Lendert Gelens

List of Publications by Citations

84 papers	1,626 citations	26 h-index	37 g-index
113 ext. papers	2,184 ext. citations	4.5 avg, IF	5.06 L-index

#	Paper	IF	Citations
84	Dynamics of one-dimensional Kerr cavity solitons. *Optics Express*, **2013**, 21, 9180-91	3.3	131
83	Dynamics of localized and patterned structures in the Lugiato-Lefever equation determine the stability and shape of optical frequency combs. *Physical Review A*, **2014**, 89,	2.6	86
82	Solitary and coupled semiconductor ring lasers as optical spiking neurons. *Physical Review E*, **2011**, 84, 036209	2.4	72
81	High-order dispersion stabilizes dark dissipative solitons in all-fiber cavities. *Optics Letters*, **2010**, 35, 306-8	3	67
80	Dark solitons in the Lugiato-Lefever equation with normal dispersion. *Physical Review A*, **2016**, 93,	2.6	62
79	Spatial trigger waves: positive feedback gets you a long way. *Molecular Biology of the Cell*, **2014**, 25, 3486-93	3.3	62
78	Third-order chromatic dispersion stabilizes Kerr frequency combs. *Optics Letters*, **2014**, 39, 2971-4	3	52
77	The Importance of Kinase-Phosphatase Integration: Lessons from Mitosis. *Trends in Cell Biology*, **2018**, 28, 6-21	18.3	50
76	Exploring multistability in semiconductor ring lasers: theory and experiment. *Physical Review Letters*, **2009**, 102, 193904	7.4	49
75	Origin and stability of dark pulse Kerr combs in normal dispersion resonators. *Optics Letters*, **2016**, 41, 2402-5	3	47
74	A general model for toxin-antitoxin module dynamics can explain persister cell formation in E. coli. *PLoS Computational Biology*, **2013**, 9, e1003190	5	46
73	Positive Feedback Keeps Duration of Mitosis Temporally Insulated from Upstream Cell-Cycle Events. *Molecular Cell*, **2016**, 64, 362-375	17.6	45
72	An Attachment-Independent Biochemical Timer of the Spindle Assembly Checkpoint. *Molecular Cell* , **2017**, 68, 715-730.e5	17.6	42
71	Impact of nonlocal interactions in dissipative systems: Towards minimal-sized localized structures. *Physical Review A*, **2007**, 75,	2.6	39
70	Excitability in optical systems close to Z2-symmetry. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2010**, 374, 739-743	2.3	34
69	Integrated culturing, modeling and transcriptomics uncovers complex interactions and emergent behavior in a three-species synthetic gut community. *ELife*, **2018**, 7,	8.9	34
68	Two-dimensional phase-space analysis and bifurcation study of the dynamical behaviour of a semiconductor ring laser. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2008**, 41, 095402	1.3	33

67	Dissipative structures in left-handed material cavity optics. *Chaos*, **2007**, 17, 037116	3.3	31
66	Topological insight into the non-arrhenius mode hopping of semiconductor ring lasers. *Physical Review Letters*, **2008**, 101, 093903	7.4	31
65	Bifurcation structure of localized states in the Lugiato-Lefever equation with anomalous dispersion. *Physical Review E*, **2018**, 97, 042204	2.4	30
64	Exploring the Function of Dynamic Phosphorylation-Dephosphorylation Cycles. *Developmental Cell*, **2018**, 44, 659-663	10.2	29
63	Square-wave oscillations in semiconductor ring lasers with delayed optical feedback. *Optics Express*, **2012**, 20, 22503-16	3.3	29
62	Quadratic soliton combs in doubly resonant second-harmonic generation. *Optics Letters*, **2018**, 43, 6033-6036	3	28
61	Optical injection in semiconductor ring lasers. *Physical Review A*, **2010**, 81,	2.6	27
60	Excitability in semiconductor microring lasers: Experimental and theoretical pulse characterization. *Physical Review A*, **2010**, 82,	2.6	26
59	Dynamical instabilities of dissipative solitons in nonlinear optical cavities with nonlocal materials. *Physical Review A*, **2008**, 77,	2.6	26
58	Formation of localized structures in bistable systems through nonlocal spatial coupling. I. General framework. *Physical Review E*, **2014**, 89, 012914	2.4	23
57	Coexistence of stable dark- and bright-soliton Kerr combs in normal-dispersion resonators. *Physical Review A*, **2017**, 95,	2.6	23
56	Desynchronizing Embryonic Cell Division Waves Reveals the Robustness of Xenopus laevis Development. *Cell Reports*, **2017**, 21, 37-46	10.6	22
55	Formation of localized structures in bistable systems through nonlocal spatial coupling. II. The nonlocal Ginzburg-Landau equation. *Physical Review E*, **2014**, 89, 012915	2.4	20
54	Nonlocality-induced front-interaction enhancement. *Physical Review Letters*, **2010**, 104, 154101	7.4	20
53	Phase-space approach to directional switching in semiconductor ring lasers. *Physical Review E*, **2009**, 79, 016213	2.4	20
52	Interaction of solitons and the formation of bound states in the generalized Lugiato-Lefever equation. *European Physical Journal D*, **2017**, 71, 1	1.3	18
51	Dark localized structures in a cavity filled with a left-handed material. *Physical Review A*, **2011**, 84,	2.6	18
50	Frequency comb generation through the locking of domain walls in doubly resonant dispersive optical parametric oscillators. *Optics Letters*, **2019**, 44, 2004-2007	3	18

49	Effects of inhomogeneities and drift on the dynamics of temporal solitons in fiber cavities and microresonators. *Optics Express*, **2014**, 22, 30943-54	3.3	16
48	Multistable and excitable behavior in semiconductor ring lasers with broken Z2-symmetry. *European Physical Journal D*, **2010**, 58, 197-207	1.3	16
47	Bistability in a system of two species interacting through mutualism as well as competition: Chemostat vs. Lotka-Volterra equations. *PLoS ONE*, **2018**, 13, e0197462	3.7	16
46	Autoregulation of mazEF expression underlies growth heterogeneity in bacterial populations. *Nucleic Acids Research*, **2018**, 46, 2918-2931	20.1	15
45	Localized structures in dispersive and doubly resonant optical parametric oscillators. *Physical Review E*, **2019**, 100, 032219	2.4	14
44	How Does the Xenopus laevis Embryonic Cell Cycle Avoid Spatial Chaos?. *Cell Reports*, **2015**, 12, 892-900	10.6	13
43	Nuclei determine the spatial origin of mitotic waves. *ELife*, **2020**, 9,	8.9	13
42	Optical injection in semiconductor ring lasers: backfire dynamics. *Optics Express*, **2008**, 16, 10968-74	3.3	12
41	Direct modulation of semiconductor ring lasers: numerical and asymptotic analysis. *Journal of the Optical Society of America B: Optical Physics*, **2012**, 29, 1983	1.7	9
40	Bifurcation structure of periodic patterns in the Lugiato-Lefever equation with anomalous dispersion. *Physical Review E*, **2018**, 98,	2.4	9
39	Cavity solitons and localized patterns in a finite-size optical cavity. *Physical Review A*, **2011**, 84,	2.6	8
38	Traveling waves and defects in the complex Swift-Hohenberg equation. *Physical Review E*, **2011**, 84, 056203	2.4	8
37	Semiconductor ring lasers coupled by a single waveguide. *Applied Physics Letters*, **2012**, 100, 251114	3.4	7
36	Oscillations and multistability in two semiconductor ring lasers coupled by a single waveguide. *Physical Review A*, **2013**, 88,	2.6	6
35	Coarsening and frozen faceted structures in the supercritical complex Swift-Hohenberg equation. *European Physical Journal D*, **2010**, 59, 23-36	1.3	6
34	Delay models for the early embryonic cell cycle oscillator. *PLoS ONE*, **2018**, 13, e0194769	3.7	6
33	Dynamic bistable switches enhance robustness and accuracy of cell cycle transitions. *PLoS Computational Biology*, **2021**, 17, e1008231	5	6
32	Co-regulation of the antagonistic RepoMan:Aurora-B pair in proliferating cells. *Molecular Biology of the Cell*, **2020**, 31, 419-438	3.5	5

31	Mutualistic cross-feeding in microbial systems generates bistability via an Allee effect. *Scientific Reports*, **2020**, 10, 7763	4.9	5
30	Bistable, Biphasic Regulation of PP2A-B55 Accounts for the Dynamics of Mitotic Substrate Phosphorylation. *Current Biology*, **2021**, 31, 794-808.e6	6.3	5
29	Competition between drift and spatial defects leads to oscillatory and excitable dynamics of dissipative solitons. *Physical Review E*, **2016**, 93, 012211	2.4	4
28	Travelling fronts in time-delayed reaction-diffusion systems. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180127	3	4
27	Faceting and coarsening dynamics in the complex Swift-Hohenberg equation. *Physical Review E*, **2009**, 80, 046221	2.4	4
26	Coordination of Timers and Sensors in Cell Signaling. *BioEssays*, **2019**, 41, e1800217	4.1	3
25	Synchronization in reaction-diffusion systems with multiple pacemakers. *Chaos*, **2020**, 30, 053139	3.3	3
24	Author response: Integrated culturing, modeling and transcriptomics uncovers complex interactions and emergent behavior in a three-species synthetic gut community **2018**,		3
23	Computational Methods to Model Persistence. *Methods in Molecular Biology*, **2016**, 1333, 207-40	1.4	2
22	Excitable dynamics through toxin-induced mRNA cleavage in bacteria. *PLoS ONE*, **2019**, 14, e0212288	3.7	2
21	Semiconductor ring lasers as optical neurons **2012**,		2
20	Asymptotic approach to the analysis of mode-hopping in semiconductor ring lasers. *Physical Review A*, **2009**, 80,	2.6	2
19	Synchronizing an oscillatory medium: The speed of pacemaker-generated waves. *Physical Review Research*, **2020**, 2,	3.9	2
18	Origin, bifurcation structure and stability of localized states in Kerr dispersive optical cavities. *IMA Journal of Applied Mathematics*,	1	2
17	Front interaction induces excitable behavior. *Physical Review E*, **2017**, 95, 020201	2.4	1
16	Eternal sunshine of the spotless cycle. *Molecular Systems Biology*, **2019**, 15, e8864	12.2	1
15	Dynamics of Dissipative Solitons in Presence of Inhomogeneities and Drift **2015**, 107-128		1
14	Modeling Kerr frequency combs using the Lugiato-Lefever equation: a characterization of the multistable landscape **2014**,		1

13	Analysis of multistability in semiconductor ring lasers **2010**,		1
12	Cavity soliton oscillations in a one-dimensional fiber resonator **2012**,		1
11	Bifurcation Structure of Localized Patterns and Spikes in Dispersive Kerr Cavities **2019**,		1
10	Localized structures formed through domain wall locking in cavity-enhanced second-harmonic generation. *Optics Letters*, **2020**, 45, 5856-5859	3	0
9	A modular approach for modeling the cell cycle based on functional response curves. *PLoS Computational Biology*, **2021**, 17, e1009008	5	0
8	Mitotic waves in an import-diffusion model with multiple nuclei in a shared cytoplasm. *BioSystems*, **2021**, 208, 104478	1.9	0
7	Analytical approximations for the speed of pacemaker-generated waves. *Physical Review E*, **2021**, 104, 014220	2.4	
6	Dynamic bistable switches enhance robustness and accuracy of cell cycle transitions **2021**, 17, e1008231		
5	Dynamic bistable switches enhance robustness and accuracy of cell cycle transitions **2021**, 17, e1008231		
4	Dynamic bistable switches enhance robustness and accuracy of cell cycle transitions **2021**, 17, e1008231		
3	Dynamic bistable switches enhance robustness and accuracy of cell cycle transitions **2021**, 17, e1008231		
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