Alberto Bononi

List of Publications by Year
in descending order

114 papers	2,009 citations	304743 22 h-index	302126 39 g-index
114 all docs	114 docs citations	114 times ranked	796 citing authors

#	Article	IF	Citations
1	The Ergodic GN Model for Space-Division Multiplexing With Strong Mode Coupling. Journal of Lightwave Technology, 2022, 40, 3263-3276.	4.6	9
2	On Sparse Gain Flattening in Pump-Constrained Submarine Links. Journal of Lightwave Technology, 2022, 40, 5854-5861.	4.6	1
3	Scaling properties of guided acoustic-wave Brillouin scattering in single-mode fibers. Optics Express, 2021, 29, 15528.	3.4	6
4	Modeling Nonlinear Interference With Sparse Raman-Tilt Equalization. Journal of Lightwave Technology, 2021, 39, 4980-4989.	4.6	6
5	The Generalized Droop Model for Submarine Fiber-Optic Systems. Journal of Lightwave Technology, 2021, 39, 5248-5257.	4.6	9
6	A State-Variable Approach to Submarine Links Capacity Optimization. Journal of Lightwave Technology, 2021, 39, 5753-5765.	4.6	4
7	On Numerical Simulations of Ultra-Wideband Long-Haul Optical Communication Systems. Journal of Lightwave Technology, 2020, 38, 1019-1031.	4.6	20
8	The Enhanced Gaussian Noise Model Extended to Polarization-Dependent Loss. Journal of Lightwave Technology, 2020, 38, 5685-5694.	4.6	19
9	The Generalized Droop Formula for Low Signal to Noise Ratio Optical Links. Journal of Lightwave Technology, 2020, 38, 2201-2213.	4.6	24
10	Fiber Nonlinearity and Optical System Performance. Springer Handbooks, 2020, , 287-351.	0.6	12
11	Impact of Sparse Gain Equalization in the Presence of Stimulated Raman Scattering. , 2020, , .		1
12	An Improved Relevance Index Method to Search Important Structures in Complex Systems. Communications in Computer and Information Science, 2019, , 3-16.	0.5	0
13	Analysis of modal coupling due to birefringence and ellipticity in strongly guiding ring-core OAM fibers. Optics Express, 2019, 27, 8308.	3.4	38
14	On the Accuracy of Split-Step Fourier Simulations for Wideband Nonlinear Optical Communications. Journal of Lightwave Technology, 2018, 36, 5669-5677.	4.6	20
15	Regeneration savings in flexible optical networks with a new load-aware reach maximization. Optical Switching and Networking, 2016, 19, 123-134.	2.0	3
16	Spectral Efficiency Optimization in Flexi-Grid Long-Haul Optical Systems. Journal of Lightwave Technology, 2015, 33, 2735-2742.	4.6	10
17	Overcoming filtering penalties in flexi-grid long-haul optical systems. , 2015, , .		3
18	A Time-Domain Extended Gaussian Noise Model. Journal of Lightwave Technology, 2015, 33, 1459-1472.	4.6	71

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19	Symbol-Rate Dependence of Dominant Nonlinearity and Reach in Coherent WDM Links. Journal of Lightwave Technology, 2015, , 1-1.	4.6	9
20	Stratified-Sampling Estimation of PDL-Induced Outage Probability in Nonlinear Coherent Systems. Journal of Lightwave Technology, 2014, 32, 4905-4911.	4.6	3
21	Load-aware transparent reach maximization in flexible optical networks. , 2014, , .		6
22	Regeneration savings in coherent optical networks with a new load-dependent reach maximization. , 2014, , .		2
23	The impact of the modulation dependent nonlinear interference missed by the Gaussian noise model. , 2014, , .		12
24	Polarization-Dependent Loss Impact on Coherent Optical Systems in Presence of Fiber Nonlinearity. IEEE Photonics Technology Letters, 2014, 26, 334-337.	2.5	18
25	An Alternative Approach to the Gaussian Noise Model and its System Implications. Journal of Lightwave Technology, 2013, 31, 3489-3499.	4.6	47
26	On nonlinearly-induced noise in single-channel optical links with digital backpropagation. Optics Express, 2013, 21, 26376.	3.4	13
27	Single- and cross-channel nonlinear interference in the Gaussian Noise model with rectangular spectra. Optics Express, 2013, 21, 32254.	3.4	22
28	PDM-iRZ-QPSK vs PS-QPSK at 100 Gbit/s over dispersion-managed links. Optics Express, 2012, 20, 7895.	3.4	16
29	On the nonlinear threshold versus distance in long-haul highly-dispersive coherent systems. Optics Express, 2012, 20, B204.	3.4	35
30	Modeling nonlinearity in coherent transmissions with dominant intrachannel-four-wave-mixing. Optics Express, 2012, 20, 7777.	3.4	50
31	On the Nonlinear Capacity with Memory of PS-QPSK and PDM-QPSK in WDM Non-Dispersion Managed Links. , 2012, , .		5
32	On nonlinear distortions of highly dispersive optical coherent systems. Optics Express, 2012, 20, 1022.	3.4	100
33	Generation and Detection of 28 Gbaud Polarization Switched-QPSK in WDM Long-Haul Transmission Systems. Journal of Lightwave Technology, 2012, 30, 1312-1318.	4.6	22
34	A New Fast and Blind Cross-Polarization Modulation Digital Compensator. , 2012, , .		9
35	Optical Solutions to Improve PDM-QPSK Resilience Against Cross-Channel Nonlinearities: A Comparison. IEEE Photonics Technology Letters, 2011, 23, 667-669.	2.5	13
36	Intra- Versus Inter-Channel PMD in Linearly Compensated Coherent PDM-PSK Nonlinear Transmissions. Journal of Lightwave Technology, 2011, 29, 1691-1700.	4.6	17

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37	Quality parameter for coherent transmissions with Gaussian-distributed nonlinear noise. Optics Express, 2011, 19, 12781.	3.4	71
38	Experimental characterization of Gaussian-distributed nonlinear distortions. , 2011, , .		20
39	Modeling Nonlinearity in Coherent Transmissions with Dominant Interpulse-Four-Wave-Mixing. , 2011, , .		6
40	Multicanonical Monte Carlo for Simulation of Optical Links. , 2011, , 373-413.		2
41	Bit Patterning in SOAs: Statistical Characterization Through Multicanonical Monte Carlo Simulations. IEEE Journal of Quantum Electronics, 2010, 46, 570-578.	1.9	8
42	Doâ€™s and donâ€™ts for a correct nonlinear PMD emulation in 100Gb/s PDM-QPSK systems. Optical Fiber Technology, 2010, 16, 274-278.	2.7	5
43	Nonlinear signalâ€“noise interactions in dispersion-managed links with various modulation formats. Optical Fiber Technology, 2010, 16, 73-85.	2.7	45
44	The performance of polarization switched-QPSK (PS-QPSK) in dispersion managed WDM transmissions. , 2010, , .		9
45	Which is the dominant nonlinearity in long-haul PDM-QPSK coherent transmissions?. , 2010, , .		19
46	Low-Complexity Compensation of SOA Nonlinearity for Single-Channel PSK and OOK. Journal of Lightwave Technology, 2010, 28, 277-288.	4.6	18
47	A comparison of different options to improve PDM-QPSK resilience against cross-channel nonlinearities. , 2010, , .		2
48	Nonlinear limits in single- and dual-polarization transmission. , 2010, , .		4
49	Cross-Phase Modulation Induced by OOK Channels on Higher-Rate DQPSK and Coherent QPSK Channels. Journal of Lightwave Technology, 2009, 27, 3974-3983.	4.6	86
50	DQPSK: When Is a Narrow Filter Receiver Good Enough?. Journal of Lightwave Technology, 2009, 27, 5106-5114.	4.6	3
51	XPM reduction in hybrid 10G/40G transmission using 10-Gb/s narrow-filtered DPSK modulation. Optics Express, 2009, 17, 5919.	3.4	0
52	Reduction of double Rayleigh scattering noise in distributed Raman amplifiers employing higher-order pumping. Optics Express, 2009, 17, 6996.	3.4	7
53	Stratified Sampling Monte Carlo Algorithm for Efficient BER Estimation in Long-Haul Optical Transmission Systems. Journal of Lightwave Technology, 2009, 27, 2404-2411.	4.6	11
54	SOA Intensity Noise Suppression in Spectrum Sliced Systems: A Multicanonical Monte Carlo Simulator of Extremely Low BER. Journal of Lightwave Technology, 2009, 27, 2667-2677.	4.6	18

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55	Monte Carlo Estimation of PDM-QPSK/OOK and DQPSK/OOK Hybrid Systems Tolerance Against Nonlinear Effects. IEEE Photonics Technology Letters, 2009, 21, 15-17.	2.5	16
56	A Fresh Look at Multicanonical Monte Carlo from a Telecom Perspective. , 2009, , .		17
57	Statistical Characterization of Bit Patterning in SOAs: BER Prediction and Experimental Validation. , 2009, , .		4
58	Experimental assessment of some Raman fiber amplifiers solutions for coarse wavelength division multiplexing applications. Photonic Network Communications, 2008, 16, 195-202.	2.7	7
59	Unified analysis of weakly-nonlinear dispersion-managed optical transmission systems using a perturbative approach. Comptes Rendus Physique, 2008, 9, 947-962.	0.9	8
60	A Change of Perspective on Single- and Double-Stage Optical PMD Compensation. Journal of Lightwave Technology, 2008, 26, 2087-2097.	4.6	1
61	A Unified Design Framework for Single-Channel Dispersion-Managed Terrestrial Systems. Journal of Lightwave Technology, 2008, 26, 3617-3631.	4.6	13
62	A stratified sampling Monte Carlo algorithm for efficient BER measurement and its application to DQPSK terrestrial systems. , 2008, , .		0
63	Revisiting Binary Sequence length requirements for the accurate emulation of highly dispersive transmission systems. , 2008, , .		4
64	Analysis of double Rayleigh scattering noise in higher-order pumped distributed Raman amplifiers. , 2008, , .		0
65	Numerical Monte Carlo comparison between coherent PDM-QPSK/OOK and incoherent DQPSK/OOK Hybrid systems. , 2008, , .		3
66	Narrow filtered DPSK: An attractive solution for Hybrid systems. , 2008, , .		1
67	Revisiting binary sequence length requirements to accurately emulate optical transmission systems in highly dispersive regime. , 2008, , .		2
68	Fundamental laws of parametric gain in periodic dispersion-managed optical links. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 773.	2.1	5
69	A Novel Model for SOAs in WDM Networks. , 2006, , .		0
70	A Reservoir Dynamic Model for Linear Optical Amplifiers. , 2006, , .		1
71	Parametric-gain approach to the analysis of single-channel DPSK/DQPSK systems with nonlinear phase noise. Journal of Lightwave Technology, 2006, 24, 2026-2037.	4.6	39
72	Fast and Efficient Dynamic WDM Semiconductor Optical Amplifier Model. Journal of Lightwave Technology, 2006, 24, 4353-4365.	4.6	38

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73	New gain parameterization for fast semiconductor optical amplifier model. , 2006, , .		1
74	A Parametric Gain Approach to Performance Evaluation of DPSK/DQPSK Systems with Nonlinear Phase Noise. , 2005, , 129-136.		1
75	Small-signal analysis of amplitude-, phase-, and polarization-to-intensity conversion in general optical linear systems with application to PMD compensation. Journal of Lightwave Technology, 2005, 23, 1074-1082.	4.6	4
76	Parametric gain in the strongly nonlinear regime and its impact on 10-Gb/s NRZ systems with forward-error correction. Journal of Lightwave Technology, 2005, 23, 2352-2363.	4.6	17
77	Transient gain dynamics in saturated Raman amplifiers. Optical Fiber Technology, 2004, 10, 91-123.	2.7	8
78	Analysis of ShuffleNets with limited number of wavelength converters employing deflection routing. Journal of Optical Networking, 2004, 4, 28.	2.5	1
79	Accurate measurement of in-band FWM power in DWDM systems over nonzero dispersion fibers. IEEE Photonics Technology Letters, 2003, 15, 260-262.	2.5	17
80	Degree of polarization degradation due to cross-phase modulation and its impact on polarization-mode dispersion compensators. Journal of Lightwave Technology, 2003, 21, 1903-1913.	4.6	40
81	The RP method: a new tool for the iterative solution of the nonlinear Schrodinger equation. Journal of Lightwave Technology, 2002, 20, 1102-1112.	4.6	95
82	Power threshold due to parametric gain in dispersion-mapped communication systems. IEEE Photonics Technology Letters, 2002, 14, 1521-1523.	2.5	6
83	Statistical characterization of the Jones matrix of long fibers affected by polarization mode dispersion (PMD). Journal of Lightwave Technology, 2002, 20, 811-821.	4.6	24
84	Is there life beyond the principal states ofÂpolarization?. Optical Fiber Technology, 2002, 8, 257-294.	2.7	7
85	Statistics of the Jones matrix of fibers affected by polarization mode dispersion. Optics Letters, 2001, 26, 675.	3.3	17
86	Extracting PMD statistics from single emulated fibre sample. Electronics Letters, 2001, 37, 884.	1.0	1
87	Impulsive pump depletion in saturated Raman amplifiers. Electronics Letters, 2001, 37, 886.	1.0	4
88	New method to equalize static and dynamic OSNR in cascades of EDFAs without in-line optical filters. , 2000, 4087, 335.		2
89	Effectiveness of gain control in EDFAs against traffic with different levels of bursty behaviour. IEE Proceedings: Optoelectronics, 2000, 147, 355-362.	0.8	12
90	Gain stabilization in gain clamped EDFA cascades fed by WDM burst-mode packet traffic. Journal of Lightwave Technology, 2000, 18, 308-313.	4.6	50

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91	Large power swings in doped-fiber amplifiers with highly variable data. IEEE Photonics Technology Letters, 1999, 11, 131-133.	2.5	19
92	Impulse response measurement of balanced chains of EDFA's in a recirculating loop. IEEE Photonics Technology Letters, 1999, 11, 1384-1386.	2.5	1
93	Analysis of hot-potato optical networks with wavelength conversion. Journal of Lightwave Technology, 1999, 17, 525-534.	4.6	58
94	Output power and SNR swings in cascades of EDFAs for circuit- and packet-switched optical networks. Journal of Lightwave Technology, 1999, 17, 733-742.	4.6	46
95	Design of gain-clamped doped-fiber amplifiers for optimal dynamic performance. Journal of Lightwave Technology, 1999, 17, 1229-1240.	4.6	33
96	<title>Experimental measurement of signal-to-FWM ratio in nonzero dispersion fibers</title>. , 1999, , .		0
97	Impulse Response of Cross-Phase Modulation Filters in Multi-span Transmission Systems with Dispersion Compensation. Optical Fiber Technology, 1998, 4, 371-383.	2.7	10
98	Weakly versus strongly multihop space-division optical networks. Journal of Lightwave Technology, 1998, 16, 490-500.	4.6	7
99	Doped-fiber amplifier dynamics: a system perspective. Journal of Lightwave Technology, 1998, 16, 945-956.	4.6	104
100	Gain control in EDFA's by pump compensation. IEEE Photonics Technology Letters, 1998, 10, 1313-1315.	2.5	20
101	Intensity distortion induced by cross-phase modulation and chromatic dispersion in optical-fiber transmissions with dispersion compensation. IEEE Photonics Technology Letters, 1998, 10, 1745-1747.	2.5	60
102	Simple dynamic model of fibre amplifiers and equivalent electrical circuit. Electronics Letters, 1997, 33, 1887.	1.0	6
103	Novel structures of the optical node in multihop transparent optical networks using deflection routing. Journal of High Speed Networks, 1996, 5, 243-258.	0.8	2
104	Analytical evaluation of improved access techniques in deflection routing networks. IEEE/ACM Transactions on Networking, 1996, 4, 726-730.	3.8	23
105	Transmission analysis of a space-division optical star network with deflection routing. Electronics Letters, 1996, 32, 239.	1.0	2
106	Analysis and comparison of hot-potato and single-buffer deflection routing in very high bit rate optical mesh networks. IEEE Transactions on Communications, 1995, 43, 88-98.	7.8	113
107	Architectures and techniques for all-optical networks. Fiber and Integrated Optics, 1994, 13, 165-183.	2.5	2
108	1.24416 Gbit/s demonstration of a transparent optical ATM packet switch node. Electronics Letters, 1994, 30, 579-580.	1.0	6

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109	<title>Demonstration of an optically transparent ATM packet switch node</title>. , 1994, 2216, 99.		0
110	Design and channel constraint analysis of ultrafast multihop all-optical networks with deflection routing employing solitons. Journal of Lightwave Technology, 1993, 11, 2166-2176.	4.6	18
111	Self-clocking scheme for bit synchronisation in ultrafast packet switching transparent optical networks. Electronics Letters, 1993, 29, 872-873.	1.0	6
112	<title>Channel impact on ultrafast all-optical mesh networks</title>. , 1993, 1975, 165.		0
113	Novel packet architecture for all-optical ultrafast packet-switching networks. Electronics Letters, 1992, 28, 2289-2291.	1.0	10
114	Analysis of the automatic frequency control in heterodyne optical receivers. Journal of Lightwave Technology, 1992, 10, 794-803.	4.6	8