

# Miro Erkintalo

## List of Publications by Year in descending order

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153  
papers

6,550  
citations

71102

41  
h-index

62596

80  
g-index

155  
all docs

155  
docs citations

155  
times ranked

2718  
citing authors

#	ARTICLE	IF	CITATIONS
1	Instabilities, breathers and rogue waves in optics. <i>Nature Photonics</i> , 2014, 8, 755-764.	31.4	739
2	Modeling of octave-spanning Kerr frequency combs using a generalized mean-field Lugiato-Lefever model. <i>Optics Letters</i> , 2013, 38, 37.	3.3	505
3	Micro-combs: A novel generation of optical sources. <i>Physics Reports</i> , 2018, 729, 1-81.	25.6	448
4	Observation of soliton explosions in a passively mode-locked fiber laser. <i>Optica</i> , 2015, 2, 36.	9.3	352
5	Universal scaling laws of Kerr frequency combs. <i>Optics Letters</i> , 2013, 38, 1790.	3.3	250
6	Roadmap on optical rogue waves and extreme events. <i>Journal of Optics (United Kingdom)</i> , 2016, 18, 063001.	2.2	225
7	Coherence and shot-to-shot spectral fluctuations in noise-like ultrafast fiber lasers. <i>Optics Letters</i> , 2013, 38, 4327.	3.3	185
8	Ultraweak long-range interactions of solitons observed over astronomical distances. <i>Nature Photonics</i> , 2013, 7, 657-663.	31.4	183
9	Higher-Order Modulation Instability in Nonlinear Fiber Optics. <i>Physical Review Letters</i> , 2011, 107, 253901.	7.8	182
10	Mode-locked femtosecond all-normal all-PM Yb-doped fiber laser using a nonlinear amplifying loop mirror. <i>Optics Express</i> , 2012, 20, 10545.	3.4	155
11	Raman rogue waves in a partially mode-locked fiber laser. <i>Optics Letters</i> , 2014, 39, 319.	3.3	148
12	Temporal tweezing of light through the trapping and manipulation of temporal cavity solitons. <i>Nature Communications</i> , 2015, 6, 7370.	12.8	141
13	Rogue-wave-like characteristics in femtosecond supercontinuum generation. <i>Optics Letters</i> , 2009, 34, 2468.	3.3	134
14	Cascaded Phase Matching and Nonlinear Symmetry Breaking in Fiber Frequency Combs. <i>Physical Review Letters</i> , 2012, 109, 223904.	7.8	113
15	Environmentally stable all-PM all-fiber giant chirp oscillator. <i>Optics Express</i> , 2012, 20, 22669.	3.4	110
16	Universal mechanism for the binding of temporal cavity solitons. <i>Optica</i> , 2017, 4, 855.	9.3	104
17	Walk-Off-Induced Modulation Instability, Temporal Pattern Formation, and Frequency Comb Generation in Cavity-Enhanced Second-Harmonic Generation. <i>Physical Review Letters</i> , 2016, 116, 033901.	7.8	100
18	Emergent rogue wave structures and statistics in spontaneous modulation instability. <i>Scientific Reports</i> , 2015, 5, 10380.	3.3	93

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19	120 fs, 4.2 nJ pulses from an all-normal-dispersion, polarization-maintaining, fiber laser. Applied Physics Letters, 2013, 103, 121111.	3.3	91
20	Nonlinear optics of fibre event horizons. Nature Communications, 2014, 5, 4969.	12.8	91
21	Second-harmonic-assisted four-wave mixing in chip-based microresonator frequency comb generation. Light: Science and Applications, 2017, 6, e16253-e16253.	16.6	83
22	Generalized dispersive wave emission in nonlinear fiber optics. Optics Letters, 2013, 38, 151.	3.3	81
23	Observation of dispersive wave emission by temporal cavity solitons. Optics Letters, 2014, 39, 5503.	3.3	81
24	Octave-spanning tunable parametric oscillation in crystalline Kerr microresonators. Nature Photonics, 2019, 13, 701-706.	31.4	80
25	Coherence properties of Kerr frequency combs. Optics Letters, 2014, 39, 283.	3.3	79
26	Raman-driven destabilization of mode-locked long cavity fiber lasers: fundamental limitations to energy scalability. Optics Letters, 2013, 38, 2644.	3.3	77
27	All-normal dispersion fiber lasers mode-locked with a nonlinear amplifying loop mirror. Optical Fiber Technology, 2014, 20, 657-665.	2.7	74
28	Observations of spatiotemporal instabilities of temporal cavity solitons. Optica, 2016, 3, 1071.	9.3	67
29	Frequency-comb formation in doubly resonant second-harmonic generation. Physical Review A, 2016, 93, .	2.5	67
30	Experimental observation of coherent cavity soliton frequency combs in silica microspheres. Optics Letters, 2016, 41, 4613.	3.3	66
31	Akhmediev breather evolution in optical fiber for realistic initial conditions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 2029-2034.	2.1	64
32	Giant dispersive wave generation through soliton collision. Optics Letters, 2010, 35, 658.	3.3	55
33	Dynamics of soliton explosions in passively mode-locked fiber lasers. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 46.	2.1	55
34	Kerr-microresonator solitons from a chirped background. Optica, 2018, 5, 1304.	9.3	52
35	Writing and erasing of temporal cavity solitons by direct phase modulation of the cavity driving field. Optics Letters, 2015, 40, 4755.	3.3	49
36	Coexistence and Interactions between Nonlinear States with Different Polarizations in a Monochromatically Driven Passive Kerr Resonator. Physical Review Letters, 2019, 123, 013902.	7.8	48

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37	Spontaneous symmetry breaking of dissipative optical solitons in a two-component Kerr resonator. Nature Communications, 2021, 12, 4023.	12.8	48
38	Stimulated Raman Scattering Imposes Fundamental Limits to the Duration and Bandwidth of Temporal Cavity Solitons. Physical Review Letters, 2018, 120, 053902.	7.8	46
39	Spontaneous creation and annihilation of temporal cavity solitons in a coherently driven passive fiber resonator. Optics Letters, 2015, 40, 3735.	3.3	44
40	Spontaneous symmetry breaking and trapping of temporal Kerr cavity solitons by pulsed or amplitude-modulated driving fields. Physical Review A, 2018, 97, .	2.5	44
41	Experimental observations of bright dissipative cavity solitons and their collapsed snaking in a Kerr resonator with normal dispersion driving. Optica, 2020, 7, 1195.	9.3	44
42	Asymmetric balance in symmetry breaking. Physical Review Research, 2020, 2, .	3.6	38
43	All-optical buffer based on temporal cavity solitons operating at 10 <sup>10</sup> Gb/s. Optics Letters, 2016, 41, 4526.	3.3	36
44	Coexistence of Multiple Nonlinear States in a Tristable Passive Kerr Resonator. Physical Review X, 2017, 7, .	8.9	36
45	Experimental signatures of dispersive waves emitted during soliton collisions. Optics Express, 2010, 18, 13379.	3.4	34
46	On the phase-dependent manifestation of optical rogue waves. Nonlinearity, 2012, 25, R73-R83.	1.4	33
47	Single envelope equation modeling of multi-octave comb arrays in microresonators with quadratic and cubic nonlinearities. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 1207.	2.1	33
48	Experimental and numerical investigations of switching wave dynamics in a normally dispersive fibre ring resonator. European Physical Journal D, 2017, 71, 1.	1.3	33
49	Widely tunable optical parametric oscillation in a Kerr microresonator. Optics Letters, 2017, 42, 5190.	3.3	31
50	Optical Frequency Combs in Quadratically Nonlinear Resonators. Micromachines, 2020, 11, 230.	2.9	31
51	Experimental observation of internally pumped parametric oscillation and quadratic comb generation in a $\langle 2 \rangle$ whispering-gallery-mode microresonator. Optics Letters, 2020, 45, 1204.	3.3	31
52	Absolute nonlinear optical probes of surface chirality. Journal of Optics, 2009, 11, 034006.	1.5	29
53	Coherent-mode representation of supercontinuum. Optics Letters, 2012, 37, 169.	3.3	29
54	Invited Article: Emission of intense resonant radiation by dispersion-managed Kerr cavity solitons. APL Photonics, 2018, 3, 120804.	5.7	29

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55	Frequency comb generation in a pulse-pumped normal dispersion Kerr mini-resonator. <i>Optics Letters</i> , 2021, 46, 512.	3.3	29
56	Controlled merging and annihilation of localised dissipative structures in an AC-driven damped nonlinear Schrödinger system. <i>New Journal of Physics</i> , 2016, 18, 033034.	2.9	27
57	Impact of desynchronization and drift on soliton-based Kerr frequency combs in the presence of pulsed driving fields. <i>Physical Review A</i> , 2019, 100, .	2.5	27
58	Limitations of the linear Raman gain approximation in modeling broadband nonlinear propagation in optical fibers. <i>Optics Express</i> , 2010, 18, 25449.	3.4	23
59	Addressing temporal Kerr cavity solitons with a single pulse of intensity modulation. <i>Optics Letters</i> , 2018, 43, 3192.	3.3	23
60	Coherent Continuous Wave Terahertz Spectroscopy Using Hilbert Transform. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2019, 40, 524-534.	2.2	23
61	Mode-locked Yb-doped fiber laser emitting broadband pulses at ultralow repetition rates. <i>Optics Letters</i> , 2016, 41, 5270.	3.3	22
62	Resonant radiation in synchronously pumped passive Kerr cavities. <i>Optics Letters</i> , 2015, 40, 427.	3.3	21
63	Harmonic and rational harmonic driving of microresonator soliton frequency combs. <i>Optica</i> , 2020, 7, 940.	9.3	21
64	Absolute Probe of Surface Chirality Based on Focused Circularly Polarized Light. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 1826-1829.	4.6	19
65	Dissipative Polarization Domain Walls in a Passive Coherently Driven Kerr Resonator. <i>Physical Review Letters</i> , 2021, 126, 023904.	7.8	19
66	Bunching of temporal cavity solitons via forward Brillouin scattering. <i>New Journal of Physics</i> , 2015, 17, 115009.	2.9	17
67	Phase and intensity control of dissipative Kerr cavity solitons. <i>Journal of the Royal Society of New Zealand</i> , 2022, 52, 149-167.	1.9	17
68	Measurement of microresonator frequency comb coherence by spectral interferometry. <i>Optics Letters</i> , 2016, 41, 277.	3.3	16
69	Large net-normal dispersion Er-doped fibre laser mode-locked with a nonlinear amplifying loop mirror. <i>Optics Communications</i> , 2018, 410, 447-451.	2.1	15
70	Breathing dynamics of symmetry-broken temporal cavity solitons in Kerr ring resonators. <i>Optics Letters</i> , 2022, 47, 1486.	3.3	15
71	Fission of solitons in continuous-wave supercontinuum. <i>Optics Letters</i> , 2012, 37, 5217.	3.3	14
72	Cascaded Bragg scattering in fiber optics. <i>Optics Letters</i> , 2013, 38, 142.	3.3	14

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73	Soliton linear-wave scattering in a Kerr microresonator. Communications Physics, 2022, 5, .	5.3	13
74	Origins of clustered frequency combs in Kerr microresonators. Optics Letters, 2018, 43, 4180.	3.3	12
75	Nonlinear Localization of Dissipative Modulation Instability. Physical Review Letters, 2021, 127, 123901.	7.8	12
76	Polarization modulation instability in a nonlinear fiber Kerr resonator. Optics Letters, 2020, 45, 5069.	3.3	12
77	Efficiency of dispersive wave generation from a dual-frequency beat signal. Optics Letters, 2014, 39, 5850.	3.3	10
78	Predicting the unpredictable?. Nature Photonics, 2015, 9, 560-562.	31.4	9
79	Experimental observations of breathing Kerr temporal cavity solitons at large detunings. Optics Letters, 2018, 43, 3674.	3.3	9
80	Observations of existence and instability dynamics of near-zero-dispersion temporal Kerr cavity solitons. Physical Review Research, 2021, 3, .	3.6	6
81	Pump-soliton nonlinear wave mixing in noise-driven fiber supercontinuum generation. Optics Letters, 2011, 36, 3870.	3.3	5
82	Dual-microcomb generation in a synchronously driven waveguide ring resonator. Optics Letters, 2021, 46, 6002.	3.3	5
83	Environment, Wildlife and LED Illumination. Optics and Photonics News, 2015, 26, 42.	0.5	3
84	Measurement of the Raman Self-Frequency Shift of a Temporal Cavity Soliton. , 2016, , .		3
85	Real Time Observations of Soliton Bound States, with Multiple Binding Mechanisms, in Passive Nonlinear Cavities. , 2016, , .		2
86	Dynamics and statistics of noise-like pulses and Rogue Waves. , 2014, , .		1
87	Transient Dynamics of Cavity Soliton Merging. , 2014, , .		1
88	Complete control of temporal cavity solitons. , 2014, , .		1
89	Flip-Flop Polarization Domain Walls in a Kerr Resonator. , 2018, , .		1
90	Observation of dispersive wave emission by temporal cavity solitons. , 2014, , .		1

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91	Theory of Frequency Comb Generation in Cavity Enhanced Second Harmonic Generation. , 2016, , .		1
92	Writing and Erasure of Temporal Cavity Solitons via Intensity Modulation of the Cavity Driving Field. , 2016, , .		1
93	Spontaneous symmetry breaking of Kerr cavity solitons. , 2020, , .		1
94	Unambiguous Probe of Surface Chirality Based on Focused Circularly-polarized Light. , 2010, , .		0
95	Optical rogue waves and soliton collisions. , 2010, , .		0
96	Optical rogue waves and localized structures in nonlinear fiber optics. , 2011, , .		0
97	Rediscovered dynamics of nonlinear fiber optics: from breathers to extreme localisation. , 2011, , .		0
98	Akhmediev breathers and pulsed modulation instability. , 2011, , .		0
99	Failure of the linear Raman gain approximation in supercontinuum generation. , 2011, , .		0
100	Failure and limitations of linear Raman gain approximation for fiber supercontinuum generation modelling. Proceedings of SPIE, 2011, , .	0.8	0
101	Frequencydoubling and recurrence phenomena in Akhmediev breathers pulse trains. , 2011, , .		0
102	Mode-locked femtosecond all PM Yb fiber laser delivering linearly chirped pulses. Proceedings of SPIE, 2012, , .	0.8	0
103	Suppression of temporal cavity soliton interactions by phase modulation of the driving beam. , 2013, , .		0
104	Ultraweak Soliton Interactions. Optics and Photonics News, 2013, 24, 49.	0.5	0
105	Pushing the limits of environmentally stable fibre lasers: 120 fs, 4.2 nJ, all-PM all-fibre. , 2013, , .		0
106	Ultra-weak acoustic interactions of temporal cavity solitons. , 2013, , .		0
107	Raman-driven destabilization of giant-chirp oscillators: Fundamental limitations to energy scalability. , 2013, , .		0
108	Observation of dispersive-wave emission by temporal cavity solitons. , 2013, , .		0

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109	Steady-state and instabilities of octave-spanning Kerr frequency combs modeled using a generalized Lugiato-Lefever equation. , 2013, , .		0
110	Raman rogue waves in a long cavity passively mode-locked fiber laser. , 2014, , .		0
111	Mean-field Numerical Modelling of Microresonator Frequency Combs. , 2014, , .		0
112	Bound states of temporal cavity solitons. , 2014, , .		0
113	Coherence properties of optical frequency combs generated in Kerr microresonators. , 2014, , .		0
114	Temporal tweezing of light. , 2014, , .		0
115	Temporal Cavity Solitons: From Fiber Resonators to Microresonators. , 2015, , .		0
116	Existence and dynamics of pairs of temporal cavity solitons weakly-bound through kelly sidebands in a passive optical fiber resonator. , 2015, , .		0
117	Dynamics of Rogue Wave and Soliton Emergence in Spontaneous Modulation Instability. , 2015, , .		0
118	Theory of quadratic optical frequency combs. , 2016, , .		0
119	Nonlinear dynamics of optical frequency combs. , 2017, , .		0
120	And then there were three. Nature Photonics, 2018, 12, 645-647.	31.4	0
121	Observation of super cavity solitons. , 2018, , .		0
122	Wideband Tunability of Kerr Parametric Oscillation in an MgF2 Microresonator. , 2019, , .		0
123	Dynamics of Kerr-Like Optical Frequency Combs Generated via Phase-Mismatched Second-Harmonic Generation. , 2019, , .		0
124	Symmetry Breaking: Balancing Asymmetries. , 2019, , .		0
125	Experimental Observation of Chimera-Like States in a Passive Kerr Resonator. , 2019, , .		0
126	Experimental Observation of Coexisting Differently Polarized Cavity Solitons in a Monochromatically Driven Passive Kerr Resonator. , 2019, , .		0



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127	Terahertz Frequency Domain Spectroscopy using Hilbert Transformation. , 2019, , .		0
128	Desynchronization of Pulsed Driving in the Formation of Soliton Kerr Frequency Combs. , 2019, , .		0
129	Quadratic Optical Frequency Combs. , 2019, , .		0
130	Breathing Cavity Solitons and Polychromatic Dispersive Radiation in a Near-Zero Dispersion Kerr Resonator. , 2021, , .		0
131	Features of spontaneous symmetry breaking of dissipative cavity solitons in passive Kerr resonators. , 2021, , .		0
132	Universal flip-flopping and self-symmetrization of symmetry-breaking dynamics in passive Kerr resonators. , 2021, , .		0
133	Got the quantum jitters. Nature Physics, 2021, 17, 432-434.	16.7	0
134	Creation and Annihilation Dynamics of Temporal Cavity Solitons. , 2015, , .		0
135	Temporal cavity solitons: from all-optical memories to microresonator frequency combs. , 2015, , .		0
136	Cavity soliton frequency comb generation in silica microspheres. , 2016, , .		0
137	Controlled Collisions of Dissipative Solitons. , 2016, , .		0
138	Observation of Spatiotemporal Chaos Induced by a Cavity Soliton in a Fiber Ring Resonator. , 2016, , .		0
139	Frequency combs in quadratically nonlinear resonators. , 2016, , .		0
140	Coexistence of Distinct Cavity Solitons States in a Tri-stable Passive Kerr Resonator. , 2016, , .		0
141	A Giant Chirp Oscillator at Ultra-low Repetition Rates. , 2016, , .		0
142	Observations of Complex Spatiotemporal Instabilities in a Fiber Ring Resonator. , 2016, , .		0
143	Cherenkov-radiation-induced binding of temporal cavity solitons observed in a passive fiber ring resonator. , 2016, , .		0
144	Measuring the Degree of Coherence of Microresonator Frequency Combs. , 2016, , .		0

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145	Programmable Repetition Rate Optical Source Based on Fiber Cavity Solitons. , 2018, , .		0
146	Atypical Trapping of Cavity Solitons in Kerr Resonators Driven with Optical Pulses. , 2018, , .		0
147	Strong resonant radiation limits Kerr cavity soliton existence in longitudinally modulated resonators. , 2018, , .		0
148	Frequency comb generation in a continuously pumped optical parametric oscillator. , 2018, , .		0
149	Experimental Observation of Internally-pumped Parametric Oscillation and Quadratic Comb Generation in a Lithium Niobate Microresonator. , 2020, , .		0
150	Manipulating dispersive waves in a normal dispersion fiber ring resonator driven by optical pulses. , 2020, , .		0
151	Adjustable repetition rate Kerr frequency combs in an integrated silica microring. , 2020, , .		0
152	Experimental observation of bright temporal cavity solitons enabled by third-order dispersion. , 2020, , .		0
153	Spontaneous polarization symmetry breaking of temporal cavity solitons in optical Kerr resonators. , 2020, , .		0