Robert I Killey

List of Publications by Year
in descending order

88 papers	2,703 citations	186265 28 h-index	189892 50 g-index
88 all docs	88 docs citations	88 times ranked	1508 citing authors

#	Article	IF	Citations
1	Electronic compensation of chromatic dispersion using a digital coherent receiver. Optics Express, 2007, 15, 2120.	3.4	311
2	SSBI Mitigation and the Kramersâ€“Kronig Scheme in Single-Sideband Direct-Detection Transmission With Receiver-Based Electronic Dispersion Compensation. Journal of Lightwave Technology, 2017, 35, 1887-1893.	4.6	245
3	A Closed-Form Approximation of the Gaussian Noise Model in the Presence of Inter-Channel Stimulated Raman Scattering. Journal of Lightwave Technology, 2019, 37, 1924-1936.	4.6	125
4	The Gaussian Noise Model in the Presence of Inter-Channel Stimulated Raman Scattering. Journal of Lightwave Technology, 2018, 36, 3046-3055.	4.6	115
5	Mitigation of Fiber Nonlinearity Using a Digital Coherent Receiver. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1217-1226.	2.9	112
6	On the performance of multichannel digital backpropagation in high-capacity long-haul optical transmission. Optics Express, 2014, 22, 30053.	3.4	97
7	Theoretical and experimental evaluation of clipping and quantization noise for optical OFDM. Optics Express, 2011, 19, 17713.	3.4	87
8	Optical Fibre Capacity Optimisation via Continuous Bandwidth Amplification and Geometric Shaping. IEEE Photonics Technology Letters, 2020, 32, 1021-1024.	2.5	85
9	Unrepeatered Nyquist PDM-16QAM transmission over 364â€‰â€‰km using Raman amplification and multi-channel digital back-propagation. Optics Letters, 2015, 40, 3025.	3.3	72
10	Generation of optical OFDM signals using 214 GS/s real time digital signal processing. Optics Express, 2009, 17, 17658.	3.4	63
11	Investigation of bandwidth loading in optical fibre transmission using amplified spontaneous emission noise. Optics Express, 2017, 25, 19529.	3.4	63
12	Spectrally Efficient WDM Nyquist Pulse-Shaped 16-QAM Subcarrier Modulation Transmission With Direct Detection. Journal of Lightwave Technology, 2015, 33, 3147-3155.	4.6	62
13	Comparison of Low Complexity Coherent Receivers for UDWDM-PONs ($lambda$-to-the-User). Journal of Lightwave Technology, 2018, 36, 3453-3464.	4.6	52
14	On the limits of digital back-propagation in the presence of transceiver noise. Optics Express, 2017, 25, 4564.	3.4	49
15	Achievable information rates estimates in optically amplified transmission systems using nonlinearity compensation and probabilistic shaping. Optics Letters, 2017, 42, 121.	3.3	49
16	Signal-signal beat interference cancellation in spectrally-efficient WDM direct-detection Nyquist-pulse-shaped 16-QAM subcarrier modulation. Optics Express, 2015, 23, 23694.	3.4	46
17	A Modulation Format Correction Formula for the Gaussian Noise Model in the Presence of Inter-Channel Stimulated Raman Scattering. Journal of Lightwave Technology, 2019, 37, 5122-5131.	4.6	46
18	Polarization-Insensitive Single-Balanced Photodiode Coherent Receiver for Long-Reach WDM-PONs. Journal of Lightwave Technology, 2016, 34, 2034-2041.	4.6	45

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19	Modulation format dependence of digital nonlinearity compensation performance in optical fibre communication systems. Optics Express, 2017, 25, 3311.	3.4	44
20	Comparison of the nonlinear transmission performance of quasi-Nyquist WDM and reduced guard interval OFDM. Optics Express, 2012, 20, 4198.	3.4	39
21	Achievable rate degradation of ultra-wideband coherent fiber communication systems due to stimulated Raman scattering. Optics Express, 2017, 25, 13024.	3.4	38
22	Equalization enhanced phase noise in Nyquist-spaced superchannel transmission systems using multi-channel digital back-propagation. Scientific Reports, 2015, 5, 13990.	3.3	34
23	Two-Stage Linearization Filter for Direct-Detection Subcarrier Modulation. IEEE Photonics Technology Letters, 2016, 28, 2838-2841.	2.5	34
24	Spectrally Efficient 168 Gb/s/Î» WDM 64-QAM Single-Sideband Nyquist-Subcarrier Modulation With Kramersâ€“Kronig Direct-Detection Receivers. Journal of Lightwave Technology, 2018, 36, 1340-1346.	4.6	34
25	Characterization of long-haul 112Gbit/s PDM-QAM-16 transmission with and without digital nonlinearity compensation. Optics Express, 2010, 18, 12939.	3.4	33
26	Comparison of digital signal-signal beat interference compensation techniques in direct-detection subcarrier modulation systems. Optics Express, 2016, 24, 29176.	3.4	33
27	Performance Comparison of Single-Sideband Direct Detection Nyquist-Subcarrier Modulation and OFDM. Journal of Lightwave Technology, 2015, 33, 2038-2046.	4.6	32
28	Modeling and mitigation of fiber nonlinearity in wideband optical signal transmission [Invited]. Journal of Optical Communications and Networking, 2020, 12, C68.	4.8	31
29	Pulse-shaping versus digital backpropagation in 224Gbit/s PDM-16QAM transmission. Optics Express, 2011, 19, 12879.	3.4	28
30	An FPGA-Based Optical Transmitter Design Using Real-Time DSP for Advanced Signal Formats and Electronic Predistortion. Journal of Lightwave Technology, 2007, 25, 3089-3099.	4.6	25
31	74.38 Tb/s Transmission Over 6300 km Single Mode Fibre Enabled by C+L Amplification and Geometrically Shaped PDM-64QAM. Journal of Lightwave Technology, 2020, 38, 531-537.	4.6	25
32	Shannon's theory in nonlinear systems. Journal of Modern Optics, 2011, 58, 1-10.	1.3	24
33	Spectrally Efficient WDM Nyquist Pulse-Shaped Subcarrier Modulation Using a Dual-Drive Machâ€“Zehnder Modulator and Direct Detection. Journal of Lightwave Technology, 2016, 34, 1158-1165.	4.6	24
34	Nonlinear Transmission Performance of Higher-Order Modulation Formats. IEEE Photonics Technology Letters, 2011, 23, 377-379.	2.5	23
35	Opportunities for Optical Access Network Transceivers Beyond OOK [Invited]. Journal of Optical Communications and Networking, 2019, 11, A186.	4.8	23
36	107 Gb/s electronic predistortion transmitter using commercial FPGAs and D/A converters implementing real-time DSP for chromatic dispersion and SPM compensation. Optics Express, 2009, 17, 8630.	3.4	21

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37	Simplified DSP-Based Signalâ€“Signal Beat Interference Mitigation Technique for Direct Detection OFDM. Journal of Lightwave Technology, 2016, 34, 866-872.	4.6	20
38	Study on the Impact of Nonlinearity and Noise on the Performance of High-Capacity Broadband Hybrid Raman-EDFA Amplified System. Journal of Lightwave Technology, 2019, 37, 5507-5515.	4.6	20
39	Experimental characterization of nonlinear interference noise as a process of intersymbol interference. Optics Letters, 2018, 43, 1123.	3.3	18
40	Optimizing FFT Precision in Optical OFDM Transceivers. IEEE Photonics Technology Letters, 2011, 23, 1550-1552.	2.5	17
41	High spectral density transmission emulation using amplified spontaneous emission noise. Optics Letters, 2016, 41, 68.	3.3	17
42	Experimental Analysis of Nonlinear Impairments in Fibre Optic Transmission Systems up to 7.3 THz. Journal of Lightwave Technology, 2017, 35, 4809-4816.	4.6	17
43	The Impact of Transceiver Noise on Digital Nonlinearity Compensation. Journal of Lightwave Technology, 2018, 36, 695-702.	4.6	17
44	Experimental investigation of SPM in long-haul direct-detection OFDM systems. Optics Express, 2008, 16, 15477.	3.4	16
45	Nonlinear Distortion in Transmission of Higher Order Modulation Formats. IEEE Photonics Technology Letters, 2010, 22, 1111-1113.	2.5	15
46	Digital nonlinearity compensation in high-capacity optical communication systems considering signal spectral broadening effect. Scientific Reports, 2017, 7, 12986.	3.3	15
47	A Closed-Form Expression to Evaluate Nonlinear Interference in Raman-Amplified Links. Journal of Lightwave Technology, 2017, 35, 4316-4328.	4.6	15
48	The ISRS GN Model, an Efficient Tool in Modeling Ultra-Wideband Transmission in Point-to-Point and Network Scenarios. , 2018, , .		15
49	2048-QAM transmission at 15 GBd over 100 km using geometric constellation shaping. Optics Express, 2021, 29, 18743.	3.4	15
50	Design studies for ASIC implementations of 28 GS/s optical QPSK- and 16-QAM-OFDM transceivers. Optics Express, 2011, 19, 20857.	3.4	14
51	10.7 Gb/s transmission over 1200 km of standard single-mode fiber by electronic predistortion using FPGA-based real-time digital signal processing. Optics Express, 2008, 16, 12171.	3.4	13
52	Design and simulation of 25 Gb/s optical OFDM transceiver ASICs. Optics Express, 2011, 19, B337.	3.4	13
53	Long-Haul Transmission of PS-QPSK at 100 Gb/s Using Digital Backpropagation. IEEE Photonics Technology Letters, 2012, 24, 176-178.	2.5	13
54	Modeling of nonlinearity-compensated optical communication systems considering second-order signal-noise interactions. Optics Letters, 2017, 42, 3351.	3.3	11

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55	Experimental and numerical investigation of bit-wise phase-control OTDM transmission. Optics Express, 2008, 16, 18725.	3.4	10
56	Relative impact of channel symbol rate on transmission capacity. Journal of Optical Communications and Networking, 2020, 12, B1.	4.8	10
57	Joint estimation of dynamic polarization and carrier phase with pilot-based adaptive equalizer in PDM-64 QAM transmission system. Optics Express, 2021, 29, 43136.	3.4	10
58	Design studies for an ASIC implementation of an optical OFDM transceiver. , 2010, , .		9
59	Novel Method of Generating QAM-16 Signals at 21.3 Gbaud and Transmission Over 480 km. IEEE Photonics Technology Letters, 2010, 22, 36-38.	2.5	9
60	Digital back-propagation for nonlinearity mitigation in distributed Raman amplified links. Optics Express, 2017, 25, 5431.	3.4	8
61	On the Impact of Fixed Point Hardware for Optical Fiber Nonlinearity Compensation Algorithms. Journal of Lightwave Technology, 2018, 36, 5016-5022.	4.6	8
62	Modelling the Delayed Nonlinear Fiber Response in Coherent Optical Communications. Journal of Lightwave Technology, 2021, 39, 1937-1952.	4.6	8
63	Challenges in Extending Optical Fibre Transmission Bandwidth Beyond C+L Band and How to Get There. , 2021, , .		7
64	Polarization-insensitive single balanced photodiode coherent receiver for passive optical networks. , 2015, , .		6
65	Span length and information rate optimisation in optical transmission systems using single-channel digital backpropagation. Optics Express, 2017, 25, 25353.	3.4	6
66	Performance of Kramersâ€“Kronig Receivers in the Presence of Local Oscillator Relative Intensity Noise. Journal of Lightwave Technology, 2019, 37, 3035-3043.	4.6	6
67	Coded Modulation for 100G Coherent EPON. Journal of Lightwave Technology, 2020, 38, 564-572.	4.6	6
68	On the Performance of Digital Back Propagation in Spatial Multiplexing Systems. Journal of Lightwave Technology, 2020, 38, 2790-2798.	4.6	6
69	Frequency-Modulated Chirp Signals for Single-Photodiode Based Coherent LiDAR System. Journal of Lightwave Technology, 2021, 39, 4661-4670.	4.6	6
70	Performance of momentum-based frequency-domain MIMO equalizer in the presence of feedback delay. Optics Express, 2020, 28, 19133.	3.4	6
71	Optical Equalization of Nonlinear Signal Distortion in 42.7-Gb/s RZ Transmission. IEEE Photonics Technology Letters, 2008, 20, 381-383.	2.5	5
72	Overview and Comparison of Nonlinear Interference Modelling Approaches in Ultra-Wideband Optical Transmission Systems. , 2019, , .		5

#	Article	IF	Citations
73	Ultra-long-haul transmission of 7Ã—429 Gbit/s PS-QPSK and PDM-BPSK. Optics Express, 2011, 19, B581.	3.4	3
74	Nonlinear transmission performance of digital Nyquist WDM and optical OFDM. , 2012, , .		3
75	Digital Back Propagation via Sub-Band Processing in Spatial Multiplexing Systems. Journal of Lightwave Technology, 2021, 39, 1020-1026.	4.6	3
76	The Partially-Coherent AWGN Channel: Transceiver Strategies for Low-Complexity Fibre Links. Journal of Lightwave Technology, 2021, 39, 5423-5431.	4.6	3
77	The Effects of Polarization-Mode Dispersion on the Phase of the Recovered Clock. Journal of Lightwave Technology, 2006, 24, 3944-3952.	4.6	2
78	Nyquist-WDM-based system performance evaluation. , 2013, , .		2
79	Coherent Technologies for Passive Optical Networks. , 2019, , .		2
80	Real-time DSP-based optical OFDM transmission. , 2010, , .		1
81	Experimental Characterization of the Time Correlation Properties of Nonlinear Interference Noise. , 2017, , .		1
82	Bidirectional Symmetric 25G Coherent ONU Using a Single Laser, Single-Ended PIN and a 2-bit ADC. , 2018, , .		1
83	Mutual Shaping and Pre-emphasis Gain Magnification in the Throughput Maximisation for Ultrawideband Transmission. , 2022, , .		1
84	Investigation of the tolerance of wavelength-routed optical networks to inaccuracy in traffic load forecasts. Journal of Optical Networking, 2005, 4, 144.	2.5	0
85	FPGA-based optical transmitters for electronic predistortion and advanced signal format generation. , 2009, , .		0
86	Predistortion and OFDM realizations. , 2011, , .		0
87	Foreword to the Special Issue on European Conference on Optical Communications (ECOC 2015). Journal of Lightwave Technology, 2016, 34, 1406-1410.	4.6	0
88	Experimental Realisation of Single-Carrier Alamouti-Coded QPSK Using Frequency-Diverse Dual-Polarisation RF Pilot Tones. , 2018, , .		0