Igor Chekhovskoy

List of Publications by Year
in descending order

29 papers	249 citations	1040056 9 h-index	940533 16 g-index
29 all docs	29 docs citations	29 times ranked	136 citing authors

#	Article	IF	Citations
1	Nonlinear pulse combining and pulse compression in multi-core fibers. Optics Letters, 2015, 40, 721.	3.3	53
2	Nonlinear Fourier Transform for Analysis of Coherent Structures in Dissipative Systems. Physical Review Letters, 2019, 122, 153901.	7.8	40
3	Nonlinear combining and compression in multicore fibers. Physical Review A, 2016, 94, .	2.5	26
4	Exponential fourth order schemes for direct Zakharov-Shabat problem. Optics Express, 2020, 28, 20.	3.4	21
5	Nonlinear Fourier transform for characterization of the coherent structures in optical microresonators. Optics Letters, 2020, 45, 3059.	3.3	19
6	Numerical approaches to simulation of multi-core fibers. Journal of Computational Physics, 2017, 334, 31-44.	3.8	14
7	Introducing phase jump tracking - a fast method for eigenvalue evaluation of the direct Zakharov-Shabat problem. Communications in Nonlinear Science and Numerical Simulation, 2021, 96, 105718.	3.3	13
8	Nonlinear Fourier transform for analysis of optical spectral combs. Physical Review E, 2021, 103, L020202.	2.1	11
9	Numerical algorithm with fourth-order accuracy for the direct Zakharov-Shabat problem. Optics Letters, 2019, 44, 2264.	3.3	10
10	Finding spatiotemporal light bullets in multicore and multimode fibers. Optics Express, 2020, 28, 7817.	3.4	9
11	Conservative multi-exponential scheme for solving the direct Zakharovâ€"Shabat scattering problem. Optics Letters, 2020, 45, 2082.	3.3	8
12	Neural networks for computing and denoising the continuous nonlinear Fourier spectrum in focusing nonlinear SchrÃ¶dinger equation. Scientific Reports, 2021, 11, 22857.	3.3	6
13	Nonlinear discrete wavefront shaping for spatiotemporal pulse compression with multicore fibers. Journal of the Optical Society of America B: Optical Physics, 2018, 35, 2169.	2.1	4
14	Application of neural networks to determine the discrete spectrum of the direct Zakharov â€" Shabat problem. Quantum Electronics, 2020, 50, 1105-1109.	1.0	4
15	Neural network for calculating direct and inverse nonlinear Fourier transform. Quantum Electronics, 2021, 51, 1118-1121.	1.0	4
16	On Demand Spatial Beam Self-Focusing in Hexagonal Multicore Fiber. IEEE Photonics Journal, 2018, 10, 1-8.	2.0	3
17	Spatiotemporal multiplexing based on hexagonal multicore optical fibres. Quantum Electronics, 2017, 47, 1150-1153.	1.0	2
18	Nonlinear Waves in Multimode Fibers. , 2018, , 1-55.		1

#	Article	IF	Citations
19	Fast sixth-order algorithm based on the generalized Cayley transform for the Zakharov-Shabat system associated with nonlinear Schrodinger equation. Journal of Computational Physics, 2022, 448, 110764.	3.8	1
20	Spatio-temporal multiplexing based on multi-core fiber. , 2017, , .		0
21	Nonlinear combining of chirped and phase-modulated Gaussian pulses in multi-core fibers. , 2017, , .		0
22	A Novel Sixth-Order Algorithm for the Direct Zakharov-Shabat Problem. , 2021, , .		0
23	Computing continuous nonlinear Fourier spectrum of optical signal with artificial neural networks. , 2021, , .		0
24	Theoretical and Experimental Study of Signal Gain in Er-doped fiber. , 2016, , .		0
25	Nonlinear pulse combining and compression in multi-core fibers with hexagonal lattice. , 2016, , .		0
26	Discrete phase front focusing in multi-core fibers with simultaneous pulse compression. , 2018, , .		0
27	Nonlinear Waves in Multimode Fibers. , 2019, , 317-371.		0
28	Neural Networks For Nonlinear Fourier Spectrum Computation. , 2021, , .		0
29	Nonlinear pulse combining and compression using twisted hexagonal multi-core fibers. , 2020, , .		0