

Gabriella Bosco

List of Publications by Year in descending order

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150
papers

4,607
citations

159585

30
h-index

114465

63
g-index

152
all docs

152
docs citations

152
times ranked

1873
citing authors

#	ARTICLE	IF	CITATIONS
1	The GN-Model of Fiber Non-Linear Propagation and its Applications. Journal of Lightwave Technology, 2014, 32, 694-721.	4.6	531
2	On the Performance of Nyquist-WDM Terabit Superchannels Based on PM-BPSK, PM-QPSK, PM-8QAM or PM-16QAM Subcarriers. Journal of Lightwave Technology, 2011, 29, 53-61.	4.6	461
3	EGN model of non-linear fiber propagation. Optics Express, 2014, 22, 16335.	3.4	347
4	Modeling of the Impact of Nonlinear Propagation Effects in Uncompensated Optical Coherent Transmission Links. Journal of Lightwave Technology, 2012, 30, 1524-1539.	4.6	341
5	Performance Limits of Nyquist-WDM and CO-OFDM in High-Speed PM-QPSK Systems. IEEE Photonics Technology Letters, 2010, 22, 1129-1131.	2.5	335
6	Analytical Modeling of Nonlinear Propagation in Uncompensated Optical Transmission Links. IEEE Photonics Technology Letters, 2011, 23, 742-744.	2.5	215
7	Analytical and Experimental Results on System Maximum Reach Increase Through Symbol Rate Optimization. Journal of Lightwave Technology, 2016, 34, 1872-1885.	4.6	106
8	A Simple and Effective Closed-Form GN Model Correction Formula Accounting for Signal Non-Gaussian Distribution. Journal of Lightwave Technology, 2015, 33, 459-473.	4.6	88
9	Discrete Multitone Modulation for Maximizing Transmission Rate in Step-Index Plastic Optical Fibers. Journal of Lightwave Technology, 2009, 27, 1503-1513.	4.6	85
10	The LOGON Strategy for Low-Complexity Control Plane Implementation in New-Generation Flexible Networks. , 2013, , .		82
11	On the use of NRZ, RZ, and CSRZ modulation at 40 Gb/s with narrow DWDM channel spacing. Journal of Lightwave Technology, 2002, 20, 1694-1704.	4.6	81
12	Nyquist-WDM-Based Flexible Optical Networks: Exploring Physical Layer Design Parameters. Journal of Lightwave Technology, 2013, 31, 2332-2339.	4.6	79
13	Performance evaluation of coherent WDM PS-QPSK (HEXA) accounting for non-linear fiber propagation effects. Optics Express, 2010, 18, 11360.	3.4	69
14	Blind modulation format identification for digital coherent receivers. Optics Express, 2015, 23, 26769.	3.4	63
15	Statistical characterization of PM-QPSK signals after propagation in uncompensated fiber links. , 2010, , .		55
16	A novel analytical approach to the evaluation of the impact of fiber parametric gain on the bit error rate. IEEE Transactions on Communications, 2001, 49, 2154-2163.	7.8	54
17	Ultra-Narrow-Spacing 10-Channel 1.12 Tb/s D-WDM Long-Haul Transmission Over Uncompensated SMF and NZDSF. IEEE Photonics Technology Letters, 2010, 22, 1419-1421.	2.5	50
18	Design Strategies and Merit of System Parameters for Uniform Uncompensated Links Supporting Nyquist-WDM Transmission. Journal of Lightwave Technology, 2015, 33, 3921-3932.	4.6	50

#	ARTICLE	IF	CITATIONS
19	On the Factor Inaccuracy in the Performance Analysis of Optical Direct-Detection DPSK Systems. IEEE Photonics Technology Letters, 2004, 16, 665-667.	2.5	43
20	Experimental validation of an analytical model for nonlinear propagation in uncompensated optical links. Optics Express, 2011, 19, B790.	3.4	43
21	Comparison of Probabilistically Shaped 64QAM With Lower Cardinality Uniform Constellations in Long-Haul Optical Systems. Journal of Lightwave Technology, 2018, 36, 501-509.	4.6	42
22	Advanced Modulation Techniques for Flexible Optical Transceivers: The Rate/Reach Tradeoff. Journal of Lightwave Technology, 2019, 37, 36-49.	4.6	42
23	GN-Model Validation Over Seven Fiber Types in Uncompensated PM-16QAM Nyquist-WDM Links. IEEE Photonics Technology Letters, 2014, 26, 206-209.	2.5	41
24	The impact of receiver imperfections on the Performance of optical direct-Detection DPSK. Journal of Lightwave Technology, 2005, 23, 842-848.	4.6	39
25	Extension and validation of the GN model for non-linear interference to uncompensated links using Raman amplification. Optics Express, 2013, 21, 3308.	3.4	39
26	Long-distance effectiveness of MLSE IMDD receivers. IEEE Photonics Technology Letters, 2006, 18, 1037-1039.	2.5	37
27	Quantum limit of direct-detection receivers using duobinary transmission. IEEE Photonics Technology Letters, 2003, 15, 102-104.	2.5	34
28	Modulation Formats Suitable for Ultrahigh Spectral Efficient WDM Systems. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 321-328.	2.9	33
29	Performance Dependence on Channel Baud-Rate of PM-QPSK Systems Over Uncompensated Links. IEEE Photonics Technology Letters, 2011, 23, 15-17.	2.5	33
30	Multistage Carrier Phase Estimation Algorithms for Phase Noise Mitigation in 64-Quadrature Amplitude Modulation Optical Systems. Journal of Lightwave Technology, 2014, 32, 2973-2980.	4.6	33
31	Fully Blind Linear and Nonlinear Equalization for 100G PM-64QAM Optical Systems. Journal of Lightwave Technology, 2015, 33, 1265-1274.	4.6	32
32	Transoceanic PM-QPSK Terabit superchannel transmission experiments at Baud-rate subcarrier spacing. , 2010, , .		31
33	Carrier Phase Estimation Through the Rotation Algorithm for 64-QAM Optical Systems. Journal of Lightwave Technology, 2015, 33, 1766-1773.	4.6	31
34	Nonlinear mitigation on subcarrier-multiplexed PM-16QAM optical systems. Optics Express, 2017, 25, 4298.	3.4	30
35	Analytical results on system maximum reach increase through symbol rate optimization. , 2015, , .		28
36	Network Planning Strategies for Next-Generation Flexible Optical Networks [Invited]. Journal of Optical Communications and Networking, 2015, 7, A511.	4.8	28

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37	Transmission of 61 C-Band Channels Over Record Distance of Hollow-Core-Fiber With L-Band Interferers. Journal of Lightwave Technology, 2021, 39, 813-820.	4.6	25
38	On the joint effect of receiver impairments on direct-detection DQPSK systems. Journal of Lightwave Technology, 2006, 24, 1323-1333.	4.6	24
39	Maximum Reach Versus Transmission Capacity for Terabit Superchannels Based on 27.75-GBaud PM-QPSK, PM-8QAM, or PM-16QAM. IEEE Photonics Technology Letters, 2010, 22, 829-831.	2.5	24
40	Experimental Investigation of Nonlinear Interference Accumulation in Uncompensated Links. IEEE Photonics Technology Letters, 2012, 24, 1230-1232.	2.5	24
41	Non-Linear Phase Noise Mitigation Over Systems Using Constellation Shaping. Journal of Lightwave Technology, 2019, 37, 3475-3482.	4.6	24
42	Impact of the Transmitter IQ-Skew in Multi-Subcarrier Coherent Optical Systems. , 2016, , .		24
43	Transmission of 9\$,imes,\$138 Gb/s Prefiltered PM-8QAM Signals Over 4000 km of Pure Silica-Core Fiber. Journal of Lightwave Technology, 2011, 29, 2310-2318.	4.6	23
44	Performance prediction for WDM PM-QPSK transmission over uncompensated links. , 2011, , .		23
45	Performance Evaluation of Long-Haul 111 Gb/s PM-QPSK Transmission Over Different Fiber Types. IEEE Photonics Technology Letters, 2010, 22, 1446-1448.	2.5	20
46	NRZ-PM-QPSK 16 \$imes\$ 100 Gb/s Transmission Over Installed Fiber With Different Dispersion Maps. IEEE Photonics Technology Letters, 2010, 22, 371-373.	2.5	20
47	Experimental demonstration of a frequency-domain Volterra series nonlinear equalizer in polarization-multiplexed transmission. Optics Express, 2013, 21, 276.	3.4	20
48	1306-km 20x1248-Gb/s PM-64QAM Transmission over PSCF with Net SEDP 11,300 (bâ™km)/s/Hz using 115 samp/symb DAC. Optics Express, 2014, 22, 1796.	3.4	20
49	Performance Analysis of MLSE Receivers Based on the Square-Root Metric. Journal of Lightwave Technology, 2008, 26, 2098-2109.	4.6	19
50	Simultaneous Transmission of 5G MMW and Sub-THz Signals Through a Fiber-FSO-5G NR Converged System. Journal of Lightwave Technology, 2022, 40, 2348-2356.	4.6	19
51	Dual Stage CPE for 64-QAM Optical Systems Based on a Modified QPSK-Partitioning Algorithm. IEEE Photonics Technology Letters, 2014, 26, 267-270.	2.5	18
52	Investigation on the robustness of a Nyquist-WDM Terabit superchannel to transmitter and receiver non-idealities. , 2010, , .		17
53	DFE Versus MLSE Electronic Equalization for Gigabit/s SI-POF Transmission Systems. IEEE Photonics Technology Letters, 2011, 23, 510-512.	2.5	17
54	Fiber Figure of Merit Based on Maximum Reach. , 2013, , .		17

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55	Impact of low-OSNR operation on the performance of advanced coherent optical transmission systems. , 2014, , .		17
56	Carrier Phase Estimation in Multi-Subcarrier Coherent Optical Systems. IEEE Photonics Technology Letters, 2016, 28, 2090-2093.	2.5	17
57	Novel figure of merit to compare fibers in coherent detection systems with uncompensated links. Optics Express, 2012, 20, 339.	3.4	15
58	Experimental validation of the EGN-model in uncompensated optical links. , 2015, , .		14
59	Experimental demonstration of fiber nonlinearity mitigation in a WDM multi-subcarrier coherent optical system. , 2015, , .		14
60	Extensive Fiber Comparison and GN-model Validation in Uncompensated Links using DAC-generated Nyquist-WDM PM-16QAM Channels. , 2013, , .		13
61	Adaptive Digital Equalization in Optical Coherent Receivers With Stokes-Space Update Algorithm. Journal of Lightwave Technology, 2014, 32, 4759-4767.	4.6	13
62	Bidirectional White-Lighting WDM VLCâ€™UWOC Converged Systems. Journal of Lightwave Technology, 2021, 39, 4351-4359.	4.6	13
63	Decreasing the complexity of LDPC iterative decoders. IEEE Communications Letters, 2005, 9, 634-636.	4.1	12
64	Analytical results on channel capacity in uncompensated optical links with coherent detection: erratum. Optics Express, 2012, 20, 19610.	3.4	12
65	Spectral Shaping in Ultra-Dense WDM Systems: Optical vs. Electrical Approaches. , 2012, , .		12
66	Long-haul 10 Gbit/s linear and non-linear IMDD transmission over uncompensated standard fiber using a SQRT-metric MLSE receiver. Optics Express, 2008, 16, 12919.	3.4	11
67	Fundamental performance limits of optical duobinary. Optics Express, 2008, 16, 19600.	3.4	11
68	Optimization of DSP-based Nyquist-WDM PM-16QAM Transmitter. , 2012, , .		11
69	16\$,imes,\$125 Gb/s Quasi-Nyquist DAC-Generated PM-16QAM Transmission Over 3590 km of PSCF. IEEE Photonics Technology Letters, 2012, 24, 2143-2146.	2.5	11
70	Adaptive Stokes-Based Polarization Demultiplexing for Long-Haul Multi-Subcarrier Systems. IEEE Photonics Technology Letters, 2019, 31, 759-762.	2.5	11
71	A new algorithm for "hard" iterative decoding of concatenated codes. IEEE Transactions on Communications, 2003, 51, 1229-1232.	7.8	10
72	MLSE-Based DQPSK Transmission in 43\$-\$Gb/s DWDM Long-Haul Dispersion-Managed Optical Systems. Journal of Lightwave Technology, 2010, 28, 1573-1581.	4.6	10

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73	Compatibility between coherent reflective burst-mode PON and TWDM-PON physical layers. Optics Express, 2014, 22, 9.	3.4	10
74	On the ultimate potential of symbol-rate optimization for increasing system maximum reach. , 2015, , .		10
75	Comparing Different Options for Flexible Networking: Probabilistic Shaping vs. Hybrid Subcarrier Modulation. , 2017, , .		10
76	Correlated Nonlinear Phase-Noise in Multi-Subcarrier Systems: Modeling and Mitigation. Journal of Lightwave Technology, 2020, 38, 1148-1156.	4.6	10
77	Multi-Stage CPE Algorithms for 64-QAM Constellations. , 2014, , .		9
78	Channel Coding for Optical Communications. , 2005, , 63-78.		8
79	Residual Non-Linear Phase Noise in Probabilistically Shaped 64-QAM Optical Links. , 2018, , .		8
80	Long-Haul Optically Uncompensated IMDD Transmission With MLSE Using the M-Method. IEEE Photonics Technology Letters, 2007, 19, 1230-1232.	2.5	7
81	Joint Effect of MLSE and Receiver Filters Optimization on Dispersion Robustness of IMDD, DPSK, DQPSK, and Duobinary Modulation. IEEE Photonics Technology Letters, 2007, 19, 2003-2005.	2.5	7
82	Investigation of the Dependence of Non-Linear Interference on the Number of WDM Channels in Coherent Optical Networks. , 2012, , .		7
83	Flexible Transceivers and the Rate/Reach Trade-off. , 2018, , .		7
84	Long-Haul WDM IMDD Transmission at 10.7 Gbit/s in a Dispersion-Managed Multispan System Using MLSE Receivers. Journal of Lightwave Technology, 2008, 26, 3041-3047.	4.6	6
85	Performance evaluation and assessment of receiver impairments of a novel PolSK transceiver based on differential demodulation. Optics Express, 2008, 16, 16079.	3.4	6
86	Impact of ADC Sampling Speed and Resolution on Uncompensated Long-Haul 111-Gb/s WDM PM-QPSK Systems. IEEE Photonics Technology Letters, 2009, 21, 1514-1516.	2.5	6
87	Joint DGD, PDL and chromatic dispersion estimation in ultra-long-haul WDM transmission experiments with coherent receivers. , 2010, , .		6
88	TWDM-PON-compatible 10 Gbps burst-mode coherent reflective ONU achieving 31 dB ODN loss using DFB lasers. , 2014, , .		6
89	Automatic bias control of Mach-Zehnder modulators for QPSK and QAM systems. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2014, 81, 403.	0.4	6
90	A Novel Update Algorithm in Stokes Space for Adaptive Equalization in Coherent Receivers. , 2014, , .		6

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91	Electronic Channel Equalization Techniques. Lecture Notes in Computer Science, 2009, , 23-47.	1.3	6
92	Maximization of the Achievable Mutual Information using Probabilistically Shaped Squared-QAM Constellations. , 2017, , .		6
93	A 400-Gb/s WDM-PAM4 OWC system through the free-space transmission with a water-air-water link. Scientific Reports, 2021, 11, 21431.	3.3	6
94	A two-way 224-Gbit/s PAM4-based fibre-FSO converged system. Scientific Reports, 2022, 12, 360.	3.3	6
95	DSP-based compensation of non-linear impairments in 100 Gb/s PolMux QPSK. , 2010, , .		5
96	A simple and accurate model for non-linear propagation effects in uncompensated coherent transmission links. , 2011, , .		5
97	Dual stage carrier phase estimation for 16-QAM systems based on a modified QPSK-partitioning algorithm. , 2013, , .		5
98	Non-Gaussian statistics of CO-OFDM signals after non-linear optical fibre transmission. IET Optoelectronics, 2018, 12, 150-155.	3.3	5
99	Effectiveness of Digital Back-Propagation and Symbol-Rate Optimization in Coherent WDM Optical Systems. , 2016, , .		5
100	Experimental Comparison of PM-16QAM and PM-32QAM with Probabilistically Shaped PM-64QAM. , 2017, , .		5
101	WDM-VLLC and White-Lighting Ring Networks With Optical Add-Drop Multiplexing Scheme. Journal of Lightwave Technology, 2022, 40, 4196-4205.	4.6	5
102	Parametric versus Non-Parametric Branch Metrics for MLSE-based Receivers with ADC and Clock Recovery. , 2008, , .		4
103	Coherent polarization-multiplexed formats: Receiver requirements and mitigation of fiber non-linear effects. , 2010, , .		4
104	Transmission of PM-64QAM over 1524 km of PSCF using fully-blind equalization and Volterra-based nonlinear mitigation. , 2014, , .		4
105	Impact of finite-resolution DAC and ADC on probabilistically-shaped QAM constellations. , 2017, , .		4
106	Performance of Digital Nyquist-WDM. , 2011, , .		4
107	Non-linearity Compensation Limits in Optical Systems with Coherent Receivers. , 2012, , .		4
108	Non-Linearity Modeling at Ultra-High Symbol Rates. , 2018, , .		4

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109	New Branch Metrics for MLSE Receivers Based on Polarization Diversity for PMD Mitigation. Journal of Lightwave Technology, 2009, 27, 4793-4803.	4.6	3
110	Non-linear function for a Gaussian photo-reception in standard IM/DD systems. Optical and Quantum Electronics, 2010, 42, 165-178.	3.3	3
111	Experimental demonstration of a novel update algorithm in stokes space for adaptive equalization in coherent receivers. , 2014, , .		3
112	Analytical Results on Channel Capacity in Uncompensated Optical Links with Coherent Detection. , 2011, , .		3
113	Effectiveness of Symbol-Rate Optimization with PM-16QAM Subcarriers in WDM Transmission. , 2017, , .		3
114	Soft Decoding in Optical Systems: Turbo Product Codes vs. LDPC Codes. , 2005, , 79-86.		2
115	Optimization of Branch Metric Exponent and Quantization Range in MLSE Receivers for Duobinary Systems. IEEE Photonics Technology Letters, 2008, 20, 924-926.	2.5	2
116	Nonlinear propagation of 1 Tbps Superchannels based on 240 Gbps PM-16QAM subcarriers on PSCF with hybrid Erbium/Raman fiber amplification. , 2010, , .		2
117	Evaluation of the Dependence on System Parameters of Non-Linear Interference Accumulation in Multi-Span Links. , 2012, , .		2
118	Network Performance Evaluation for Nyquist-WDM-Based Flexible Optical Networking. , 2012, , .		2
119	Spectrally Efficient Transmission: a Comparison between Nyquist-WDM and CO-OFDM Approaches. , 2012, , .		2
120	Electronic dispersion pre-compensation in PM-QPSK systems over mixed-fiber links. , 2014, , .		2
121	Linewidth-tolerant feed-forward dual-stage CPE algorithm based on 64-QAM constellation partitioning. , 2014, , .		2
122	Theoretical and experimental assessment of nonlinearity mitigation through symbol rate optimization. , 2015, , .		2
123	A novel PolSK transceiver based on differential demodulation: assessment of performance. , 2006, , .		1
124	MLSE Receivers and Their Applications in Optical Transmission Systems. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
125	Electronic distortion compensation in the mitigation of optical transmission impairments: the view of joint project on mitigation of optical transmission impairments by electronic means ePhoton/ONE+ project. IET Optoelectronics, 2009, 3, 73-85.	3.3	1
126	Experimental Demonstration of a Frequency-Domain Volterra Series Nonlinear Equalizer in Polarization-Multiplexed Transmission. , 2012, , .		1

#	ARTICLE	IF	CITATIONS
127	Evaluation of Non-Linear Interference in Uncompensated Links using Raman Amplification. , 2012, , .		1
128	Performance and complexity comparison of carrier phase estimation algorithms for DP-64-QAM optical signals. , 2014, , .		1
129	Performance and Complexity Comparison of CPE Algorithms for 256-QAM Optical Signals. , 2015, , .		1
130	Scalable modulation technology and the tradeoff of reach, spectral efficiency, and complexity. , 2017, , .		1
131	Johnson SU Distribution in Uncompensated QPSK Coherent Optical Transmission Systems. , 2019, , .		1
132	Modulation Format, Core and Spectrum Assignment in a Multicore Optical Link with and without MIMO Receivers. , 2020, , .		1
133	Digital Nyquist WDM for Access Networks using Limited Bandwidth Reflective Semiconductor Optical Amplifiers. , 2012, , .		1
134	A 400-Gb/s OWC System through the Free-Space Link with a Water-Air-Water Interface. , 2021, , .		1
135	Recent Progress and Fundamental Limitations of Optical MLSE Receivers. , 2007, , .		0
136	Corrections to "Joint Effect of MLSE and Receiver Filters Optimization on Dispersion Robustness of IMDD, DPSK, DQPSK, and Duobinary Modulation" [15 Dec 07 2003-2005]. IEEE Photonics Technology Letters, 2008, 20, 662-662.	2.5	0
137	Record-Length 10.7 Gb/s Uncompensated Transmission Experiment over Installed Fiber Using Narrow-Filtered Duobinary and a Correlation-Sensitive MLSE-Rx. , 2009, , .		0
138	Extended TWDM-PON demonstration up to 100 km and 35 dB ODN loss on Burst-Mode Coherent Reflective PON. , 2014, , .		0
139	Boosting the capacity of legacy networks using PM-64QAM and Nyquist-WDM technique. , 2014, , .		0
140	Pilot tones based polarization rotation, frequency offset and phase estimation for polarization multiplexed Offset-QAM Multi-Subcarrier coherent optical systems. , 2016, , .		0
141	Guest Editorial OFC 2017 Special Issue. Journal of Lightwave Technology, 2018, 36, 3-5.	4.6	0
142	In Memoriam Paul W. Shumate. Journal of Lightwave Technology, 2019, 37, 2896-2897.	4.6	0
143	Editorial Selected Papers From OFC 2019. Journal of Lightwave Technology, 2020, 38, 177-177.	4.6	0
144	Guest Editorial OFC 2019 Special Issue. Journal of Lightwave Technology, 2020, 38, 3-5.	4.6	0

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145	Editorial Selected Papers From OFC 2020. Journal of Lightwave Technology, 2021, 39, 856-856.	4.6	0
146	Experiments on Long-Haul High-Capacity Transmission Systems. Signals and Communication Technology, 2011,, 185-234.	0.5	0
147	Performance Evaluation of Coherent PS-QPSK (HEXA) Modulation., 2011,, .		0
148	Modeling and Mitigation of Nonlinear Effects in Uncompensated Coherent Optical Transmission Systems., 2019,, .		0
149	Real-Time Monitoring of the Impact of Cascaded Wavelength-Selective Switches in Digital Coherent Receivers., 2020,, .		0
150	Editorial Foreword to the OFC 2021 Special Issue. Journal of Lightwave Technology, 2022, 40, 1255-1255.	4.6	0