Reports</i> , 2020, 10, 19324.	3.3	14
24	Introduction to Focus Issue: Instabilities and nonequilibrium structures. <i>Chaos</i> , 2020, 30, 110401.	2.5	2
25	Transition from nonradiative to radiative oscillons in parametrically driven systems. <i>Physical Review E</i> , 2020, 101, 052209.	2.1	1
26	Front propagation steered by a high-wavenumber modulation: Theory and experiments. <i>Chaos</i> , 2020, 30, 053138.	2.5	4
27	Umbilical defect dynamics in an inhomogeneous nematic liquid crystal layer. <i>Physical Review E</i> , 2020, 101, 062704.	2.1	5
28	Weak signal enhancement by nonlinear resonance control in a forced nano-electromechanical resonator. <i>Nature Communications</i> , 2020, 11, 2400.	12.8	42
29	Gapped vegetation patterns: Crown/root allometry and snaking bifurcation. <i>Chaos, Solitons and Fractals</i> , 2020, 133, 109617.	5.1	9
30	Noise-induced kink propagation in shallow granular layers. <i>Chaos, Solitons and Fractals</i> , 2020, 134, 109677.	5.1	3
31	On the repulsive interaction between localised vegetation patches in scarce environments. <i>Scientific Reports</i> , 2020, 10, 5740.	3.3	6
32	Chaotic motion of localized structures. <i>Physical Review E</i> , 2020, 101, 042212.	2.1	1
33	Two-dimensional optical chimera states in an array of coupled waveguide resonators. <i>Chaos</i> , 2020, 30, 043107.	2.5	13
34	Transition to Spatiotemporal Intermittency and Defect Turbulence in Systems under Translational Coupling. <i>Physical Review Letters</i> , 2020, 124, 164101.	7.8	3
35	Time-delayed nonlocal response inducing traveling temporal localized structures. <i>Physical Review Research</i> , 2020, 2, .	3.6	19
36	Magnetic field-induced vortex triplet and vortex lattice in a liquid crystal cell. <i>Physical Review Research</i> , 2020, 2, .	3.6	6

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37	Labyrinthine patterns transitions. <i>Physical Review Research</i> , 2020, 2, .	3.6	12
38	Front depinning by deterministic and stochastic fluctuations: A comparison. <i>Physical Review E</i> , 2019, 99, 062226.	2.1	5
39	Traveling wave into an unstable state in dissipative oscillator chains. <i>Nonlinear Dynamics</i> , 2019, 98, 1391-1402.	5.2	4
40	Experimental Observation of Chimera-Like States in a Passive Kerr Resonator. , 2019, , .		0
41	Extended stable equilibrium invaded by an unstable state. <i>Scientific Reports</i> , 2019, 9, 15096.	3.3	7
42	Raman Response Induces Moving Cavity Solitons in Optical Resonators. , 2019, , .		0
43	Chaotic patterns and localized states in spin valves. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 476, 589-596.	2.3	10
44	Front propagation transition induced by diffraction in a liquid crystal light valve. <i>Optics Express</i> , 2019, 27, 12391.	3.4	5
45	On the origin of the optical vortex lattices in a nematic liquid crystal light valve. <i>Optics Letters</i> , 2019, 44, 2947.	3.3	6
46	Extended patchy ecosystems may increase their total biomass through self-replication. <i>Ecological Indicators</i> , 2018, 94, 534-543.	6.3	13
47	Oscillating decorated interfaces in parametrically driven systems. <i>Physical Review E</i> , 2018, 97, 012207.	2.1	3
48	Symmetry Breaking and Restoration in the Ginzburgâ€“Landau Model of Nematic Liquid Crystals. <i>Journal of Nonlinear Science</i> , 2018, 28, 1079-1107.	2.1	2
49	Dissipative structures induced by photoisomerization in a dye-doped nematic liquid crystal layer. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20170382.	3.4	6
50	Observation and modelling of vegetation spirals and arcs in isotropic environmental conditions: dissipative structures in arid landscapes. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20180026.	3.4	24
51	Dissipative structures in matter out of equilibrium: from chemistry, photonics and biology, the legacy of Ilya Prigogine (part 2). <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20180276.	3.4	9
52	Front propagation into an unstable state in a forced medium: Experiments and theory. <i>Physical Review E</i> , 2018, 98, .	2.1	7
53	Alternation of Defects and Phase Turbulence Induces Extreme Events in an Extended Microcavity Laser. <i>Entropy</i> , 2018, 20, 789.	2.2	6
54	Dissipative magnetic breathers induced by time-modulated voltages. <i>Physical Review E</i> , 2018, 98, .	2.1	6

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55	Chimera states in a Duffing oscillators chain coupled to nearest neighbors. <i>Chaos</i> , 2018, 28, 083126.	2.5	31
56	Spontaneous light-induced Turing patterns in a dye-doped twisted nematic layer. <i>Scientific Reports</i> , 2018, 8, 12867.	3.3	10
57	Spontaneous motion of localized structures induced by parity symmetry breaking transition. <i>Chaos</i> , 2018, 28, 053119.	2.5	12
58	Dissipative structures in matter out of equilibrium: from chemistry, photonics and biology, the legacy of Ilya Prigogine (part 1). <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20180114.	3.4	21
59	Extreme events following bifurcation to spatiotemporal chaos in a spatially extended microcavity laser. <i>Physical Review A</i> , 2017, 95, .	2.5	39
60	Nonvariational mechanism of front propagation: Theory and experiments. <i>Physical Review E</i> , 2017, 95, 010202.	2.1	12
61	Theory of light-matter interaction in nematic liquid crystals and the second Painlevé equation. <i>Calculus of Variations and Partial Differential Equations</i> , 2017, 56, 1.	1.7	8
62	Drifting cavity solitons and dissipative rogue waves induced by time-delayed feedback in Kerr optical frequency comb and in all fiber cavities. <i>Chaos</i> , 2017, 27, 114312.	2.5	15
63	Phase Stochastic Resonance in a Forced Nanoelectromechanical Membrane. <i>Physical Review Letters</i> , 2017, 119, 234101.	7.8	24
64	$\langle i \rangle$ -kink propagation in the damped Frenkel-Kontorova model. <i>Europhysics Letters</i> , 2017, 119, 40003.	2.0	8
65	Spatiotemporal chaos and two-dimensional dissipative rogue waves in Lugiato-Lefever model. <i>European Physical Journal D</i> , 2017, 71, 1.	1.3	25
66	Localized structures and spatiotemporal chaos: comparison between the driven damped sine-Gordon and the Lugiato-Lefever model. <i>European Physical Journal D</i> , 2017, 71, 1.	1.3	20
67	Alternating superlattice textures in driven nanomagnets. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2017, 44, 404-413.	3.3	3
68	Chimera-like states in an array of coupled-waveguide resonators. <i>Optics Letters</i> , 2017, 42, 2906.	3.3	33
69	Characterization of spatiotemporal chaos in a Kerr optical frequency comb and in all fiber cavities. <i>Optics Letters</i> , 2017, 42, 1063.	3.3	31
70	Slanted snaking of localized Faraday waves. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	14
71	Self-Replication of Localized Vegetation Patches in Scarce Environments. <i>Scientific Reports</i> , 2016, 6, 33703.	3.3	46
72	Berry Phase of Light under Bragg Reflection by Chiral Liquid-Crystal Media. <i>Physical Review Letters</i> , 2016, 117, 053903.	7.8	58

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91	Localized vegetation patterns, fairy circles, and localized patches in arid landscapes. <i>Physical Review E</i> , 2015, 91, 022924.	2.1	45
92	Alternating spin-polarized current induces parametric resonance in spin valves. <i>Physical Review B</i> , 2015, 91, .	3.2	13
93	Asymmetric counterpropagating fronts without flow. <i>Physical Review E</i> , 2015, 91, 060501.	2.1	3
94	Internal noise and system size effects induce nondiffusive kink dynamics. <i>Physical Review E</i> , 2015, 91, 032922.	2.1	3
95	Traveling pulse on a periodic background in parametrically driven systems. <i>Physical Review E</i> , 2015, 91, 050901.	2.1	13
96	Noise-induced traveling Nozaki-Bekki holes and vortices in experimental drifting patterns. , 2014, , .		0
97	Photo-isomerization fronts in dye-doped nematic liquid crystals. <i>Optics Letters</i> , 2014, 39, 1861.	3.3	9
98	Propagative phase shielding solitons in inhomogeneous media. <i>Physica D: Nonlinear Phenomena</i> , 2014, 269, 86-93.	2.8	1
99	Localized structures in dissipative media: from optics to plant ecology. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20140101.	3.4	96
100	Chaoticon: localized pattern with permanent dynamics. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20140011.	3.4	21
101	Strong interaction between plants induces circular barren patches: fairy circles. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20140009.	3.4	51
102	Light-matter interaction induces a single positive vortex with swirling arms. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20140019.	3.4	16
103	Emergence of spatiotemporal dislocation chains in drifting patterns. <i>Chaos</i> , 2014, 24, 023133.	2.5	4
104	Zig-zag wall lattice in a nematic liquid crystal with an in-plane switching configuration. <i>Physical Review E</i> , 2014, 90, 022504.	2.1	6
105	Symmetry breaking of nematic umbilical defects through an amplitude equation. <i>Physical Review E</i> , 2014, 90, 012507.	2.1	20
106	Experimental observation of front propagation in a negatively diffractive inhomogeneous Kerr cavity. <i>Physical Review A</i> , 2014, 90, .	2.5	28
107	Dissipative structures induced by spin-transfer torques in nanopillars. <i>Physical Review E</i> , 2014, 89, 022908.	2.1	16
108	Photo-isomerization induces pattern instability, labyrinth and foam textures. , 2014, , .		0

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109	Harnessing Optical Vortex Lattices in Nematic Liquid Crystals. <i>Physical Review Letters</i> , 2013, 111, 093902.	7.8	103
110	Spatially modulated kinks in shallow granular layers. <i>Physical Review E</i> , 2013, 88, 020201.	2.1	17
111	Phase shielding soliton in parametrically driven systems. <i>Physical Review E</i> , 2013, 87, 052915.	2.1	8
112	Quasiperiodicity route to spatiotemporal chaos in one-dimensional pattern-forming systems. <i>Physical Review E</i> , 2013, 88, 052916.	2.1	34
113	Spatiotemporal Chaotic Localized State in Liquid Crystal Light Valve Experiments with Optical Feedback. <i>Physical Review Letters</i> , 2013, 110, 104101.	7.8	38
114	Pinning-depinning transition of fronts between standing waves. <i>Physical Review E</i> , 2013, 87, 012901.	2.1	7
115	Strong Nonlocal Coupling Stabilizes Localized Structures: An Analysis Based on Front Dynamics. <i>Physical Review Letters</i> , 2013, 110, 174101.	7.8	42
116	Characterization of the vortex-pair interaction law and nonlinear mobility effects. <i>New Journal of Physics</i> , 2013, 15, 013028.	2.9	10
117	Bifurcations of emerging patterns in the presence of additive noise. <i>Physical Review E</i> , 2013, 87, 042919.	2.1	20
118	Breather soliton solutions in a parametrically driven magnetic wire. <i>Europhysics Letters</i> , 2013, 104, 40001.	2.0	20
119	Advection of Optical Localized Structures. <i>Springer Proceedings in Complexity</i> , 2013, , 67-72.	0.3	0
120	Two-soliton precession state in a parametrically driven magnetic wire. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	16
121	Effects of translational coupling on dissipative localized states. <i>Physical Review E</i> , 2012, 86, 036201.	2.1	7
122	Symmetry-induced pinning-depinning transition of a subharmonic wave pattern. <i>Physical Review E</i> , 2012, 85, 035201.	2.1	7
123	Origin of the Pinning of Drifting Monostable Patterns. <i>Physical Review Letters</i> , 2012, 109, 104101.	7.8	9
124	Effective-parametric resonance in a non-oscillating system. <i>Europhysics Letters</i> , 2012, 98, 30006.	2.0	10
125	Localized waves in a parametrically driven magnetic nanowire. <i>Europhysics Letters</i> , 2012, 97, 30006.	2.0	22
126	Vortex Induction via Anisotropy Stabilized Light-Matter Interaction. <i>Physical Review Letters</i> , 2012, 109, 143901.	7.8	84

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127	Vortex Emission Accompanies the Advection of Optical Localized Structures. <i>Physical Review Letters</i> , 2011, 106, 063901.	7.8	15
128	Coalescence cascade of dissipative solitons in parametrically driven systems. <i>Physical Review E</i> , 2011, 84, 036205.	2.1	15
129	Dissipative Localized States with Shieldlike Phase Structure. <i>Physical Review Letters</i> , 2011, 107, 254102.	7.8	14
130	Homoclinic Snaking of Localized Patterns in a Spatially Forced System. <i>Physical Review Letters</i> , 2011, 107, 264101.	7.8	29
131	Continuous description of lattice discreteness effects in front propagation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 412-424.	3.4	36
132	Control and managing of localized states in two-dimensional systems with periodic forcing. <i>European Physical Journal D</i> , 2010, 59, 43-51.	1.3	7
133	Localized states and non-variational Ising-Bloch transition of a parametrically driven easy-plane ferromagnetic wire. <i>Physica D: Nonlinear Phenomena</i> , 2010, 239, 72-86.	2.8	38
134	Subharmonic wave transition in a quasi-one-dimensional noisy fluidized shallow granular bed. <i>Physical Review E</i> , 2010, 81, 046208.	2.1	17
135	Front dynamics and pinning-depinning phenomenon in spatially periodic media. <i>Physical Review E</i> , 2010, 81, 056203.	2.1	33
136	Interaction law of 2D localized precession states. <i>Europhysics Letters</i> , 2010, 90, 38005.	2.0	21
137	A new perspective on stochastic resonance in monostable systems. <i>New Journal of Physics</i> , 2010, 12, 113027.	2.9	15
138	Analytical studies of fronts, colonies, and patterns: Combination of the Allee effect and nonlocal competition interactions. <i>Physical Review E</i> , 2010, 82, 036210.	2.1	52
139	Localized States in Bi-Pattern Systems. <i>Advances in Nonlinear Optics</i> , 2009, 2009, 1-9.	0.6	7
140	Driven Front Propagation in 1D Spatially Periodic Media. <i>Physical Review Letters</i> , 2009, 103, 128003.	7.8	44
141	NONVARIATIONAL ISING-BLOCH TRANSITION IN PARAMETRICALLY DRIVEN SYSTEMS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009, 19, 2717-2726.	1.7	33
142	DYNAMICS OF AN INTERFACE CONNECTING A STRIPE PATTERN AND A UNIFORM STATE: AMENDED NEWELL-WHITEHEAD-SEGEL EQUATION. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009, 19, 2801-2812.	1.7	3
143	PARAMETRICALLY DRIVEN INSTABILITY IN QUASI-REVERSAL SYSTEMS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009, 19, 3525-3532.	1.7	29
144	Solitary localized structures in a liquid crystal light-valve experiment. <i>New Journal of Physics</i> , 2009, 11, 093037.	2.9	23

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145	Soliton pair interaction law in parametrically driven Newtonian fluid. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 3213-3226.	3.4	30
146	Liquid–solid-like transition in quasi-one-dimensional driven granular media. Nature Physics, 2008, 4, 249-254.	16.7	84
147	Universal shape law of stochastic supercritical bifurcations: Theory and experiments. Physical Review E, 2008, 77, 026218.	2.1	20
148	SHILNIKOV BIFURCATION: STATIONARY QUASI-REVERSAL BIFURCATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 1905-1915.	1.7	4
149	Local theory of the slanted homoclinic snaking bifurcation diagram. Physical Review E, 2008, 78, 036214.	2.1	29
150	Localized states beyond the asymptotic parametrically driven amplitude equation. Physical Review E, 2008, 77, 056209.	2.1	46
151	Comment on ‘‘Asymptotics of Large Bound States of Localized Structures’’. Physical Review Letters, 2008, 100, 049401; author reply 049402.	7.8	2
152	Transversal interface dynamics of a front connecting a stripe pattern to a uniform state. Europhysics Letters, 2008, 83, 28002.	2.0	9
153	Noise induced rolls propagation. European Physical Journal: Special Topics, 2007, 143, 171-179.	2.6	7
154	Pattern formation and localized structures in monoatomic layer deposition. European Physical Journal: Special Topics, 2007, 146, 407-425.	2.6	7
155	Front propagation sustained by additive noise. Physical Review E, 2006, 74, 011303.	2.1	30
156	Pattern Formation and Localized Structures in Reaction-Diffusion Systems with Non-Fickian Transport. Physical Review Letters, 2006, 97, 176102.	7.8	27
157	Localized States in Bistable Pattern-Forming Systems. Physical Review Letters, 2006, 96, 214501.	7.8	39
158	Localized patterns and hole solutions in one-dimensional extended systems. Physica A: Statistical Mechanics and Its Applications, 2005, 356, 48-53.	2.6	58
159	Coarsening dynamics of the one-dimensional Cahn-Hilliard model. Physical Review E, 2005, 71, 046210.	2.1	23
160	Patterns and localized structures in population dynamics. Physical Review E, 2005, 72, 056217.	2.1	89
161	Additive Noise Induces Front Propagation. Physical Review Letters, 2005, 94, 148302.	7.8	55
162	Bouncing localized structures in a liquid-crystal light-valve experiment. Physical Review E, 2005, 71, 015205.	2.1	64

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163	van der Waals normal form for a one-dimensional hydrodynamic model. <i>Physical Review E</i> , 2004, 70, 031302.	2.1	26
164	First-order Fréedericksz transition and front propagation in a liquid crystal light valve with feedback. <i>European Physical Journal D</i> , 2004, 28, 435-445.	1.3	28
165	Front Dynamics in a Liquid Crystal Light Valve with Feedback. <i>Nonlinear Phenomena and Complex Systems</i> , 2004, , 115-126.	0.0	0
166	van der Waals-“Like Transition in Fluidized Granular Matter. <i>Physical Review Letters</i> , 2002, 89, 044301.	7.8	81
167	Inhomogeneous Fréedericksz transition in nematic liquid crystals. <i>Physical Review E</i> , 2001, 65, 011708.	2.1	10
168	Dissipation-induced instabilities in an optical cavity laser: A mechanical analog near the 1:1 resonance. <i>Physical Review E</i> , 2001, 64, 067603.	2.1	10
169	First-order Fréedericksz transition in the presence of light-driven feedback in nematic liquid crystals. <i>Physical Review E</i> , 2001, 63, 060701.	2.1	33
170	Detailed balance in non-equilibrium systems. <i>Dynamical Systems</i> , 1997, 12, 61-70.	0.7	3