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	Mutual Shaping and Pre-emphasis Gain Magnification in the Throughput Maximisation for Ultrawideband Transmission. , 2022, , .		1
2	Frequency-Modulated Chirp Signals for Single-Photodiode Based Coherent LiDAR System. Journal of Lightwave Technology, 2021, 39, 4661-4670.	4.6	6
3	Digital Back Propagation via Sub-Band Processing in Spatial Multiplexing Systems. Journal of Lightwave Technology, 2021, 39, 1020-1026.	4.6	3
4	Modelling the Delayed Nonlinear Fiber Response in Coherent Optical Communications. Journal of Lightwave Technology, 2021, 39, 1937-1952.	4.6	8
5	2048-QAM transmission at 15 GBd over 100 km using geometric constellation shaping. Optics Express, 2021, 29, 18743.	3.4	15
6	Challenges in Extending Optical Fibre Transmission Bandwidth Beyond C+L Band and How to Get There. , 2021, , .		7
7	The Partially-Coherent AWGN Channel: Transceiver Strategies for Low-Complexity Fibre Links. Journal of Lightwave Technology, 2021, 39, 5423-5431.	4.6	3
8	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
9	Coded Modulation for 100G Coherent EPON. Journal of Lightwave Technology, 2020, 38, 564-572.	4.6	6
10	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
11	Optical Fibre Capacity Optimisation via Continuous Bandwidth Amplification and Geometric Shaping. IEEE Photonics Technology Letters, 2020, 32, 1021-1024.	2.5	85
12	Modeling and mitigation of fiber nonlinearity in wideband optical signal transmission [Invited]. Journal of Optical Communications and Networking, 2020, 12, C68.	4.8	31
13	On the Performance of Digital Back Propagation in Spatial Multiplexing Systems. Journal of Lightwave Technology, 2020, 38, 2790-2798.	4.6	6
14	Relative impact of channel symbol rate on transmission capacity. Journal of Optical Communications and Networking, 2020, 12, B1.	4.8	10
15	Performance of momentum-based frequency-domain MIMO equalizer in the presence of feedback delay. Optics Express, 2020, 28, 19133.	3.4	6
16	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
17	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
18	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

#	Article	IF	Citations
19	Coherent Technologies for Passive Optical Networks. , 2019, , .		2
20	Overview and Comparison of Nonlinear Interference Modelling Approaches in Ultra-Wideband Optical Transmission Systems. , 2019, , .		5
21	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
22	Opportunities for Optical Access Network Transceivers Beyond OOK [Invited]. Journal of Optical Communications and Networking, 2019, 11, A186.	4.8	23
23	Spectrally Efficient 168 Gb/sÎ» 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
24	The Impact of Transceiver Noise on Digital Nonlinearity Compensation. Journal of Lightwave Technology, 2018, 36, 695-702.	4.6	17
25	The Gaussian Noise Model in the Presence of Inter-Channel Stimulated Raman Scattering. Journal of Lightwave Technology, 2018, 36, 3046-3055.	4.6	115
26	Experimental Realisation of Single-Carrier Alamouti-Coded QPSK Using Frequency-Diverse Dual-Polarisation RF Pilot Tones. , 2018, , .		0
27	Bidirectional Symmetric 25G Coherent ONU Using a Single Laser, Single-Ended PIN and a 2-bit ADC. , 2018, , .		1
28	The ISRS GN Model, an Efficient Tool in Modeling Ultra-Wideband Transmission in Point-to-Point and Network Scenarios. , 2018, , .		15
29	On the Impact of Fixed Point Hardware for Optical Fiber Nonlinearity Compensation Algorithms. Journal of Lightwave Technology, 2018, 36, 5016-5022.	4.6	8
30	Comparison of Low Complexity Coherent Receivers for UDWDM-PONs ($lambda$-to-the-User). Journal of Lightwave Technology, 2018, 36, 3453-3464.	4.6	52
31	Experimental characterization of nonlinear interference noise as a process of intersymbol interference. Optics Letters, 2018, 43, 1123.	3.3	18
32	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
33	Digital nonlinearity compensation in high-capacity optical communication systems considering signal spectral broadening effect. Scientific Reports, 2017, 7, 12986.	3.3	15
34	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
35	Experimental Characterization of the Time Correlation Properties of Nonlinear Interference Noise. , 2017, , .		1
36	A Closed-Form Expression to Evaluate Nonlinear Interference in Raman-Amplified Links. Journal of Lightwave Technology, 2017, 35, 4316-4328.	4.6	15

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37	Modulation format dependence of digital nonlinearity compensation performance in optical fibre communication systems. Optics Express, 2017, 25, 3311.	3.4	44
38	On the limits of digital back-propagation in the presence of transceiver noise. Optics Express, 2017, 25, 4564.	3.4	49
39	Digital back-propagation for nonlinearity mitigation in distributed Raman amplified links. Optics Express, 2017, 25, 5431.	3.4	8
40	Achievable rate degradation of ultra-wideband coherent fiber communication systems due to stimulated Raman scattering. Optics Express, 2017, 25, 13024.	3.4	38
41	Investigation of bandwidth loading in optical fibre transmission using amplified spontaneous emission noise. Optics Express, 2017, 25, 19529.	3.4	63
42	Span length and information rate optimisation in optical transmission systems using single-channel digital backpropagation. Optics Express, 2017, 25, 25353.	3.4	6
43	Achievable information rates estimates in optically amplified transmission systems using nonlinearity compensation and probabilistic shaping. Optics Letters, 2017, 42, 121.	3.3	49
44	Modeling of nonlinearity-compensated optical communication systems considering second-order signal-noise interactions. Optics Letters, 2017, 42, 3351.	3.3	11
45	Comparison of digital signal-signal beat interference compensation techniques in direct-detection subcarrier modulation systems. Optics Express, 2016, 24, 29176.	3.4	33
46	Two-Stage Linearization Filter for Direct-Detection Subcarrier Modulation. IEEE Photonics Technology Letters, 2016, 28, 2838-2841.	2.5	34
47	Foreword to the Special Issue on European Conference on Optical Communications (ECOC 2015). Journal of Lightwave Technology, 2016, 34, 1406-1410.	4.6	0
48	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
49	High spectral density transmission emulation using amplified spontaneous emission noise. Optics Letters, 2016, 41, 68.	3.3	17
50	Polarization-Insensitive Single-Balanced Photodiode Coherent Receiver for Long-Reach WDM-PONs. Journal of Lightwave Technology, 2016, 34, 2034-2041.	4.6	45
51	Simplified DSP-Based Signalâ€“Signal Beat Interference Mitigation Technique for Direct Detection OFDM. Journal of Lightwave Technology, 2016, 34, 866-872.	4.6	20
52	Equalization enhanced phase noise in Nyquist-spaced superchannel transmission systems using multi-channel digital back-propagation. Scientific Reports, 2015, 5, 13990.	3.3	34
53	Polarization-insensitive single balanced photodiode coherent receiver for passive optical networks. , 2015, , .		6
54	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

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55	Performance Comparison of Single-Sideband Direct Detection Nyquist-Subcarrier Modulation and OFDM. Journal of Lightwave Technology, 2015, 33, 2038-2046.	4.6	32
56	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
57	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
58	On the performance of multichannel digital backpropagation in high-capacity long-haul optical transmission. Optics Express, 2014, 22, 30053.	3.4	97
59	Nyquist-WDM-based system performance evaluation. , 2013, , .		2
60	Comparison of the nonlinear transmission performance of quasi-Nyquist WDM and reduced guard interval OFDM. Optics Express, 2012, 20, 4198.	3.4	39
61	Nonlinear transmission performance of digital Nyquist WDM and optical OFDM. , 2012, , .		3
62	Long-Haul Transmission of PS-QPSK at 100 Gb/s Using Digital Backpropagation. IEEE Photonics Technology Letters, 2012, 24, 176-178.	2.5	13
63	Optimizing FFT Precision in Optical OFDM Transceivers. IEEE Photonics Technology Letters, 2011, 23, 1550-1552.	2.5	17
64	Nonlinear Transmission Performance of Higher-Order Modulation Formats. IEEE Photonics Technology Letters, 2011, 23, 377-379.	2.5	23
65	Shannon's theory in nonlinear systems. Journal of Modern Optics, 2011, 58, 1-10.	1.3	24
66	Pulse-shaping versus digital backpropagation in 224Gbit/s PDM-16QAM transmission. Optics Express, 2011, 19, 12879.	3.4	28
67	Theoretical and experimental evaluation of clipping and quantization noise for optical OFDM. Optics Express, 2011, 19, 17713.	3.4	87
68	Design studies for ASIC implementations of 28 GS/s optical QPSK- and 16-QAM-OFDM transceivers. Optics Express, 2011, 19, 20857.	3.4	14
69	Design and simulation of 25 Gb/s optical OFDM transceiver ASICs. Optics Express, 2011, 19, B337.	3.4	13
70	Ultra-long-haul transmission of 7Ã—429 Gbit/s PS-QPSK and PDM-BPSK. Optics Express, 2011, 19, B581.	3.4	3
71	Predistortion and OFDM realizations. , 2011, , .		0
72	Mitigation of Fiber Nonlinearity Using a Digital Coherent Receiver. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1217-1226.	2.9	112

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73	Design studies for an ASIC implementation of an optical OFDM transceiver. , 2010, , .		9
74	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
75	Nonlinear Distortion in Transmission of Higher Order Modulation Formats. IEEE Photonics Technology Letters, 2010, 22, 1111-1113.	2.5	15
76	Real-time DSP-based optical OFDM transmission. , 2010, , .		1
77	Characterization of long-haul 112Gbit/s PDM-QAM-16 transmission with and without digital nonlinearity compensation. Optics Express, 2010, 18, 12939.	3.4	33
78	FPGA-based optical transmitters for electronic predistortion and advanced signal format generation. , 2009, , .		0
79	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
80	Generation of optical OFDM signals using 214 GS/s real time digital signal processing. Optics Express, 2009, 17, 17658.	3.4	63
81	Optical Equalization of Nonlinear Signal Distortion in 42.7-Gb/s RZ Transmission. IEEE Photonics Technology Letters, 2008, 20, 381-383.	2.5	5
82	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
83	Experimental investigation of SPM in long-haul direct-detection OFDM systems. Optics Express, 2008, 16, 15477.	3.4	16
84	Experimental and numerical investigation of bit-wise phase-control OTDM transmission. Optics Express, 2008, 16, 18725.	3.4	10
85	Electronic compensation of chromatic dispersion using a digital coherent receiver. Optics Express, 2007, 15, 2120.	3.4	311
86	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
87	The Effects of Polarization-Mode Dispersion on the Phase of the Recovered Clock. Journal of Lightwave Technology, 2006, 24, 3944-3952.	4.6	2
88	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