Seb J Savory

List of Publications by Year
in descending order

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158 papers	5,662 citations	147801 31 h-index	79698 73 g-index
162 all docs	162 docs citations	162 times ranked	2617 citing authors

#	Article	IF	Citations
1	Digital filters for coherent optical receivers. Optics Express, 2008, 16, 804.	3.4	1,042
2	Digital Coherent Optical Receivers: Algorithms and Subsystems. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1164-1179.	2.9	636
3	Roadmap of optical communications. Journal of Optics (United Kingdom), 2016, 18, 063002.	2.2	402
4	Electronic compensation of chromatic dispersion using a digital coherent receiver. Optics Express, 2007, 15, 2120.	3.4	311
5	Blind Equalization and Carrier Phase Recovery in a 16-QAM Optical Coherent System. Journal of Lightwave Technology, 2009, 27, 3042-3049.	4.6	295
6	Laser Linewidth Tolerance for 16-QAM Coherent Optical Systems Using QPSK Partitioning. IEEE Photonics Technology Letters, 2010, 22, 631-633.	2.5	226
7	Compensation of Quadrature Imbalance in an Optical QPSK Coherent Receiver. IEEE Photonics Technology Letters, 2008, 20, 1733-1735.	2.5	225
8	Digital Signal Processing for Coherent Transceivers Employing Multilevel Formats. Journal of Lightwave Technology, 2017, 35, 1125-1141.	4.6	173
9	Mitigation of Fiber Nonlinearity Using a Digital Coherent Receiver. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1217-1226.	2.9	112
10	Digital Coherent Receivers for Long-Reach Optical Access Networks. Journal of Lightwave Technology, 2013, 31, 609-620.	4.6	106
11	Spectrally Shaped DP-16QAM Super-Channel Transmission with Multi-Channel Digital Back-Propagation. Scientific Reports, 2015, 5, 8214.	3.3	100
12	Blind Equalization of Receiver In-Phase/Quadrature Skew in the Presence of Nyquist Filtering. IEEE Photonics Technology Letters, 2013, 25, 2446-2449.	2.5	73
13	Design of a 1 Tb/s Superchannel Coherent Receiver. Journal of Lightwave Technology, 2016, 34, 1453-1463.	4.6	70
14	Adapting Transmitter Power and Modulation Format to Improve Optical Network Performance Utilizing the Gaussian Noise Model of Nonlinear Impairments. Journal of Lightwave Technology, 2014, 32, 4087-4096.	4.6	65
15	A long-reach ultra-dense 10 Gbit/s WDM-PON using a digital coherent receiver. Optics Express, 2010, 18, 25855.	3.4	61
16	Comparison of Low Complexity Coherent Receivers for UDWDM-PONs ($lambda$-to-the-User). Journal of Lightwave Technology, 2018, 36, 3453-3464.	4.6	52
17	Machine Learning Based Linear and Nonlinear Noise Estimation. Journal of Optical Communications and Networking, 2018, 10, D42.	4.8	51
18	Impact of Interchannel Nonlinearities on a Split-Step Intrachannel Nonlinear Equalizer. IEEE Photonics Technology Letters, 2010, 22, 673-675.	2.5	50

#	Article	IF	Citations
19	Routing, modulation, spectrum and launch power assignment to maximize the traffic throughput of a nonlinear optical mesh network. Photonic Network Communications, 2015, 29, 244-256.	2.7	50
20	Widely Tunable Burst Mode Digital Coherent Receiver With Fast Reconfiguration Time for 112 Gb/s DP-QPSK WDM Networks. Journal of Lightwave Technology, 2012, 30, 3924-3930.	4.6	49
21	Optimal Least-Squares FIR Digital Filters for Compensation of Chromatic Dispersion in Digital Coherent Optical Receivers. Journal of Lightwave Technology, 2014, 32, 1449-1456.	4.6	45
22	Congestion Aware Routing in Nonlinear Elastic Optical Networks. IEEE Photonics Technology Letters, 2014, 26, 1057-1060.	2.5	45
23	Polarization-Insensitive Single-Balanced Photodiode Coherent Receiver for Long-Reach WDM-PONs. Journal of Lightwave Technology, 2016, 34, 2034-2041.	4.6	45
24	Blind adaptive equalization of â€¨polarization-switched QPSK modulation. Optics Express, 2011, 19, 8533.	3.4	40
25	Generation and long-haul transmission of polarization-switched QPSK at 429 Gb/s. Optics Express, 2011, 19, 9296.	3.4	38
26	Compensation of Frequency Offset for 16-QAM Optical Coherent Systems using QPSK Partitioning. IEEE Photonics Technology Letters, 2011, , .	2.5	36
27	Impact of phase to amplitude noise conversion in coherent optical systems with digital dispersion compensation. Optics Express, 2010, 18, 16273.	3.4	35
28	Equalization enhanced phase noise in Nyquist-spaced superchannel transmission systems using multi-channel digital back-propagation. Scientific Reports, 2015, 5, 13990.	3.3	34
29	Characterization of long-haul 112Gbit/s PDM-QAM-16 transmission with and without digital nonlinearity compensation. Optics Express, 2010, 18, 12939.	3.4	33
30	Burst Mode Receiver for 112 Gb/s DP-QPSK with parallel DSP. Optics Express, 2011, 19, B770.	3.4	33
31	Compensation of Frequency Offset for Differentially Encoded 16- and 64-QAM in the Presence of Laser Phase Noise. IEEE Photonics Technology Letters, 2010, 22, 176-178.	2.5	32
32	Reduced Complexity Equalization for Coherent Long-Reach Passive Optical Networks [Invited]. Journal of Optical Communications and Networking, 2015, 7, A16.	4.8	32
33	The Benefit of Split Nonlinearity Compensation for Single-Channel Optical Fiber Communications. IEEE Photonics Technology Letters, 2016, 28, 1803-1806.	2.5	31
34	Machine learning for optical fiber communication systems: An introduction and overview. APL Photonics, 2021, 6, .	5.7	29
35	Pulse-shaping versus digital backpropagation in 224Gbit/s PDM-16QAM transmission. Optics Express, 2011, 19, 12879.	3.4	28
36	Probabilistic Design of Optical Transmission Systems. Journal of Lightwave Technology, 2017, 35, 931-940.	4.6	27

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37	Digital backpropagation accounting for polarization-mode dispersion. Optics Express, 2017, 25, 1903.	3.4	27
38	Digital Equalisation of 40Gbit/s per Wavelength Transmission over 2480km of Standard Fibre without Optical Dispersion Compensation. , 2006, , .		26
39	Carrier Phase Recovery for 16-QAM Using QPSK Partitioning and Sliding Window Averaging. IEEE Photonics Technology Letters, 2014, 26, 854-857.	2.5	26
40	On the Impact of Optimal Modulation and FEC Overhead on Future Optical Networks. Journal of Lightwave Technology, 2016, 34, 2339-2352.	4.6	26
41	Bidirectional wavelength-division multiplexing transmission over installed fibre using a simplified optical coherent access transceiver. Nature Communications, 2017, 8, 1043.	12.8	26
42	Coherent Passive Optical Networks: Why, When, and How. IEEE Communications Magazine, 2021, 59, 112-117.	6.1	26
43	Influence of Pulse Shape in 112-Gb/s WDM PDM-QPSK Transmission. IEEE Photonics Technology Letters, 2010, 22, 1714-1716.	2.5	25
44	DSP algorithms for recovering single-carrier Alamouti coded signals for PON applications. Optics Express, 2016, 24, 24083.	3.4	25
45	Digital Signal Processing Options in Long Haul Transmission. , 2008, , .		24
46	Nonlinear Transmission Performance of Higher-Order Modulation Formats. IEEE Photonics Technology Letters, 2011, 23, 377-379.	2.5	23
47	Estimating OSNR of equalised QPSK signals. Optics Express, 2011, 19, B661.	3.4	23
48	Approximations for the Nonlinear Self-Channel Interference of Channels With Rectangular Spectra. IEEE Photonics Technology Letters, 2013, 25, 961-964.	2.5	23
49	Transmission of 42.8Gbit/s Polarization Multiplexed NRZ-QPSK over 6400km of Standard Fiber with no Optical Dispersion Compensation. , 2007, , .		19
50	Scalable Capacity Estimation for Nonlinear Elastic All-Optical Core Networks. Journal of Lightwave Technology, 2019, 37, 5380-5391.	4.6	19
51	Differential carrier phase recovery for QPSK optical coherent systems with integrated tunable lasers. Optics Express, 2013, 21, 10166.	3.4	18
52	Joint Estimation of Linear and Non-linear Signal-to-Noise Ratio based on Neural Networks. , 2018, , .		18
53	Bidirectional 10 Gbit/s long-reach WDM-PON using digital coherent receivers. , 2011, , .		17
54	Nonlinear Distortion in Transmission of Higher Order Modulation Formats. IEEE Photonics Technology Letters, 2010, 22, 1111-1113.	2.5	15

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55	Network Equipment and Their Procurement Strategy for High Capacity Elastic Optical Networks. Journal of Optical Communications and Networking, 2016, 8, A201.	4.8	15
56	Maximizing the information throughput of ultra-wideband fiber-optic communication systems. Optics Express, 2022, 30, 19320.	3.4	15
57	Digital Signal Processing for Coherent Systems. , 2012, , .		14
58	Assessment of Options for Utilizing SNR Margin to Increase Network Data Throughput. , 2015, , .		14
59	Long-Haul Transmission of PS-QPSK at 100 Gb/s Using Digital Backpropagation. IEEE Photonics Technology Letters, 2012, 24, 176-178.	2.5	13
60	Digital coherent optical access networks. , 2013, , .		13
61	Transmitter Optimized Optical Networks. , 2013, , .		13
62	Carrier-Phase Estimation for 16-QAM Optical Coherent Systems Using QPSK Partitioning With Barycenter Approximation. Journal of Lightwave Technology, 2014, 32, 2420-2427.	4.6	13
63	Modulatorâ€Free Coherentâ€Oneâ€Way Quantum Key Distribution. Laser and Photonics Reviews, 2017, 11, 1700067.	8.7	13
64	A comparison of modulation formats for passive optical networks. Optics Express, 2011, 19, B836.	3.4	12
65	80-km Coherent DWDM-PON on 20-GHz Grid With Injected Gain Switched Comb Source. IEEE Photonics Technology Letters, 2014, 26, 364-367.	2.5	12
66	Modified radius directed equaliser for high order QAM. , 2015, , .		12
67	Technology Requirements for an Alamouti-Coded 100 Gb/s Digital Coherent Receiver Using 3 Ã— 3 Couplers for Passive Optical Networks. IEEE Photonics Journal, 2018, 10, 1-13.	2.0	12
68	Estimating Outages Due to Polarization Mode Dispersion Using Extreme Value Statistics. Journal of Lightwave Technology, 2006, 24, 3907-3913.	4.6	11
69	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
70	Gain-switched multicarrier transmitter in a long-reach UDWDM PON with a digital coherent receiver. Optics Letters, 2013, 38, 4797.	3.3	11
71	Spectral Shaping for Mitigating Backreflections in a Bidirectional 10 Gbit/s Coherent WDM-PON. , 2013, , .		11
72	Design considerations for low-margin elastic optical networks in the nonlinear regime [Invited]. Journal of Optical Communications and Networking, 2019, 11, C76.	4.8	11

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73	Physics-Informed Gaussian Process Regression for Optical Fiber Communication Systems. Journal of Lightwave Technology, 2021, 39, 6833-6844.	4.6	11
74	Bidirectional Symmetrical 100 Gb/s/Î» Coherent PON Using a Simplified ONU Transceiver. IEEE Photonics Technology Letters, 2022, 34, 838-841.	2.5	11
75	A direct GHz-clocked phase and intensity modulated transmitter applied to quantum key distribution. Quantum Science and Technology, 2018, 3, 045010.	5.8	10
76	Interaction between polarization mode dispersion and polarization-dependent losses in optical communication links. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 424.	2.1	9
77	Compensation of fibre impairments in digital coherent systems. , 2008, , .		9
78	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
79	Reducing the Power Consumption of the CMA Equalizer Update for a Digital Coherent Receiver. , 2014, , .		9
80	Throughput Gains From Adaptive Transceivers in Nonlinear Elastic Optical Networks. Journal of Lightwave Technology, 2017, 35, 1280-1289.	4.6	9
81	Realizing High Sensitivity at 40 Gbit/s and 100 Gbit/s. , 2012, , .		9
82	Compensation of fibre impairments in digital coherent systems. , 2008, , .		8
83	Introducing scenario based learning: Experiences from an undergraduate electronic and electrical engineering course. , 2010, , .		8
84	Digital Coherence Enhancement Enabling 6-GBd DP-64QAM Using a 1.4-MHz Linewidth Laser. IEEE Photonics Technology Letters, 2013, 25, 2213-2216.	2.5	8
85	Fast Wavelength Switching 6 GBd Dual Polarization 16QAM Digital Coherent Burst Mode Receiver. IEEE Photonics Technology Letters, 2014, 26, 297-300.	2.5	8
86	Experimental demonstration of multi-pilot aided carrier phase estimation for DP-64QAM and DP-256QAM. , 2015, , .		8
87	Approximating the Partially Coherent Additive White Gaussian Noise Channel in Polar Coordinates. IEEE Photonics Technology Letters, 2019, 31, 833-836.	2.5	8
88	Coherent Access: Status and Opportunities. , 2020, , .		8
89	Electronic signal processing in optical communications. , 2008, , .		7
90	Digital Coherent Technology for Long-Reach Optical Access. , 2014, , .		7

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91	Using 25â€‰â€‰GbE Client Rates to Access the Gains of Adaptive Bit- and Code-Rate Networking. Journal of Optical Communications and Networking, 2016, 8, A86.	4.8	7
92	A Baud-Rate Sampled Coherent Transceiver with Digital Pulse Shaping and Interpolation. , 2013, , .		7
93	In-Band OSNR Monitoring Using Spectral Analysis After Frequency Down-Conversion. IEEE Photonics Technology Letters, 2007, 19, 115-117.	2.5	6
94	Polarization-insensitive single balanced photodiode coherent receiver for passive optical networks. , 2015, , .		6
95	Manipulating photon coherence to enhance the security of distributed phase reference quantum key distribution. Applied Physics Letters, 2017, 111, .	3.3	6
96	Robust Single Polarization Coherent Transceiver Using DGD Pre-distortion for Optical Access Networks. , 2016, , .		6
97	A Low Complexity Hybrid Time-Frequency Domain Adaptive Equalizer for Coherent Optical Receivers. , 2016, , .		6
98	Linear and nonlinear impairment mitigation in a Nyquist spaced DP-16QAM WDM transmission system with full-field DBP. , 2014, , .		5
99	Demonstration of 10 Gbit/s Colorless Coherent PON Incorporating Tunable DS-DBR Lasers and Low-Complexity Parallel DSP. , 2012, , .		5
100	Improved Linewidth Tolerant Carrier Phase Recovery Based on Polar MAP Metric Estimate. , 2017, , .		5
101	Low Complexity Coherent for Access Networks. , 2020, , .		5
102	Burst Mode Receiver for 112 Gb/s DP-QPSK. , 2011, , .		4
103	Fast Wavelength Switching 112Gb/s Coherent Burst Mode Transceiver for Dynamic Optical Networks. , 2012, , .		4
104	On Optimal Modulation and FEC Overhead for Future Optical Networks. , 2015, , .		4
105	Low Complexity Multichannel Nonlinear Predistortion for Passive Optical Networks. , 2015, , .		4
106	Single Channel Probe Utilizing the EGN Model to Estimate Link Parameters for Network Abstraction. , 2017, , .		4
107	Parameter Optimisation for Ultra-Wideband Optical Networks in the Presence of Stimulated Raman Scattering Effect. , 2021, , .		4
108	Estimating OSNR of Equalised QPSK Signals. , 2011, , .		4

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109	On the Impact of Backreflections in a Bidirectional 10 Gbit/s Coherent WDM-PON. , 2012, , .		4
110	Disentangling the control electron in a two qubit solid state quantum gate. Journal of Physics Condensed Matter, 2006, 18, S777-S782.	1.8	3
111	Coherent Detection - Why is it back?. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	3
112	Experimental investigation of PDM-QAM16 transmission at 112 Gbit/s over 2400 km. , 2010, , .		3
113	Fibre nonlinearities in WDM-systems with reduced channel-spacing and symbol-rate. , 2010, , .		3
114	Optimizing the FEC Overhead in a 100 GbE PDM-QPSK Digital Coherent Transmission System. Journal of Lightwave Technology, 2011, 29, 1118-1126.	4.6	3
115	Ultra-long-haul transmission of 7Ã—429 Gbit/s PS-QPSK and PDM-BPSK. Optics Express, 2011, 19, B581.	3.4	3
116	SOA blanking and signal pre-emphasis for wavelength agile 100Gb/s transmitters. , 2012, , .		3
117	Perturbation-Based Frequency Domain Linear and Nonlinear Noise Estimation. Journal of Lightwave Technology, 2022, 40, 6055-6063.	4.6	3
118	Distributed abstraction and verification of an installed optical fibre network. Scientific Reports, 2021, 11, 10750.	3.3	3
119	Transceiver Noise Characterization Based on Perturbations. Journal of Lightwave Technology, 2021, 39, 5799-5804.	4.6	3
120	Estimating Network Throughput with an Adaptive Routing and Wavelength Assignment Algorithm. , 2018, , .		3
121	Extreme Values in Optical Fiber Communication Systems. , 2020, , .		3
122	Long-haul WDM transmission of PDM-8PSK and PDM-8QAM with nonlinear DSP. , 2012, , .		2
123	Nyquist-WDM-based system performance evaluation. , 2013, , .		2
124	Nyquist-WDM PDM-QPSK transmission over SMF-28 fibre using URFL amplification. , 2014, , .		2
125	Fast Wavelength Switching Transceiver for a Virtualized Coherent Optical Network. Journal of Lightwave Technology, 2015, 33, 1007-1013.	4.6	2
126	The benefit of split nonlinearity compensation for single channel optical fiber communications. , 2016, , .		2

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127	Comparison of Pulse Shapes in a 224Gbit/s (28Gbaud) PDM-QAM16 Long-Haul Transmission Experiment. , 2011, , .		2
128	How Pessimistic is a Worst-Case SNR Degradation as a Link Abstraction Metric?. , 2016, , .		2
129	Digital Signal Processing for Coherent Optical Communication Systems. , 2013, , .		2
130	Single Technique for Simultaneous Monitoring of OSNR and Chromatic Dispersion at 40Gbit/s. , 2006, , .		1
131	Robust Long-Haul Transmission Utilizing Electronic Precompensation and MLSE Equalization. , 2007, , .		1
132	Benefits of digital backpropagation in coherent QPSK and 16QAM fibre links. Proceedings of SPIE, 2010, , .	0.8	1
133	DSP techniques for 16-QAM coherent optical systems. , 2010, , .		1
134	Editorial [New EIC S.J. Savory]. IEEE Photonics Technology Letters, 2012, 24, 331-331.	2.5	1
135	Machine Learning Based Noise Estimation in Optical Fiber Communication Networks. , 2018, , .		1
136	Ultra-long-haul transmission of 7Ã—42.9Gbit/s PS-QPSK and PM-BPSK. , 2011, , .		1
137	Remote Abstraction of an Installed Dark Fiber Network using Noise to Signal Ratio. , 2018, , .		1
138	A Comparison of Modulation Formats for Passive Optical Networks. , 2011, , .		1
139	Impact of Amplifier Noise Figure on Network Throughput. , 2016, , .		1
140	A Pareto-Optimality Based Multi-Objective Optimisation Approach to Assist Optical Network (Re-)Design Choices. , 2021, , .		1
141	Recent Progress and Fundamental Limitations of Optical MLSE Receivers. , 2007, , .		0
142	Experimental characterisation of QAM16 at symbol rates up to 42Gbaud. , 2010, , .		0
143	Nonlinear Digital Processing for Uncompensated Systems. , 2010, , .		0
144	Relationship between electrical bandwidth and FEC overhead in a 100GbE digital coherent transceiver. , 2010, , .		0

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145	Fixed point precision requirements of the CMA for digital coherent access. , 2012, , .		0
146	Editorial: Increasing the Page Limit to Permit Four-Page Letters. IEEE Photonics Technology Letters, 2012, 24, 719-720.	2.5	0
147	Fast wavelength switching transceivers for bandwidth on demand based coherent optical networks. , 2014, , .		0
148	Fast Wavelength Switching DP-OFDM Transceiver in a 5-Node 800km Coherent OBS Network. , 2014, , .		0
149	Estimating divergently routed nonlinearly interfering channel powers using cross phase modulation. Optics Express, 2014, 22, 25506.	3.4	0
150	Unrepeated transmission over 253.4 km ultra low loss fiber achieving 6.95 b/s/Hz SE using EDFA-only pre-amplification. , 2014, , .		0
151	Guest Editorial: OFC/NFOEC 2013 Special Issue. Journal of Lightwave Technology, 2014, 32, 525-527.	4.6	0
152	Designing adaptive coded modulation for optical networks via achievable information rates. , 2017, , .		0
153	Benefits of Digital Backpropagation in Coherent QPSK and 16QAM Fibre Links. , 2010, , .		0
154	Demonstration of 10 Gbit/s Colorless Coherent PON Incorporating Tunable DS-DBR Lasers and Low-Complexity Parallel DSP. , 2012, , .		0
155	Fast Switching Burst Mode Receiver in a 24-Channel 112Gb/s DP-QPSK WDM System with 240km Transmission. , 2012, , .		0
156	A Transition Metric in Polar Co-ordinates for MLSE of a Complex Modulated DML. , 2020, , .		0
157	Amplifier Considerations in ROADMâ€“free Spaceâ€“Switched Nonlinear Optical Links. , 2020, , .		0
158	DSP for Optical Transponders. Springer Handbooks, 2020, , 155-176.	0.6	0