

Stephen E Ralph

List of Publications by Year in descending order

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67
papers

413
citations

840776

11
h-index

839539

18
g-index

67
all docs

67
docs citations

67
times ranked

450
citing authors

#	ARTICLE	IF	CITATIONS
1	Electronic Equalization of Multikilometer 10-Gb/s Multimode Fiber Links: Mode-Coupling Effects. Journal of Lightwave Technology, 2006, 24, 4885-4894.	4.6	40
2	III-nitride integration on ferroelectric materials of lithium niobate by molecular beam epitaxy. Applied Physics Letters, 2005, 87, 171107.	3.3	34
3	Frequency Dependent ENoB Requirements for M-QAM Optical Links: An Analysis Using an Improved Digital to Analog Converter Model. Journal of Lightwave Technology, 2018, 36, 4082-4089.	4.6	33
4	Raman Amplification in Multimode Fiber. IEEE Photonics Technology Letters, 2007, 19, 218-220.	2.5	22
5	Silicon Photonic Modulator Linearity and Optimization for Microwave Photonic Links. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-10.	2.9	22
6	Mode Coupling in Plastic Optical Fiber Enables 40-Gb/s Performance. IEEE Photonics Technology Letters, 2007, 19, 1254-1256.	2.5	21
7	Identification of Soft Failures in Optical Links Using Low Complexity Anomaly Detection. , 2019, , .		21
8	Noise in VCSEL-Based Links: Direct Measurement of VCSEL Transverse Mode Correlations and Implications for MPN and RIN. Journal of Lightwave Technology, 2017, 35, 698-705.	4.6	20
9	Optical performance monitoring using digital coherent receivers and convolutional neural networks. Optics Express, 2020, 28, 32087.	3.4	18
10	Hole-induced transient bandgap renormalization: A mechanism for photo-induced absorption in defect-engineered semiconductors. Applied Physics Letters, 2000, 76, 1722-1724.	3.3	15
11	VCSEL-Based PAM-4 Links up to 62 Gbit/s Over OM3, OM4, and WB-MMF: Performance Comparison at 850 nm and 1050 nm. Journal of Lightwave Technology, 2017, 35, 1614-1623.	4.6	14
12	High-Performance Fully Integrated Silicon Photonic Microwave Mixer Subsystems. Journal of Lightwave Technology, 2020, 38, 5536-5545.	4.6	13
13	Spectral method for the simultaneous determination of uncorrelated and correlated amplitude and timing jitter. Applied Physics Letters, 2002, 80, 3694-3696.	3.3	11
14	100 m, 40 Gb/s Plastic Optical Fiber Link. , 2008, , .		10
15	In-Band Crosstalk Transmission Penalties on 112-Gb/s PDM-QPSK Optical Links. IEEE Photonics Technology Letters, 2011, 23, 745-747.	2.5	10
16	Frequency Dependent ENoB Requirements for 400G/600G/800G Optical Links. Journal of Lightwave Technology, 2020, 38, 5008-5016.	4.6	10
17	40Gbps links using plastic optical fiber. , 2007, , .		8
18	Experimental demonstration of 51.56 Gbit/s PAM-4 at 905nm and impact of level dependent RIN. , 2014, , .		8

#	ARTICLE	IF	CITATIONS
19	Implementing DACs in High Speed Optical Link Simulations. , 2017, , .		6
20	Joint Linear and Nonlinear Noise Estimation of Optical Links by Exploiting Carrier Phase Recovery. , 2020, , .		6
21	Mode coupling: Why POF Supports 40Gbps. , 2007, , .		5
22	Receiver-side adaptive opto-electronic chromatic dispersion compensation. , 2007, , .		5
23	ENoB requirements for non-square 64-QAM. , 2016, , .		5
24	Accelerating Assessments of Optical Components Using Machine Learning: TDECQ as Demonstrated Example. Journal of Lightwave Technology, 2021, 39, 64-72.	4.6	5
25	Multi-Objective Laser Rate Equation Based Parameter Extraction Using VCSEL Small Signal Response and RIN Spectra. Journal of Lightwave Technology, 2020, 38, 6437-6445.	4.6	4
26	High Performance Microwave Photonic Downconversion in a Commercial InP Platform. , 2021, , .		4
27	Supermode Dynamics for VCSEL Modulation. , 2021, , .		4
28	Constellation-based identification of linear and nonlinear OSNR using machine learning: a study of link-agnostic performance. Optics Express, 2022, 30, 2693.	3.4	4
29	New model for Mode Partition Noise and relative intensity noise in VCSEL-based optical links. , 2013, , .		3
30	Parameter Extraction through Joint Optimization of Modulation Response and RIN Spectra. , 2018, , .		3
31	TDECQ Sensitivity to Algorithmic Implementation and Noise Characterization. , 2020, , .		3
32	Convolutional Recurrent Machine Learning for OSNR and Launch Power Estimation: A Critical Assessment. , 2020, , .		3
33	10 Gb/s, 850 nm VCSEL based large core POF links. , 2008, , .		2
34	Offset QPSK for 112 Gb/s coherent optical links. , 2010, , .		2
35	Autonomous identification and detection for multi-gigabit photonic assisted wireless links. , 2015, , .		2
36	Blind polarization identification and demultiplexing using statistical learning. , 2017, , .		2

#	ARTICLE	IF	CITATIONS
37	Microwave Photonic Links: Optimizing SiP Modulator Design and Operation. , 2019, , .		2
38	Impairment Identification for PAM-4 Transceivers and Links Using Machine Learning. , 2021, , .		2
39	High Data Rate Multimode Fiber Access Systems. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
40	DQPSK for Terabit Ethernet in the 1310 nm band. , 2011, , .		1
41	Performance comparison of autonomous software-defined coherent optical receivers. , 2014, , .		1
42	Raised cosine pulse shapes for next generation MMF links. , 2016, , .		1
43	Adaptive nonsymmetrical demodulation based on machine learning to mitigate time-varying impairments. , 2016, , .		1
44	55 Gbps error free data transmission with 980 nm VCSELs across 100 m of multiple-mode optical fiber. , 2019, , .		1
45	Convolutional Neural Networks for Optical Performance Monitoring. , 2019, , .		1
46	Analytic Equations for Photonic Frequency Converter Design. Journal of Lightwave Technology, 2021, , 1-1.	4.6	1
47	Robust Topology Optimization for Foundry-Photonics Inverse Design: Examining Compact and Arbitrary Power Splitters. , 2021, , .		1
48	Spectral Spacing Estimation in Gridless Nyquist-WDM Systems using Local Binary Patterns. , 2021, , .		1
49	Behavioral PAM-4 VCSEL Model using Stochastic Multimode Rate Equations for Link Design Optimization. , 2022, , .		1
50	Scalability of line excitation THz arrays. , 2007, , .		0
51	Scalability of Line Excitation THz Arrays. , 2007, , .		0
52	Bidirectional DFEs for 10Gb/s Ethernet over Multimode Fiber Links: Complexity Reduction and Reach Extension. , 2007, , .		0
53	40-Gb/s in Plastic Optical Fiber. , 2008, , .		0
54	Block linear coherent detection of optical continuous phase modulation. , 2010, , .		0

#	ARTICLE	IF	CITATIONS
55	Dispersion map optimization of single and Dual-Pol QPSK in the presence of aggressor channels. , 2010, , .		0
56	Nonlinearity-enhanced crosstalk effects for a 112 Gb/s PDM-QPSK transmission over 1620-km SSMF. , 2011, , .		0
57	Lattice-reduction-aided Wiener filtering for communications over ISI channels. , 2012, , .		0
58	Digital pre-compensation of inter-channel crosstalk for superchannel systems. , 2012, , .		0
59	Photonic frequency downconversion link theory and simulation. , 2014, , .		0
60	Autonomous receiver architecture for multi-gigabit photonic assisted RF signals. , 2015, , .		0
61	Simple nonlinear post-compensator for coherent detection. , 2015, , .		0
62	A novel channel estimation technique for transmitter side narrowband filtering compensation. , 2015, , .		0
63	Photonic frequency conversion for dynamic spectral access and signal remoting. , 2016, , .		0
64	Optical signal reconstruction using transmit-side DSP. , 2017, , .		0
65	Photonic Integrated Circuits for Simultaneous Channelization and Downconversion. , 2019, , .		0
66	Synthetic Pockels Modulators in Silicon. , 2021, , .		0
67	Design Guide for Photonic Frequency Converters. , 2021, , .		0