

Stephane Randoux

List of Publications by Year in descending order

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95
papers

2,568
citations

186254
28
h-index

189881
50
g-index

95
all docs

95
docs citations

95
times ranked

1330
citing authors

#	ARTICLE	IF	CITATIONS
1	Prediction and manipulation of hydrodynamic rogue waves via nonlinear spectral engineering. Physical Review Fluids, 2022, 7, .	2.5	13
2	Nonlinear dispersion relation in integrable turbulence. Scientific Reports, 2022, 12, .	3.3	3
3	Spatiotemporal observation of higher-order modulation instability in a recirculating fiber loop. Optics Letters, 2022, 47, 3560.	3.3	5
4	Single-shot observation of breathers from noise-induced modulation instability using heterodyne temporal imaging. Optics Letters, 2021, 46, 298.	3.3	3
5	Local Emergence of Peregrine Solitons: Experiments and Theory. Frontiers in Physics, 2021, 8, .	2.1	7
6	Extreme rogue wave generation from narrowband partially coherent waves. Physical Review E, 2021, 103, 032209.	2.1	12
7	Numerical spectral synthesis of breather gas for the focusing nonlinear Schrödinger equation. Physical Review E, 2021, 103, 042205.	2.1	10
8	Spatio-temporal observation of higher-order modulation instability in a recirculating fiber loop. , 2021, , .		0
9	Solitonic model of the condensate. Physical Review E, 2021, 104, 044213.	2.1	10
10	Single-shot measurement of the photonic band structure in a fiber-based Floquet-Bloch lattice. Communications Physics, 2021, 4, .	5.3	5
11	Observation of a giant nonlinear wave-packet on the surface of the ocean. Scientific Reports, 2021, 11, 23606.	3.3	8
12	The Physics of the one-dimensional nonlinear Schrödinger equation in fiber optics: Rogue waves, modulation instability and self-focusing phenomena. Reviews in Physics, 2020, 5, 100037.	8.9	59
13	Topological Swing of Bloch Oscillations in Quantum Walks. Physical Review Letters, 2020, 125, 186804.	7.8	14
14	From modulational instability to focusing dam breaks in water waves. Physical Review Fluids, 2020, 5, .	2.5	28
15	Emergence of Peregrine solitons in integrable turbulence of deep water gravity waves. Physical Review Fluids, 2020, 5, .	2.5	15
16	Nonlinear Spectral Synthesis of Soliton Gas in Deep-Water Surface Gravity Waves. Physical Review Letters, 2020, 125, 264101.	7.8	50
17	Single-Shot Time-Resolved Phase and Intensity Measurement of Breathers in the Nonlinear Stage of Modulation Instability. , 2019, , .		0
18	Statistical Properties of the Nonlinear Stage of Modulation Instability in Fiber Optics. Physical Review Letters, 2019, 123, 093902.	7.8	51

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19	Early stage of integrable turbulence in the one-dimensional nonlinear Schrödinger equation: A semiclassical approach to statistics. Physical Review E, 2019, 100, 032212.	2.1	9
20	Nonlinear Evolution of the Locally Induced Modulational Instability in Fiber Optics. Physical Review Letters, 2019, 122, 054101.	7.8	69
21	Modulational Instability of a Plane Wave in the Presence of Localized Perturbations: Experiments in Nonlinear Fiber Optics. , 2019, , .		0
22	Space-Time Evolution of Noise-Driven Modulation Instability in Optical Fibers Experiments. , 2019, , .		0
23	Bound State Soliton Gas Dynamics Underlying the Spontaneous Modulational Instability. Physical Review Letters, 2019, 123, 234102.	7.8	67
24	Spontaneous emergence of rogue waves in partially coherent waves: A quantitative experimental comparison between hydrodynamics and optics. Physical Review E, 2018, 97, 012208.	2.1	32
25	Single-shot measurement of phase and amplitude by using a heterodyne time-lens system and ultrafast digital time-holography. Nature Photonics, 2018, 12, 228-234.	31.4	126
26	Nonlinear spectral analysis of Peregrine solitons observed in optics and in hydrodynamic experiments. Physical Review E, 2018, 98, 022219.	2.1	49
27	Catastrophic process of coherence degradation. , 2018, , .		0
28	Single-shot observation of optical rogue waves in integrable turbulence using time microscopy. , 2017, , .		1
29	Origins of spectral broadening of incoherent waves: Catastrophic process of coherence degradation. Physical Review A, 2017, 96, .	2.5	5
30	Universality of the Peregrine Soliton in the Focusing Dynamics of the Cubic Nonlinear Schrödinger Equation. Physical Review Letters, 2017, 119, 033901.	7.8	103
31	Optical Random Riemann Waves in Integrable Turbulence. Physical Review Letters, 2017, 118, 233901.	7.8	21
32	Nonlinear random optical waves: Integrable turbulence, rogue waves and intermittency. Physica D: Nonlinear Phenomena, 2016, 333, 323-335.	2.8	39
33	Hydrodynamic and Optical Waves: A Common Approach for Unidimensional Propagation. Lecture Notes in Physics, 2016, , 1-22.	0.7	4
34	Integrable Turbulence with Nonlinear Random Optical Waves. Lecture Notes in Physics, 2016, , 277-307.	0.7	0
35	On the origin of heavy-tail statistics in equations of the Nonlinear Schrödinger type. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 3173-3177.	2.1	28
36	Inverse scattering transform analysis of rogue waves using local periodization procedure. Scientific Reports, 2016, 6, 29238.	3.3	80

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37	Single-shot observation of optical rogue waves in integrable turbulence using time microscopy. Nature Communications, 2016, 7, 13136.	12.8	186
38	Optical rogue waves in integrable turbulence. , 2016, , .		0
39	Optical Rogue Waves in Integrable Turbulence. Physical Review Letters, 2015, 114, 143903.	7.8	159
40	Statistics of a turbulent Raman fiber laser. Optics Letters, 2015, 40, 3101.	3.3	14
41	Intermittency in Integrable Turbulence. Physical Review Letters, 2014, 113, 113902.	7.8	68
42	Optical wave turbulence: Towards a unified nonequilibrium thermodynamic formulation of statistical nonlinear optics. Physics Reports, 2014, 542, 1-132.	25.6	208
43	Temporal dynamics of incoherent nonlinear waves. , 2014, , .		0
44	Intermittency in integrable turbulence. , 2014, , .		0
45	Cell death induced by direct laser activation of singlet oxygen at 1270 nm. Laser Physics, 2013, 23, 025601.	1.2	16
46	Transient buildup of the optical power spectrum in Raman fiber lasers. Optics Express, 2013, 21, 2331.	3.4	10
47	Experimental evidence of extreme value statistics in Raman fiber lasers. Optics Letters, 2012, 37, 500.	3.3	76
48	Nonlinear propagation of incoherent waves in single-mode fibers: from wave turbulence theory to experiments. , 2012, , .		0
49	Cancerous Cell Death from Sensitizer Free Photoactivation of Singlet Oxygen. Photochemistry and Photobiology, 2012, 88, 167-174.	2.5	66
50	Optical rogue waves in Raman fiber lasers. , 2012, , .		1
51	Wave turbulence in integrable systems: nonlinear propagation of incoherent optical waves in single-mode fibers. Optics Express, 2011, 19, 17852.	3.4	43
52	Intracavity changes in the field statistics of Raman fiber lasers. Optics Letters, 2011, 36, 790.	3.3	38
53	Kinetic Description of Random Optical Waves and Anomalous Thermalization of a Nearly Integrable Wave System. Letters in Mathematical Physics, 2011, 96, 415-447.	1.1	6
54	Thermalization and condensation in an incoherently pumped passive optical cavity. Physical Review A, 2011, 84, .	2.5	22

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55	Anomalous thermalization of nonlinear optical wave systems. , 2011, , .		0
56	Statistical properties and optical spectra of Raman fiber lasers: Influence of Bragg-grating mirrors. , 2011, , .		0
57	Anomalous thermalization of optical waves induced by third-order dispersion effects. , 2010, , .		0
58	Anomalous Thermalization of Nonlinear Wave Systems. Physical Review Letters, 2010, 104, 054101.	7.8	42
59	A high-power tunable Raman fiber ring laser for the investigation of singlet oxygen production from direct laser excitation around 1270 nm. Optics Express, 2010, 18, 22928.	3.4	43
60	Influence of third-order dispersion on the propagation of incoherent light in optical fibers. Optics Letters, 2010, 35, 2367.	3.3	30
61	Influence of dispersion of fiber Bragg grating mirrors on formation of optical power spectrum in Raman fiber lasers. Optics Letters, 2010, 35, 2505.	3.3	17
62	Anomalous Thermalization of Nonlinear Optical Waves. , 2010, , .		0
63	Grating-Free and Bragg-Grating-Based Raman Lasers Made With Highly Nonlinear Photonic Crystal Fibers. Journal of Lightwave Technology, 2009, 27, 1580-1589.	4.6	3
64	Benefits of optimized HNL-PCF for Raman fiber lasers. , 2009, , .		0
65	All-fiber Raman lasers with highly nonlinear photonic crystal fibers. , 2009, , .		0
66	Self-oscillations in a cascaded Raman laser made with a highly nonlinear photonic crystal fiber. Optics Express, 2008, 16, 11237.	3.4	10
67	Dynamics and spectral properties of a grating-free Raman laser made with a highly nonlinear photonic crystal fiber. Proceedings of SPIE, 2008, , .	0.8	0
68	Generation of subnanosecond pulses in a cascaded Raman laser. , 2007, , .		0
69	Grating-free Raman laser using highly nonlinear photonic crystal fiber. Optics Express, 2007, 15, 16035.	3.4	11
70	Spectral broadening of a multimode continuous-wave optical field propagating in the normal dispersion regime of a fiber. Optics Letters, 2006, 31, 1696.	3.3	54
71	Polarization-resolved analysis of the characteristics of a Raman laser made with a polarization maintaining fiber. Optics Communications, 2006, 260, 232-241.	2.1	5
72	Toward passive mode locking by nonlinear polarization evolution in a cascaded Raman fiber ring laser. Optics Communications, 2006, 267, 145-148.	2.1	11

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73	Influence of spectral broadening on steady characteristics of Raman fiber lasers: from experiments to questions about validity of usual models. Optics Communications, 2004, 237, 201-212.	2.1	45
74	Influence of light polarization on dynamics of all-fiber Raman lasers: theoretical analysis. Optics Letters, 2004, 29, 2166.	3.3	11
75	Influence of light polarization on dynamics of continuous-wave-pumped Raman fiber lasers. Optics Letters, 2003, 28, 2464.	3.3	19
76	Origin of spectral hole burning in Brillouin fiber amplifiers and generators. Physical Review A, 2002, 65, .	2.5	24
77	Intensity noise in Brillouin fiber ring lasers. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 1055.	2.1	22
78	Bruit d'intensité dans les lasers Brillouin à fibre. European Physical Journal Special Topics, 2002, 12, 175-176.	0.2	0
79	Origine du bruit de trou spectral dans les amplificateurs et générateurs Brillouin. European Physical Journal Special Topics, 2002, 12, 177-178.	0.2	0
80	Experimental and theoretical study of linewidth narrowing in Brillouin fiber ring lasers. Journal of the Optical Society of America B: Optical Physics, 2001, 18, 556.	2.1	85
81	Comment on "Observation of Inhomogeneous Spectral Broadening of Stimulated Brillouin Scattering in an Optical Fiber". Physical Review Letters, 2001, 88, 029401.	7.8	4
82	Bragg grating based Brillouin fibre laser. Optics Communications, 2000, 177, 303-306.	2.1	3
83	Linewidth narrowing in Brillouin lasers: Theoretical analysis. Physical Review A, 2000, 62, .	2.5	181
84	Temporal coherence of a Brillouin fiber laser. European Physical Journal Special Topics, 2000, 10, Pr8-175.	0.2	0
85	Characterization of a Brillouin amplifier and a Brillouin laser optically injected. European Physical Journal Special Topics, 2000, 10, Pr8-173.	0.2	0
86	Polarization dynamics of a Brillouin fiber ring laser. Physical Review A, 1999, 59, 1644-1653.	2.5	13
87	Polarization instabilities and antiphase dynamics in a Brillouin fiber ring laser. Physical Review A, 1997, 56, R1717-R1720.	2.5	5
88	Brillouin fiber lasers: dynamics and stability. , 1996, , .		0
89	Dynamics of a Brillouin fiber ring laser: Off-resonant case. Physical Review A, 1996, 53, 2822-2828.	2.5	22
90	Dynamics of stimulated Brillouin scattering with feedback. Quantum and Semiclassical Optics: Journal of the European Optical Society Part B, 1996, 8, 1109-1145.	0.9	17

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91	Dynamical analysis of Brillouin fiber lasers: An experimental approach. Physical Review A, 1995, 51, R4345-R4348.	2.5	28
92	Dynamical behavior of a Brillouin fiber ring laser emitting two Stokes components. Physical Review A, 1995, 52, 2327-2334.	2.5	24
93	Dynamics of second-order stokes emission in a brillouin fiber ring oscillator. , 0, , .		0
94	Dynamical behavior of a Brillouin fiber ring laser exhibiting polarization instabilities. , 0, , .		0
95	Linewidth narrowing in Brillouin fiber lasers. , 0, , .		0