

Alberto Bononi

List of Publications by Year in descending order

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114
papers

2,009
citations

304743

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39
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all docs

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docs citations

114
times ranked

796
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis and comparison of hot-potato and single-buffer deflection routing in very high bit rate optical mesh networks. <i>IEEE Transactions on Communications</i> , 1995, 43, 88-98.	7.8	113
2	Doped-fiber amplifier dynamics: a system perspective. <i>Journal of Lightwave Technology</i> , 1998, 16, 945-956.	4.6	104
3	On nonlinear distortions of highly dispersive optical coherent systems. <i>Optics Express</i> , 2012, 20, 1022.	3.4	100
4	The RP method: a new tool for the iterative solution of the nonlinear Schrodinger equation. <i>Journal of Lightwave Technology</i> , 2002, 20, 1102-1112.	4.6	95
5	Cross-Phase Modulation Induced by OOK Channels on Higher-Rate DQPSK and Coherent QPSK Channels. <i>Journal of Lightwave Technology</i> , 2009, 27, 3974-3983.	4.6	86
6	Quality parameter for coherent transmissions with Gaussian-distributed nonlinear noise. <i>Optics Express</i> , 2011, 19, 12781.	3.4	71
7	A Time-Domain Extended Gaussian Noise Model. <i>Journal of Lightwave Technology</i> , 2015, 33, 1459-1472.	4.6	71
8	Intensity distortion induced by cross-phase modulation and chromatic dispersion in optical-fiber transmissions with dispersion compensation. <i>IEEE Photonics Technology Letters</i> , 1998, 10, 1745-1747.	2.5	60
9	Analysis of hot-potato optical networks with wavelength conversion. <i>Journal of Lightwave Technology</i> , 1999, 17, 525-534.	4.6	58
10	Gain stabilization in gain clamped EDFA cascades fed by WDM burst-mode packet traffic. <i>Journal of Lightwave Technology</i> , 2000, 18, 308-313.	4.6	50
11	Modeling nonlinearity in coherent transmissions with dominant intrachannel-four-wave-mixing. <i>Optics Express</i> , 2012, 20, 7777.	3.4	50
12	An Alternative Approach to the Gaussian Noise Model and its System Implications. <i>Journal of Lightwave Technology</i> , 2013, 31, 3489-3499.	4.6	47
13	Output power and SNR swings in cascades of EDFAs for circuit- and packet-switched optical networks. <i>Journal of Lightwave Technology</i> , 1999, 17, 733-742.	4.6	46
14	Nonlinear signal-noise interactions in dispersion-managed links with various modulation formats. <i>Optical Fiber Technology</i> , 2010, 16, 73-85.	2.7	45
15	Degree of polarization degradation due to cross-phase modulation and its impact on polarization-mode dispersion compensators. <i>Journal of Lightwave Technology</i> , 2003, 21, 1903-1913.	4.6	40
16	Parametric-gain approach to the analysis of single-channel DPSK/DQPSK systems with nonlinear phase noise. <i>Journal of Lightwave Technology</i> , 2006, 24, 2026-2037.	4.6	39
17	Fast and Efficient Dynamic WDM Semiconductor Optical Amplifier Model. <i>Journal of Lightwave Technology</i> , 2006, 24, 4353-4365.	4.6	38
18	Analysis of modal coupling due to birefringence and ellipticity in strongly guiding ring-core OAM fibers. <i>Optics Express</i> , 2019, 27, 8308.	3.4	38

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19	On the nonlinear threshold versus distance in long-haul highly-dispersive coherent systems. Optics Express, 2012, 20, B204.	3.4	35
20	Design of gain-clamped doped-fiber amplifiers for optimal dynamic performance. Journal of Lightwave Technology, 1999, 17, 1229-1240.	4.6	33
21	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
22	The Generalized Droop Formula for Low Signal to Noise Ratio Optical Links. Journal of Lightwave Technology, 2020, 38, 2201-2213.	4.6	24
23	Analytical evaluation of improved access techniques in deflection routing networks. IEEE/ACM Transactions on Networking, 1996, 4, 726-730.	3.8	23
24	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
25	Single- and cross-channel nonlinear interference in the Gaussian Noise model with rectangular spectra. Optics Express, 2013, 21, 32254.	3.4	22
26	Gain control in EDFA's by pump compensation. IEEE Photonics Technology Letters, 1998, 10, 1313-1315.	2.5	20
27	On the Accuracy of Split-Step Fourier Simulations for Wideband Nonlinear Optical Communications. Journal of Lightwave Technology, 2018, 36, 5669-5677.	4.6	20
28	On Numerical Simulations of Ultra-Wideband Long-Haul Optical Communication Systems. Journal of Lightwave Technology, 2020, 38, 1019-1031.	4.6	20
29	Experimental characterization of Gaussian-distributed nonlinear distortions. , 2011, , .		20
30	Large power swings in doped-fiber amplifiers with highly variable data. IEEE Photonics Technology Letters, 1999, 11, 131-133.	2.5	19
31	Which is the dominant nonlinearity in long-haul PDM-QPSK coherent transmissions?. , 2010, , .		19
32	The Enhanced Gaussian Noise Model Extended to Polarization-Dependent Loss. Journal of Lightwave Technology, 2020, 38, 5685-5694.	4.6	19
33	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
34	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
35	Low-Complexity Compensation of SOA Nonlinearity for Single-Channel PSK and OOK. Journal of Lightwave Technology, 2010, 28, 277-288.	4.6	18
36	Polarization-Dependent Loss Impact on Coherent Optical Systems in Presence of Fiber Nonlinearity. IEEE Photonics Technology Letters, 2014, 26, 334-337.	2.5	18

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37	Statistics of the Jones matrix of fibers affected by polarization mode dispersion. <i>Optics Letters</i> , 2001, 26, 675.	3.3	17
38	Accurate measurement of in-band FWM power in DWDM systems over nonzero dispersion fibers. <i>IEEE Photonics Technology Letters</i> , 2003, 15, 260-262.	2.5	17
39	Parametric gain in the strongly nonlinear regime and its impact on 10-Gb/s NRZ systems with forward-error correction. <i>Journal of Lightwave Technology</i> , 2005, 23, 2352-2363.	4.6	17
40	A Fresh Look at Multicanonical Monte Carlo from a Telecom Perspective. , 2009, , .		17
41	Intra- Versus Inter-Channel PMD in Linearly Compensated Coherent PDM-PSK Nonlinear Transmissions. <i>Journal of Lightwave Technology</i> , 2011, 29, 1691-1700.	4.6	17
42	Monte Carlo Estimation of PDM-QPSK/OOK and DQPSK/OOK Hybrid Systems Tolerance Against Nonlinear Effects. <i>IEEE Photonics Technology Letters</i> , 2009, 21, 15-17.	2.5	16
43	PDM-iRZ-QPSK vs PS-QPSK at 100 Gbit/s over dispersion-managed links. <i>Optics Express</i> , 2012, 20, 7895.	3.4	16
44	A Unified Design Framework for Single-Channel Dispersion-Managed Terrestrial Systems. <i>Journal of Lightwave Technology</i> , 2008, 26, 3617-3631.	4.6	13
45	Optical Solutions to Improve PDM-QPSK Resilience Against Cross-Channel Nonlinearities: A Comparison. <i>IEEE Photonics Technology Letters</i> , 2011, 23, 667-669.	2.5	13
46	On nonlinearly-induced noise in single-channel optical links with digital backpropagation. <i>Optics Express</i> , 2013, 21, 26376.	3.4	13
47	Effectiveness of gain control in EDFAs against traffic with different levels of bursty behaviour. <i>IEE Proceedings: Optoelectronics</i> , 2000, 147, 355-362.	0.8	12
48	The impact of the modulation dependent nonlinear interference missed by the Gaussian noise model. , 2014, , .		12
49	Fiber Nonlinearity and Optical System Performance. <i>Springer Handbooks</i> , 2020, , 287-351.	0.6	12
50	Stratified Sampling Monte Carlo Algorithm for Efficient BER Estimation in Long-Haul Optical Transmission Systems. <i>Journal of Lightwave Technology</i> , 2009, 27, 2404-2411.	4.6	11
51	Novel packet architecture for all-optical ultrafast packet-switching networks. <i>Electronics Letters</i> , 1992, 28, 2289-2291.	1.0	10
52	Impulse Response of Cross-Phase Modulation Filters in Multi-span Transmission Systems with Dispersion Compensation. <i>Optical Fiber Technology</i> , 1998, 4, 371-383.	2.7	10
53	Spectral Efficiency Optimization in Flexi-Grid Long-Haul Optical Systems. <i>Journal of Lightwave Technology</i> , 2015, 33, 2735-2742.	4.6	10
54	The performance of polarization switched-QPSK (PS-QPSK) in dispersion managed WDM transmissions. , 2010, , .		9

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55	Symbol-Rate Dependence of Dominant Nonlinearity and Reach in Coherent WDM Links. Journal of Lightwave Technology, 2015, , 1-1.	4.6	9
56	The Generalized Droop Model for Submarine Fiber-Optic Systems. Journal of Lightwave Technology, 2021, 39, 5248-5257.	4.6	9
57	A New Fast and Blind Cross-Polarization Modulation Digital Compensator. , 2012, , .		9
58	The Ergodic GN Model for Space-Division Multiplexing With Strong Mode Coupling. Journal of Lightwave Technology, 2022, 40, 3263-3276.	4.6	9
59	Analysis of the automatic frequency control in heterodyne optical receivers. Journal of Lightwave Technology, 1992, 10, 794-803.	4.6	8
60	Transient gain dynamics in saturated Raman amplifiers. Optical Fiber Technology, 2004, 10, 91-123.	2.7	8
61	Unified analysis of weakly-nonlinear dispersion-managed optical transmission systems using a perturbative approach. Comptes Rendus Physique, 2008, 9, 947-962.	0.9	8
62	Bit Patterning in SOAs: Statistical Characterization Through Multicanonical Monte Carlo Simulations. IEEE Journal of Quantum Electronics, 2010, 46, 570-578.	1.9	8
63	Weakly versus strongly multihop space-division optical networks. Journal of Lightwave Technology, 1998, 16, 490-500.	4.6	7
64	Is there life beyond the principal states of polarization?. Optical Fiber Technology, 2002, 8, 257-294.	2.7	7
65	Experimental assessment of some Raman fiber amplifiers solutions for coarse wavelength division multiplexing applications. Photonic Network Communications, 2008, 16, 195-202.	2.7	7
66	Reduction of double Rayleigh scattering noise in distributed Raman amplifiers employing higher-order pumping. Optics Express, 2009, 17, 6996.	3.4	7
67	Self-clocking scheme for bit synchronisation in ultrafast packet switching transparent optical networks. Electronics Letters, 1993, 29, 872-873.	1.0	6
68	1.24416 Gbit/s demonstration of a transparent optical ATM packet switch node. Electronics Letters, 1994, 30, 579-580.	1.0	6
69	Simple dynamic model of fibre amplifiers and equivalent electrical circuit. Electronics Letters, 1997, 33, 1887.	1.0	6
70	Power threshold due to parametric gain in dispersion-mapped communication systems. IEEE Photonics Technology Letters, 2002, 14, 1521-1523.	2.5	6
71	Load-aware transparent reach maximization in flexible optical networks. , 2014, , .		6
72	Scaling properties of guided acoustic-wave Brillouin scattering in single-mode fibers. Optics Express, 2021, 29, 15528.	3.4	6

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73	Modeling Nonlinear Interference With Sparse Raman-Tilt Equalization. Journal of Lightwave Technology, 2021, 39, 4980-4989.	4.6	6
74	Modeling Nonlinearity in Coherent Transmissions with Dominant Interpulse-Four-Wave-Mixing. , 2011, , .		6
75	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
76	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
77	On the Nonlinear Capacity with Memory of PS-QPSK and PDM-QPSK in WDM Non-Dispersion Managed Links. , 2012, , .		5
78	Impulsive pump depletion in saturated Raman amplifiers. Electronics Letters, 2001, 37, 886.	1.0	4
79	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
80	Revisiting Binary Sequence length requirements for the accurate emulation of highly dispersive transmission systems. , 2008, , .		4
81	Statistical Characterization of Bit Patterning in SOAs: BER Prediction and Experimental Validation. , 2009, , .		4
82	Nonlinear limits in single- and dual-polarization transmission. , 2010, , .		4
83	A State-Variable Approach to Submarine Links Capacity Optimization. Journal of Lightwave Technology, 2021, 39, 5753-5765.	4.6	4
84	Numerical Monte Carlo comparison between coherent PDM-QPSK/OOK and incoherent DQPSK/OOK Hybrid systems. , 2008, , .		3
85	DQPSK: When Is a Narrow Filter Receiver Good Enough?. Journal of Lightwave Technology, 2009, 27, 5106-5114.	4.6	3
86	Stratified-Sampling Estimation of PDL-Induced Outage Probability in Nonlinear Coherent Systems. Journal of Lightwave Technology, 2014, 32, 4905-4911.	4.6	3
87	Overcoming filtering penalties in flexi-grid long-haul optical systems. , 2015, , .		3
88	Regeneration savings in flexible optical networks with a new load-aware reach maximization. Optical Switching and Networking, 2016, 19, 123-134.	2.0	3
89	Architectures and techniques for all-optical networks. Fiber and Integrated Optics, 1994, 13, 165-183.	2.5	2
90	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

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91	Transmission analysis of a space-division optical star network with deflection routing. Electronics Letters, 1996, 32, 239.	1.0	2
92	New method to equalize static and dynamic OSNR in cascades of EDFAs without in-line optical filters. , 2000, 4087, 335.		2
93	Revisiting binary sequence length requirements to accurately emulate optical transmission systems in highly dispersive regime. , 2008, , .		2
94	A comparison of different options to improve PDM-QPSK resilience against cross-channel nonlinearities. , 2010, , .		2
95	Regeneration savings in coherent optical networks with a new load-dependent reach maximization. , 2014, , .		2
96	Multicanonical Monte Carlo for Simulation of Optical Links. , 2011, , 373-413.		2
97	Impulse response measurement of balanced chains of EDFA's in a recirculating loop. IEEE Photonics Technology Letters, 1999, 11, 1384-1386.	2.5	1
98	Extracting PMD statistics from single emulated fibre sample. Electronics Letters, 2001, 37, 884.	1.0	1
99	Analysis of ShuffleNets with limited number of wavelength converters employing deflection routing. Journal of Optical Networking, 2004, 4, 28.	2.5	1
100	A Parametric Gain Approach to Performance Evaluation of DPSK/DQPSK Systems with Nonlinear Phase Noise. , 2005, , 129-136.		1
101	A Reservoir Dynamic Model for Linear Optical Amplifiers. , 2006, , .		1
102	New gain parameterization for fast semiconductor optical amplifier model. , 2006, , .		1
103	A Change of Perspective on Single- and Double-Stage Optical PMD Compensation. Journal of Lightwave Technology, 2008, 26, 2087-2097.	4.6	1
104	Narrow filtered DPSK: An attractive solution for Hybrid systems. , 2008, , .		1
105	Impact of Sparse Gain Equalization in the Presence of Stimulated Raman Scattering. , 2020, , .		1
106	On Sparse Gain Flattening in Pump-Constrained Submarine Links. Journal of Lightwave Technology, 2022, 40, 5854-5861.	4.6	1
107	<title>Channel impact on ultrafast all-optical mesh networks</title>. , 1993, 1975, 165.		0
108	<title>Demonstration of an optically transparent ATM packet switch node</title>. , 1994, 2216, 99.		0

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109	<title>Experimental measurement of signal-to-FWM ratio in nonzero dispersion fibers</title>. , 1999, , .		0
110	A Novel Model for SOAs in WDM Networks. , 2006, , .		0
111	A stratified sampling Monte Carlo algorithm for efficient BER measurement and its application to DQPSK terrestrial systems. , 2008, , .		0
112	Analysis of double Rayleigh scattering noise in higher-order pumped distributed Raman amplifiers. , 2008, , .		0
113	XPM reduction in hybrid 10G/40G transmission using 10-Gb/s narrow-filtered DPSK modulation. Optics Express, 2009, 17, 5919.	3.4	0
114	An Improved Relevance Index Method to Search Important Structures in Complex Systems. Communications in Computer and Information Science, 2019, , 3-16.	0.5	0