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	Perturbation-Based Frequency Domain Linear and Nonlinear Noise Estimation. Journal of Lightwave Technology, 2022, 40, 6055-6063.	4.6	3
2	Maximizing the information throughput of ultra-wideband fiber-optic communication systems. Optics Express, 2022, 30, 19320.	3.4	15
3	Bidirectional Symmetrical 100 Gb/s/Î» Coherent PON Using a Simplified ONU Transceiver. IEEE Photonics Technology Letters, 2022, 34, 838-841.	2.5	11
4	Distributed abstraction and verification of an installed optical fibre network. Scientific Reports, 2021, 11, 10750.	3.3	3
5	Parameter Optimisation for Ultra-Wideband Optical Networks in the Presence of Stimulated Raman Scattering Effect. , 2021, , .		4
6	Transceiver Noise Characterization Based on Perturbations. Journal of Lightwave Technology, 2021, 39, 5799-5804.	4.6	3
7	Physics-Informed Gaussian Process Regression for Optical Fiber Communication Systems. Journal of Lightwave Technology, 2021, 39, 6833-6844.	4.6	11
8	A Pareto-Optimality Based Multi-Objective Optimisation Approach to Assist Optical Network (Re-)Design Choices. , 2021, , .		1
9	Machine learning for optical fiber communication systems: An introduction and overview. APL Photonics, 2021, 6, .	5.7	29
10	Coherent Passive Optical Networks: Why, When, and How. IEEE Communications Magazine, 2021, 59, 112-117.	6.1	26
11	Coherent Access: Status and Opportunities. , 2020, , .		8
12	Extreme Values in Optical Fiber Communication Systems. , 2020, , .		3
13	A Transition Metric in Polar Co-ordinates for MLSE of a Complex Modulated DML. , 2020, , .		0
14	Amplifier Considerations in ROADMâ€“free Spaceâ€“Switched Nonlinear Optical Links. , 2020, , .		0
15	Low Complexity Coherent for Access Networks. , 2020, , .		5
16	DSP for Optical Transponders. Springer Handbooks, 2020, , 155-176.	0.6	0
17	Scalable Capacity Estimation for Nonlinear Elastic All-Optical Core Networks. Journal of Lightwave Technology, 2019, 37, 5380-5391.	4.6	19
18	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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19	Approximating the Partially Coherent Additive White Gaussian Noise Channel in Polar Coordinates. IEEE Photonics Technology Letters, 2019, 31, 833-836.	2.5	8
20	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
21	Machine Learning Based Noise Estimation in Optical Fiber Communication Networks. , 2018, , .		1
22	Machine Learning Based Linear and Nonlinear Noise Estimation. Journal of Optical Communications and Networking, 2018, 10, D42.	4.8	51
23	Comparison of Low Complexity Coherent Receivers for UDWDM-PONs ($lambda$-to-the-User). Journal of Lightwave Technology, 2018, 36, 3453-3464.	4.6	52
24	A direct GHz-clocked phase and intensity modulated transmitter applied to quantum key distribution. Quantum Science and Technology, 2018, 3, 045010.	5.8	10
25	Estimating Network Throughput with an Adaptive Routing and Wavelength Assignment Algorithm. , 2018, , .		3
26	Joint Estimation of Linear and Non-linear Signal-to-Noise Ratio based on Neural Networks. , 2018, , .		18
27	Remote Abstraction of an Installed Dark Fiber Network using Noise to Signal Ratio. , 2018, , .		1
28	Digital Signal Processing for Coherent Transceivers Employing Multilevel Formats. Journal of Lightwave Technology, 2017, 35, 1125-1141.	4.6	173
29	Throughput Gains From Adaptive Transceivers in Nonlinear Elastic Optical Networks. Journal of Lightwave Technology, 2017, 35, 1280-1289.	4.6	9
30	Modulatorâ€Free Coherentâ€Oneâ€Way Quantum Key Distribution. Laser and Photonics Reviews, 2017, 11, 1700067.	8.7	13
31	Probabilistic Design of Optical Transmission Systems. Journal of Lightwave Technology, 2017, 35, 931-940.	4.6	27
32	Bidirectional wavelength-division multiplexing transmission over installed fibre using a simplified optical coherent access transceiver. Nature Communications, 2017, 8, 1043.	12.8	26
33	Manipulating photon coherence to enhance the security of distributed phase reference quantum key distribution. Applied Physics Letters, 2017, 111, .	3.3	6
34	Single Channel Probe Utilizing the EGN Model to Estimate Link Parameters for Network Abstraction. , 2017, , .		4
35	Designing adaptive coded modulation for optical networks via achievable information rates. , 2017, , .		0
36	Digital backpropagation accounting for polarization-mode dispersion. Optics Express, 2017, 25, 1903.	3.4	27

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37	Improved Linewidth Tolerant Carrier Phase Recovery Based on Polar MAP Metric Estimate. , 2017, , .		5
38	DSP algorithms for recovering single-carrier Alamouti coded signals for PON applications. Optics Express, 2016, 24, 24083.	3.4	25
39	The benefit of split nonlinearity compensation for single channel optical fiber communications. , 2016, , .		2
40	Roadmap of optical communications. Journal of Optics (United Kingdom), 2016, 18, 063002.	2.2	402
41	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
42	Network Equipment and Their Procurement Strategy for High Capacity Elastic Optical Networks. Journal of Optical Communications and Networking, 2016, 8, A201.	4.8	15
43	The Benefit of Split Nonlinearity Compensation for Single-Channel Optical Fiber Communications. IEEE Photonics Technology Letters, 2016, 28, 1803-1806.	2.5	31
44	Design of a 1 Tb/s Superchannel Coherent Receiver. Journal of Lightwave Technology, 2016, 34, 1453-1463.	4.6	70
45	On the Impact of Optimal Modulation and FEC Overhead on Future Optical Networks. Journal of Lightwave Technology, 2016, 34, 2339-2352.	4.6	26
46	Polarization-Insensitive Single-Balanced Photodiode Coherent Receiver for Long-Reach WDM-PONs. Journal of Lightwave Technology, 2016, 34, 2034-2041.	4.6	45
47	How Pessimistic is a Worst-Case SNR Degradation as a Link Abstraction Metric?. , 2016, , .		2
48	Impact of Amplifier Noise Figure on Network Throughput. , 2016, , .		1
49	Robust Single Polarization Coherent Transceiver Using DGD Pre-distortion for Optical Access Networks. , 2016, , .		6
50	A Low Complexity Hybrid Time-Frequency Domain Adaptive Equalizer for Coherent Optical Receivers. , 2016, , .		6
51	Modified radius directed equaliser for high order QAM. , 2015, , .		12
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	On Optimal Modulation and FEC Overhead for Future Optical Networks. , 2015, , .		4
54	Experimental demonstration of multi-pilot aided carrier phase estimation for DP-64QAM and DP-256QAM. , 2015, , .		8

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55	Polarization-insensitive single balanced photodiode coherent receiver for passive optical networks. , 2015, , .		6
56	Fast Wavelength Switching Transceiver for a Virtualized Coherent Optical Network. Journal of Lightwave Technology, 2015, 33, 1007-1013.	4.6	2
57	Assessment of Options for Utilizing SNR Margin to Increase Network Data Throughput. , 2015, , .		14
58	Reduced Complexity Equalization for Coherent Long-Reach Passive Optical Networks [Invited]. Journal of Optical Communications and Networking, 2015, 7, A16.	4.8	32
59	Spectrally Shaped DP-16QAM Super-Channel Transmission with Multi-Channel Digital Back-Propagation. Scientific Reports, 2015, 5, 8214.	3.3	100
60	Low Complexity Multichannel Nonlinear Predistortion for Passive Optical Networks. , 2015, , .		4
61	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
62	Linear and nonlinear impairment mitigation in a Nyquist spaced DP-16QAM WDM transmission system with full-field DBP. , 2014, , .		5
63	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
64	Fast wavelength switching transceivers for bandwidth on demand based coherent optical networks. , 2014, , .		0
65	Fast Wavelength Switching DP-OFDM Transceiver in a 5-Node 800km Coherent OBS Network. , 2014, , .		0
66	Estimating divergently routed nonlinearly interfering channel powers using cross phase modulation. Optics Express, 2014, 22, 25506.	3.4	0
67	Fast Wavelength Switching 6 GBd Dual Polarization 16QAM Digital Coherent Burst Mode Receiver. IEEE Photonics Technology Letters, 2014, 26, 297-300.	2.5	8
68	Unrepeated transmission over 253.4 km ultra low loss fiber achieving 6.95 b/s/Hz SE using EDFA-only pre-amplification. , 2014, , .		0
69	Reducing the Power Consumption of the CMA Equalizer Update for a Digital Coherent Receiver. , 2014, , .		9
70	Digital Coherent Technology for Long-Reach Optical Access. , 2014, , .		7
71	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
72	Guest Editorial: OFC/NFOEC 2013 Special Issue. Journal of Lightwave Technology, 2014, 32, 525-527.	4.6	0

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73	Carrier Phase Recovery for 16-QAM Using QPSK Partitioning and Sliding Window Averaging. IEEE Photonics Technology Letters, 2014, 26, 854-857.	2.5	26
74	Congestion Aware Routing in Nonlinear Elastic Optical Networks. IEEE Photonics Technology Letters, 2014, 26, 1057-1060.	2.5	45
75	Nyquist-WDM PDM-QPSK transmission over SMF-28 fibre using URFL amplification. , 2014, , .		2
76	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
77	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
78	Approximations for the Nonlinear Self-Channel Interference of Channels With Rectangular Spectra. IEEE Photonics Technology Letters, 2013, 25, 961-964.	2.5	23
79	Digital Coherent Receivers for Long-Reach Optical Access Networks. Journal of Lightwave Technology, 2013, 31, 609-620.	4.6	106
80	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
81	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
82	Digital coherent optical access networks. , 2013, , .		13
83	Gain-switched multicarrier transmitter in a long-reach UDWDM PON with a digital coherent receiver. Optics Letters, 2013, 38, 4797.	3.3	11
84	Spectral Shaping for Mitigating Backreflections in a Bidirectional 10 Gbit/s Coherent WDM-PON. , 2013, , .		11
85	Differential carrier phase recovery for QPSK optical coherent systems with integrated tunable lasers. Optics Express, 2013, 21, 10166.	3.4	18
86	Nyquist-WDM-based system performance evaluation. , 2013, , .		2
87	Transmitter Optimized Optical Networks. , 2013, , .		13
88	Digital Signal Processing for Coherent Optical Communication Systems. , 2013, , .		2
89	A Baud-Rate Sampled Coherent Transceiver with Digital Pulse Shaping and Interpolation. , 2013, , .		7
90	Digital Signal Processing for Coherent Systems. , 2012, , .		14

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91	Fixed point precision requirements of the CMA for digital coherent access. , 2012, , .		0
92	SOA blanking and signal pre-emphasis for wavelength agile 100Gb/s transmitters. , 2012, , .		3
93	Editorial [New EIC S.J. Savory]. IEEE Photonics Technology Letters, 2012, 24, 331-331.	2.5	1
94	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
95	Editorial: Increasing the Page Limit to Permit Four-Page Letters. IEEE Photonics Technology Letters, 2012, 24, 719-720.	2.5	0
96	Long-Haul Transmission of PS-QPSK at 100 Gb/s Using Digital Backpropagation. IEEE Photonics Technology Letters, 2012, 24, 176-178.	2.5	13
97	Fast Wavelength Switching 112Gb/s Coherent Burst Mode Transceiver for Dynamic Optical Networks. , 2012, , .		4
98	Long-haul WDM transmission of PDM-8PSK and PDM-8QAM with nonlinear DSP. , 2012, , .		2
99	On the Impact of Backreflections in a Bidirectional 10 Gbit/s Coherent WDM-PON. , 2012, , .		4
100	Realizing High Sensitivity at 40 Gbit/s and 100 Gbit/s. , 2012, , .		9
101	Demonstration of 10 Gbit/s Colorless Coherent PON Incorporating Tunable DS-DBR Lasers and Low-Complexity Parallel DSP. , 2012, , .		0
102	Fast Switching Burst Mode Receiver in a 24-Channel 112Gb/s DP-QPSK WDM System with 240km Transmission. , 2012, , .		0
103	Demonstration of 10 Gbit/s Colorless Coherent PON Incorporating Tunable DS-DBR Lasers and Low-Complexity Parallel DSP. , 2012, , .		5
104	Nonlinear Transmission Performance of Higher-Order Modulation Formats. IEEE Photonics Technology Letters, 2011, 23, 377-379.	2.5	23
105	Compensation of Frequency Offset for 16-QAM Optical Coherent Systems using QPSK Partitioning. IEEE Photonics Technology Letters, 2011, , .	2.5	36
106	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
107	Blind adaptive equalization of â€¨polarization-switched QPSK modulation. Optics Express, 2011, 19, 8533.	3.4	40
108	Generation and long-haul transmission of polarization-switched QPSK at 429 Gb/s. Optics Express, 2011, 19, 9296.	3.4	38

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109	Pulse-shaping versus digital backpropagation in 224Gbit/s PDM-16QAM transmission. Optics Express, 2011, 19, 12879.	3.4	28
110	Ultra-long-haul transmission of 7Ã—429 Gbit/s PS-QPSK and PDM-BPSK. Optics Express, 2011, 19, B581.	3.4	3
111	Estimating OSNR of equalised QPSK signals. Optics Express, 2011, 19, B661.	3.4	23
112	Burst Mode Receiver for 112 Gb/s DP-QPSK with parallel DSP. Optics Express, 2011, 19, B770.	3.4	33
113	A comparison of modulation formats for passive optical networks. Optics Express, 2011, 19, B836.	3.4	12
114	Burst Mode Receiver for 112 Gb/s DP-QPSK. , 2011, , .		4
115	Ultra-long-haul transmission of 7Ã—42.9Gbit/s PS-QPSK and PM-BPSK. , 2011, , .		1
116	Estimating OSNR of Equalised QPSK Signals. , 2011, , .		4
117	Comparison of Pulse Shapes in a 224Gbit/s (28Gbaud) PDM-QAM16 Long-Haul Transmission Experiment. , 2011, , .		2
118	Bidirectional 10 Gbit/s long-reach WDM-PON using digital coherent receivers. , 2011, , .		17
119	A Comparison of Modulation Formats for Passive Optical Networks. , 2011, , .		1
120	Experimental investigation of PDM-QAM16 transmission at 112 Gbit/s over 2400 km. , 2010, , .		3
121	Digital Coherent Optical Receivers: Algorithms and Subsystems. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1164-1179.	2.9	636
122	Mitigation of Fiber Nonlinearity Using a Digital Coherent Receiver. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1217-1226.	2.9	112
123	Benefits of digital backpropagation in coherent QPSK and 16QAM fibre links. Proceedings of SPIE, 2010, , .	0.8	1
124	Fibre nonlinearities in WDM-systems with reduced channel-spacing and symbol-rate. , 2010, , .		3
125	Experimental characterisation of QAM16 at symbol rates up to 42Gbaud. , 2010, , .		0
126	Nonlinear Digital Processing for Uncompensated Systems. , 2010, , .		0

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127	Relationship between electrical bandwidth and FEC overhead in a 100GbE digital coherent transceiver. , 2010, , .		0
128	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
129	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
130	Impact of Interchannel Nonlinearities on a Split-Step Intrachannel Nonlinear Equalizer. IEEE Photonics Technology Letters, 2010, 22, 673-675.	2.5	50
131	Nonlinear Distortion in Transmission of Higher Order Modulation Formats. IEEE Photonics Technology Letters, 2010, 22, 1111-1113.	2.5	15
132	Influence of Pulse Shape in 112-Gb/s WDM PDM-QPSK Transmission. IEEE Photonics Technology Letters, 2010, 22, 1714-1716.	2.5	25
133	DSP techniques for 16-QAM coherent optical systems. , 2010, , .		1
134	Characterization of long-haul 112Gbit/s PDM-QAM-16 transmission with and without digital nonlinearity compensation. Optics Express, 2010, 18, 12939.	3.4	33
135	Impact of phase to amplitude noise conversion in coherent optical systems with digital dispersion compensation. Optics Express, 2010, 18, 16273.	3.4	35
136	A long-reach ultra-dense 10 Gbit/s WDM-PON using a digital coherent receiver. Optics Express, 2010, 18, 25855.	3.4	61
137	Laser Linewidth Tolerance for 16-QAM Coherent Optical Systems Using QPSK Partitioning. IEEE Photonics Technology Letters, 2010, 22, 631-633.	2.5	226
138	Introducing scenario based learning: Experiences from an undergraduate electronic and electrical engineering course. , 2010, , .		8
139	Benefits of Digital Backpropagation in Coherent QPSK and 16QAM Fibre Links. , 2010, , .		0
140	Blind Equalization and Carrier Phase Recovery in a 16-QAM Optical Coherent System. Journal of Lightwave Technology, 2009, 27, 3042-3049.	4.6	295
141	Electronic signal processing in optical communications. , 2008, , .		7
142	Digital filters for coherent optical receivers. Optics Express, 2008, 16, 804.	3.4	1,042
143	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
144	Compensation of Quadrature Imbalance in an Optical QPSK Coherent Receiver. IEEE Photonics Technology Letters, 2008, 20, 1733-1735.	2.5	225

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145	Compensation of fibre impairments in digital coherent systems. , 2008, , .		9
146	Compensation of fibre impairments in digital coherent systems. , 2008, , .		8
147	Digital Signal Processing Options in Long Haul Transmission. , 2008, , .		24
148	Transmission of 42.8Gbit/s Polarization Multiplexed NRZ-QPSK over 6400km of Standard Fiber with no Optical Dispersion Compensation. , 2007, , .		19
149	Recent Progress and Fundamental Limitations of Optical MLSE Receivers. , 2007, , .		0
150	Electronic compensation of chromatic dispersion using a digital coherent receiver. Optics Express, 2007, 15, 2120.	3.4	311
151	Coherent Detection - Why is it back?. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	3
152	Robust Long-Haul Transmission Utilizing Electronic Precompensation and MLSE Equalization. , 2007, , .		1
153	In-Band OSNR Monitoring Using Spectral Analysis After Frequency Down-Conversion. IEEE Photonics Technology Letters, 2007, 19, 115-117.	2.5	6
154	Digital Equalisation of 40Gbit/s per Wavelength Transmission over 2480km of Standard Fibre without Optical Dispersion Compensation. , 2006, , .		26
155	Estimating Outages Due to Polarization Mode Dispersion Using Extreme Value Statistics. Journal of Lightwave Technology, 2006, 24, 3907-3913.	4.6	11
156	Single Technique for Simultaneous Monitoring of OSNR and Chromatic Dispersion at 40Gbit/s. , 2006, , .		1
157	Disentangling the control electron in a two qubit solid state quantum gate. Journal of Physics Condensed Matter, 2006, 18, S777-S782.	1.8	3
158	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