Gino Biondini

List of Publications by Citations

125 papers	2,383 citations	28 h-index	43 g-index
146 ext. papers	2,821 ext. citations	2.4 avg, IF	5.56 L-index

#	Paper	IF	Citations
125	Multiscale pulse dynamics in communication systems with strong dispersion management. *Optics Letters*, **1998**, 23, 1668-70	3	203
124	Inverse scattering transform for the focusing nonlinear Schrödinger equation with nonzero boundary conditions. *Journal of Mathematical Physics*, **2014**, 55, 031506	1.2	133
123	Inverse scattering transform for the vector nonlinear Schrödinger equation with nonvanishing boundary conditions. *Journal of Mathematical Physics*, **2006**, 47, 063508	1.2	92
122	On a family of solutions of the Kadomtsev-Petviashvili equation which also satisfy the Toda lattice hierarchy. *Journal of Physics A*, **2003**, 36, 10519-10536		83
121	Soliton solutions of the Kadomtsev-Petviashvili II equation. *Journal of Mathematical Physics*, **2006**, 47, 033514	1.2	79
120	Universal Nature of the Nonlinear Stage of Modulational Instability. *Physical Review Letters*, **2016**, 116, 043902	7.4	71
119	Importance sampling for polarization-mode dispersion. *IEEE Photonics Technology Letters*, **2002**, 14, 310-312	2.2	64
118	Methods for discrete solitons in nonlinear lattices. *Physical Review E*, **2002**, 65, 026602	2.4	54
117	Inverse scattering transform for the integrable discrete nonlinear Schrödinger equation with nonvanishing boundary conditions. *Inverse Problems*, **2007**, 23, 1711-1758	2.3	52
116	Four-wave mixing in wavelength-division-multiplexed soliton systems: damping and amplification. *Optics Letters*, **1996**, 21, 1646-8	3	52
115	Quasi-linear optical pulses in strongly dispersion-managed transmission systems. *Optics Letters*, **2001**, 26, 459-61	3	47
114	Line soliton interactions of the Kadomtsev-Petviashvili equation. *Physical Review Letters*, **2007**, 99, 064103	7.4	46
113	Long-Time Asymptotics for the Focusing Nonlinear Schrödinger Equation with Nonzero Boundary Conditions at Infinity and Asymptotic Stage of Modulational Instability. *Communications on Pure and Applied Mathematics*, **2017**, 70, 2300-2365	2.5	45
112	On the focusing non-linear Schrödinger equation with non-zero boundary conditions and double poles. *IMA Journal of Applied Mathematics*, **2017**, 82, 131-151	1	43
111	Importance sampling for polarization-mode dispersion: techniques and applications. *Journal of Lightwave Technology*, **2004**, 22, 1201-1215	4	42
110	Multiple importance sampling for first- and second-order polarization-mode dispersion. *IEEE Photonics Technology Letters*, **2002**, 14, 1273-1275	2.2	39
109	Incomplete collisions of wavelength-division multiplexed dispersion-managed solitons. *Journal of the Optical Society of America B: Optical Physics*, **2001**, 18, 577	1.7	38

108	Oscillation structure of localized perturbations in modulationally unstable media. *Physical Review E*, **2016**, 94, 060201	2.4	38
107	Optical solitons: Perspectives and applications. *Chaos*, **2000**, 10, 471-474	3.3	37
106	Inverse Scattering Transform for the Multi-Component Nonlinear Schrödinger Equation with Nonzero Boundary Conditions. *Studies in Applied Mathematics*, **2011**, 126, 245-302	2.1	35
105	Inverse Scattering Transform for the Defocusing Manakov System with Nonzero Boundary Conditions. *SIAM Journal on Mathematical Analysis*, **2015**, 47, 706-757	1.7	34
104	Importance sampling for noise-induced amplitude and timing jitter in soliton transmission systems. *Optics Letters*, **2003**, 28, 105-7	3	33
103	Experimental Observation and Theoretical Description of Multisoliton Fission in Shallow Water. *Physical Review Letters*, **2016**, 117, 144102	7.4	33
102	The Integrable Nature of Modulational Instability. *SIAM Journal on Applied Mathematics*, **2015**, 75, 136-163	1.8	32
101	The Three-Component Defocusing Nonlinear Schrödinger Equation with Nonzero Boundary Conditions. *Communications in Mathematical Physics*, **2016**, 348, 475-533	2	32
100	On the Whitham Equations for the Defocusing Nonlinear Schrodinger Equation with Step Initial Data. *Journal of Nonlinear Science*, **2006**, 16, 435-481	2.8	31
99	Nonlinear Schrödinger equations with mean terms in nonresonant multidimensional quadratic materials. *Physical Review E*, **2001**, 63, 046605	2.4	30
98	On timing Jitter in wavelength-division multiplexed soliton systems. *Optics Communications*, **1998**, 150, 305-318	2	28
97	Elastic and inelastic line-soliton solutions of the KadomtsevPetviashvili II equation. *Mathematics and Computers in Simulation*, **2007**, 74, 237-250	3.3	28
96	Analysis of PMD compensators with fixed DGD using importance sampling. *IEEE Photonics Technology Letters*, **2002**, 14, 627-629	2.2	27
95	The focusing Manakov system with nonzero boundary conditions. *Nonlinearity*, **2015**, 28, 3101-3151	1.7	26
94	Dark-bright soliton solutions with nontrivial polarization interactions for the three-component defocusing nonlinear Schrödinger equation with nonzero boundary conditions. *Journal of Mathematical Physics*, **2015**, 56, 071505	1.2	26
93	On the Nonlinear Schrödinger Equation on the Half Line with Homogeneous Robin Boundary Conditions. *Studies in Applied Mathematics*, **2012**, 129, 249-271	2.1	26
92	Multi-dimensional pulse propagation in non-resonant (2) materials. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1997**, 236, 520-524	2.3	25
91	Inverse scattering transform for the defocusing nonlinear Schrödinger equation with fully asymmetric non-zero boundary conditions. *Physica D: Nonlinear Phenomena*, **2016**, 333, 117-136	3.3	25

90	Universal Behavior of Modulationally Unstable Media. *SIAM Review*, **2018**, 60, 888-908	7.4	25
89	Resonance and web structure in discrete soliton systems: the two-dimensional Toda lattice and its fully discrete and ultra-discrete analogues. *Journal of Physics A*, **2004**, 37, 11819-11839		24
88	Solitons, boundary value problems and a nonlinear method of images. *Journal of Physics A: Mathematical and Theoretical*, **2009**, 42, 205207	2	21
87	Collision-induced timing shifts in dispersion-managed soliton systems. *Optics Letters*, **2002**, 27, 318-20	3	21
86	On the Spectrum of the Dirac Operator and the Existence of Discrete Eigenvalues for the Defocusing Nonlinear Schrödinger Equation. *Studies in Applied Mathematics*, **2014**, 132, 138-159	2.1	20
85	Four-wave mixing in wavelengthdivision multiplexed soliton systems:ideal fibers. *Journal of the Optical Society of America B: Optical Physics*, **1997**, 14, 1788	1.7	20
84	Initial-boundary-value problems for discrete evolution equations: discrete linear Schrödinger and integrable discrete nonlinear Schrödinger equations. *Inverse Problems*, **2008**, 24, 065011	2.3	20
83	Nonlinear chirp of dispersion-managed return-to-zero pulses. *Optics Letters*, **2001**, 26, 1761-3	3	19
82	A Method to Compute Statistics of Large, Noise-Induced Perturbations of Nonlinear Schrödinger Solitons. *SIAM Review*, **2008**, 50, 523-549	7.4	18
81	Soliton Interactions of the KadomtsevPetviashvili Equation and Generation of Large-Amplitude Water Waves. *Studies in Applied Mathematics*, **2009**, 122, 377-394	2.1	17
80	Polarization-mode dispersion emulation with Maxwellian lengths and importance sampling. *IEEE Photonics Technology Letters*, **2004**, 16, 789-791	2.2	17
79	Auto-modulation versus breathers in the nonlinear stage of modulational instability. *Optics Letters*, **2018**, 43, 5291-5294	3	17
78	Solitons and rogue waves in spinor Bose-Einstein condensates. *Physical Review E*, **2018**, 97, 022221	2.4	16
77	A Method to Compute Statistics of Large, Noise-Induced Perturbations of Nonlinear Schrödinger Solitons. *SIAM Journal on Applied Mathematics*, **2007**, 67, 1418-1439	1.8	16
76	A comparative study of single-section polarization-mode dispersion compensators. *Journal of Lightwave Technology*, **2004**, 22, 1023-1032	4	15
75	On the degenerate soliton solutions of the focusing nonlinear Schrödinger equation. *Journal of Mathematical Physics*, **2017**, 58, 033507	1.2	14
74	Statistical analysis of the performance of PMD compensators using multiple importance sampling. *IEEE Photonics Technology Letters*, **2003**, 15, 1716-1718	2.2	12
73	Detailed comparison of numerical methods for the perturbed sine-Gordon equation with impulsive forcing. *Journal of Engineering Mathematics*, **2014**, 87, 167-186	1.2	11

72	Localized multi-dimensional optical pulses in non-resonant quadratic materials. *Mathematics and Computers in Simulation*, **2001**, 56, 511-519	3.3	11
71	Self-induced thermal effects and modal competition in continuous-wave optical parametric oscillators. *Journal of the Optical Society of America B: Optical Physics*, **2002**, 19, 802	1.7	11
70	Anisotropic hinge model for polarization-mode dispersion in installed fibers. *Optics Letters*, **2008**, 33, 1924-6	3	10
69	Noise-induced perturbations of dispersion-managed solitons. *Physical Review A*, **2007**, 75,	2.6	10
68	Non-Maxwellian DGD distributions of PMD emulators		10
67	Soliton trapping, transmission, and wake in modulationally unstable media. *Physical Review E*, **2018**, 98,	2.4	10
66	Dark-bright soliton pairs: Bifurcations and collisions. *Physical Review A*, **2018**, 97,	2.6	9
65	Whitham modulation theory for (2 + 1)-dimensional equations of Kadomtsev–Petviashvili type. *Journal of Physics A: Mathematical and Theoretical*, **2018**, 51, 215501	2	9
64	Outage Statistics in a Waveplate Hinge Model of Polarization-Mode Dispersion. *Journal of Lightwave Technology*, **2010**, 28, 1958-1968	4	9
63	A comparison between lumped and distributed filter models in wavelength-division multiplexed soliton systems. *Optics Communications*, **1999**, 172, 211-227	2	9
62	Gibbs Phenomenon for Dispersive PDEs on the Line. *SIAM Journal on Applied Mathematics*, **2017**, 77, 813-838	1.8	8
61	Whitham modulation theory for the Kadomtsev- Petviashvili equation. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20160695	2.4	8
60	Polarization interactions in multi-component defocusing media. *Journal of Physics A: Mathematical and Theoretical*, **2015**, 48, 395202	2	8
59	Polarization-dependent chromatic dispersion and its impact on return-to-zero transmission formats. *IEEE Photonics Technology Letters*, **2005**, 17, 1866-1868	2.2	8
58	Riemann problems and dispersive shocks in self-focusing media. *Physical Review E*, **2018**, 98,	2.4	8
57	Soliton interactions and degenerate soliton complexes for the focusing nonlinear Schrödinger equation with nonzero background. *European Physical Journal Plus*, **2018**, 133, 1	3.1	8
56	The Ablowitz–Ladik system with linearizable boundary conditions. *Journal of Physics A: Mathematical and Theoretical*, **2015**, 48, 375202	2	7
55	Initial-boundary-value problems for discrete linear evolution equations. *IMA Journal of Applied Mathematics*, **2010**, 75, 968-997	1	7

54	The dispersion-managed Ginzburg–Landau equation and its application to femtosecond lasers. *Nonlinearity*, **2008**, 21, 2849-2870	1.7	7
53	Analysis of polarization-mode dispersion compensators using importance sampling		7
52	Small dispersion limit of the Korteweg–de Vries equation with periodic initial conditions and analytical description of the Zabusky–Kruskal experiment. *Physica D: Nonlinear Phenomena*, **2016**, 333, 137-147	3.3	7
51	Whitham modulation theory for the two-dimensional Benjamin-Ono equation. *Physical Review E*, **2017**, 96, 032225	2.4	6
50	Hybrid Hinge Model for Polarization-Mode Dispersion in Installed Fiber Transmission Systems. *Journal of Lightwave Technology*, **2014**, 32, 1412-1419	4	5
49	The Ablowitz-Ladik system on the natural numbers with certain linearizable boundary conditions. *Applicable Analysis*, **2010**, 89, 627-644	0.8	5
48	Importance Sampling for Dispersion-Managed Solitons. *SIAM Journal on Applied Dynamical Systems*, **2010**, 9, 432-461	2.8	5
47	Phase noise of dispersion-managed solitons. *Physical Review A*, **2009**, 80,	2.6	5
46	Four-wave mixing in dispersion-managed return-to-zero systems. *Journal of the Optical Society of America B: Optical Physics*, **2003**, 20, 831	1.7	5
45	Reduction of collision-induced timing shifts in dispersion-managed quasi-linear systems with periodic-group-delay dispersion compensation. *Optics Letters*, **2004**, 29, 2354-6	3	5
44	Semiline solutions of the Burgers equation with time dependent flux at the origin. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1996**, 220, 201-204	2.3	5
43	Long-Time Asymptotics for the Focusing Nonlinear Schrödinger Equation with Nonzero Boundary Conditions in the Presence of a Discrete Spectrum. *Communications in Mathematical Physics*, **2021**, 382, 1495-1577	2	5
42	Evolution partial differential equations with discontinuous data. *Quarterly of Applied Mathematics*, **2018**, 77, 689-726	0.7	5
41	On the soliton solutions of the two-dimensional Toda lattice. *Journal of Physics A: Mathematical and Theoretical*, **2010**, 43, 434007	2	4
40	. *Journal of Lightwave Technology*, **2008**, 26, 2110-2117	4	4
39	On the Burgers equation with moving boundary. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2001**, 279, 194-206	2.3	4
38	Multiscale expansions avector solitons of a two-dimensional nonlocal nonlinear Schrödinger system. *Studies in Applied Mathematics*, **2020**, 145, 739-764	2.1	4
37	Discrete and continuous coupled nonlinear integrable systems via the dressing method. *Studies in Applied Mathematics*, **2019**, 142, 139-161	2.1	4

36	Inverse scattering transform for the focusing nonlinear Schrödinger equation with counterpropagating flows. *Studies in Applied Mathematics*, **2021**, 146, 371-439	2.1	4
35	Nonlinear interactions between solitons and dispersive shocks in focusing media. *Physical Review E*, **2019**, 99, 022215	2.4	3
34	Novel systems of resonant wave interactions. *Journal of Physics A: Mathematical and Theoretical*, **2015**, 48, 225203	2	3
33	An Introduction to Rare Event Simulation and Importance Sampling. *Handbook of Statistics*, **2015**, 33, 29-68	0.6	3
32	Multiple importance sampling for first- and second-order PMD		3
31	Importance-sampled pulse broadening statistics before and after PMD compensation		3
30	On-demand generation of dark soliton trains in Bose-Einstein condensates. *Physical Review A*, **2021**, 103,	2.6	3
29	Imaginary eigenvalues of Zakharov–Shabat problems with non-zero background. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2018**, 382, 2632-2637	2.3	3
28	Interactions of solitary waves in integrable and nonintegrable lattices. *Chaos*, **2020**, 30, 043101	3.3	2
27	Resonant optical pulses on a continuous-wave background in two-level active media. *Europhysics Letters*, **2018**, 121, 20001	1.6	2
26	On the Efficiency of Importance Sampling Techniques for Polarization-Mode Dispersion in Optical Fiber Transmission Systems. *SIAM Journal on Applied Mathematics*, **2013**, 73, 155-174	1.8	2
25	Recurrence due to periodic multisoliton fission in the defocusing nonlinear Schrödinger equation. *Physical Review E*, **2017**, 96, 052213	2.4	2
24	Statistics of Polarization-Mode Dispersion Emulators with Unequal Sections. *SIAM Journal on Applied Mathematics*, **2008**, 69, 552-564	1.8	2
23	Correction to "Importance Sampling for Polarization-Mode Dispersion: Techniques and Applications" *Journal of Lightwave Technology*, **2006**, 24, 1065-1065	4	2
22	On the Evolution and Interaction of Dispersion-Managed Solitons **2000**, 75-114		2
21	Integrability, exact reductions and special solutions of the KP–Whitham equations. *Nonlinearity*, **2020**, 33, 4114-4132	1.7	2
20	On the generation and propagation of solitary waves in integrable and nonintegrable nonlinear lattices. *European Physical Journal Plus*, **2020**, 135, 1	3.1	2
19	Linearizable boundary value problems for the nonlinear Schrödinger equation in laboratory coordinates. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2019**, 383, 494-503	2.3	1

18	Transverse dynamics of vector solitons in defocusing nonlocal media. *European Physical Journal Plus*, **2020**, 135, 1	3.1	1
17	Preface: Mark J. Ablowitz, nonlinear waves and integrable systems. Part I. *Studies in Applied Mathematics*, **2016**, 137, 3-9	2.1	1
16	Inverse scattering transform for two-level systems with nonzero background. *Journal of Mathematical Physics*, **2019**, 60, 073510	1.2	1
15	IMPORTANCE SAMPLING FOR NOISE-INDUCED AMPLITUDE AND TIMING JITTER IN SOLITON TRANSMISSION SYSTEMS **2003**,		1
14	Multicanonical Monte Carlo of first- and second-order PMD		1
13	Optimization of a PMD compensator with constant differential group delay using importance sampling **2001**,		1
12	Correction to "Multiple importance sampling for first-and second-order polarization-mode dispersion". *IEEE Photonics Technology Letters*, **2002**, 14, 1487-1487	2.2	1
11	Evolution of truncated and bent gravity wave solitons: the Mach expansion problem. *Journal of Fluid Mechanics*, **2021**, 909,	3.7	1
10	Excitation of switching waves in normally dispersive Kerr cavities. *Optics Letters*, **2021**, 46, 2481-2484	3	1
9	Oblique interactions between solitons and mean flows in the Kadomtsev–Petviashvili equation. *Nonlinearity*, **2021**, 34, 3583-3617	1.7	1
8	Semiclassical dynamics and coherent soliton condensates in self-focusing nonlinear media with periodic initial conditions. *Studies in Applied Mathematics*, **2020**, 145, 325-356	2.1	0
7	On the well-posedness of the Eckhaus equation. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1997**, 230, 319-323	2.3	0
6	Applications of importance sampling to polarization mode dispersion. *Journal of Optical and Fiber Communications Research*, **2004**, 1, 14-31		0
5	p-star models, mean-field random networks, and the heat hierarchy.. *Physical Review E*, **2022**, 105, 014306	2.4	0
4	Solitons and soliton interactions in repulsive spinor Bose–Einstein condensates with nonzero background. *European Physical Journal Plus*, **2021**, 136, 1	3.1	0
3	Preface: Mark J. Ablowitz, nonlinear waves and integrable systems. Part II. *Studies in Applied Mathematics*, **2016**, 137, 157-158	2.1	
2	Periodic-Group-Delay Dispersion Compensation Reduces Collision-Induced Timing Shifts in Dispersion-Managed Quasilinear Systems. *Theoretical and Mathematical Physics(Russian Federation)*, **2005**, 144, 881-887	0.7	
1	Applications of importance sampling to polarization mode dispersion **2004**, 95-112		