Syed Baqar Hussain

List of Publications by Year
in descending order

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85 papers	943 citations	471371 17 h-index	501076 28 g-index
85 all docs	85 docs citations	85 times ranked	625 citing authors

#	Article	IF	Citations
1	A Meta-Learning-Assisted Training Framework for Physical Layer Modeling in Optical Networks. Journal of Lightwave Technology, 2022, 40, 2684-2695.	2.7	4
2	Multi-Dimensional Distribution Matching With Bit-Level Shaping for Probabilistically Shaped High Order Modulation Formats. Journal of Lightwave Technology, 2022, 40, 2870-2879.	2.7	7
3	Direct-sequence spread spectrum time division multiple access with direct detection for latency optimized passive optical network. Optics Communications, 2022, 510, 127955.	1.0	1
4	End-to-End Deep Learning for Long-haul Fiber Transmission Using Differentiable Surrogate Channel. Journal of Lightwave Technology, 2022, 40, 2807-2822.	2.7	15
5	Performance and Complexity Analysis of Conventional and Deep Learning Equalizers for the High-Speed IMDD PON. Journal of Lightwave Technology, 2022, 40, 4528-4538.	2.7	16
6	Fast and Accurate Waveform Modeling of Long-Haul Multi-Channel Optical Fiber Transmission Using a Hybrid Model-Data Driven Scheme. Journal of Lightwave Technology, 2022, 40, 4571-4580.	2.7	13
7	Pilot-Tone Assisted Successive Interference Cancellation for Uplink Power- and Frequency-Division Multiplexing Passive Optical Network. Journal of Lightwave Technology, 2022, 40, 4237-4245.	2.7	4
8	SOA Assisted Wavelength Reusing for 25G Colorless PON With Low-Cost 10G EAM. IEEE Photonics Journal, 2022, 14, 1-5.	1.0	3
9	Automatic Optimization of Volterra Equalizer With Deep Reinforcement Learning for Intensity-Modulated Direct-Detection Optical Communications. Journal of Lightwave Technology, 2022, 40, 5395-5406.	2.7	4
10	Carrier-Assisted Phase Retrieval. Journal of Lightwave Technology, 2022, 40, 5583-5596.	2.7	18
11	Low-Complexity Triplet-Correlative Perturbative Fiber Nonlinearity Compensation for Long-Haul Optical Transmission. Journal of Lightwave Technology, 2022, 40, 5416-5425.	2.7	3
12	Fusing Physics to Fiber Nonlinearity Model for Optical Networks Based on Physics-Guided Neural Networks. Journal of Lightwave Technology, 2022, 40, 5793-5802.	2.7	3
13	Digital-Analog Hybrid Optical Access Integrating 56-Gbps PAM-4 Signal and 5G mmWave Signal by Spectral Null Filling. Journal of Lightwave Technology, 2021, 39, 1278-1288.	2.7	9
14	Physical Layer Dynamic Key Encryption in OFDM-PON System Based on Cellular Neural Network. IEEE Photonics Journal, 2021, 13, 1-14.	1.0	17
15	Secure OFDM-Based NOMA for Machine-to-Machine Communication. Wireless Communications and Mobile Computing, 2021, 2021, 1-8.	0.8	0
16	Modeling EDFA Gain: Approaches and Challenges. Photonics, 2021, 8, 417.	0.9	8
17	Enabling Technologies for Comprehensive Optical Mobile Fronthaul Access Network. , 2021, , .		2
18	A study on performance improvement of IMDD-UFMC with modified K-means non-uniform quantization. Optics Communications, 2020, 476, 126324.	1.0	6

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19	An overview of ML-based applications for next generation optical networks. Science China Information Sciences, 2020, 63, 1.	2.7	9
20	Real-time secure optical OFDM transmission with chaotic data encryption. Optics Communications, 2020, 473, 126005.	1.0	13
21	Q-Learning Based Joint Allocation of Fronthaul and Radio Resources in Multiwavelength-Enabled C-RAN. Lecture Notes in Computer Science, 2020, , 623-634.	1.0	0
22	Comparative Investigation of Kramers-Kronig and FFE in Low-Cost PON with C-Band SSB-PAM4 Signal. , 2019, , .		1
23	Physical-Layer OFDM Data Encryption using Chaotic QAM Mapping. , 2019, , .		2
24	Advanced Optical Transmission Technologies for 5G Fronthaul. , 2019, , .		1
25	Joint Allocation of Radio and Fronthaul Resources in Multi-Wavelength-Enabled C-RAN Based on Reinforcement Learning. Journal of Lightwave Technology, 2019, 37, 5780-5789.	2.7	9
26	Chaotic Arnold transform and chirp matrix encryption scheme for enhancing the performance and security of OFDM-PON. Optical Fiber Technology, 2019, 51, 64-70.	1.4	13
27	A comprehensive optical mobile fronthaul network toward high-fidelity, flexible and low-latency transport. Photonic Network Communications, 2019, 37, 322-334.	1.4	1
28	Chaotic distribution of QAM symbols for secure OFDM signal transmission. Optical Fiber Technology, 2019, 47, 61-65.	1.4	14
29	Multi-Gbit/s real-time modems for chaotic optical OFDM data encryption and decryption. Optics Communications, 2019, 432, 39-43.	1.0	6
30	Flexible Hybrid PAM2/4 for Fidelity Optimization in Digital Mobile Fronthaul. IEEE Photonics Technology Letters, 2018, 30, 599-602.	1.3	5
31	Chaotic Constellation Mapping for Physical-Layer Data Encryption in OFDM-PON. IEEE Photonics Technology Letters, 2018, 30, 339-342.	1.3	51
32	Flexible Baseband-Unit Aggregation Enabled by Reconfigurable Multi-IF Over WDM Fronthaul. IEEE Photonics Journal, 2018, 10, 1-10.	1.0	8
33	Key Distribution Based on Phase Fluctuation Between Polarization Modes in Optical Channel. IEEE Photonics Technology Letters, 2018, 30, 704-707.	1.3	35
34	Physical-layer data encryption using chaotic constellation rotation in OFDM-PON. , 2018, , .		6
35	Transmission of 100Gb/s PAM4 Signals Over 15km Dispersion-Unmanaged SSMF Using a Directly Modulated Laser in C-Band. , 2018, , .		5
36	Application of Machine Learning in Elastic Optical Networks. , 2018, , .		4

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37	Dynamic QAM Mapping for Physical-Layer Security Using Digital Chaos. IEEE Access, 2018, 6, 47199-47205.	2.6	21
38	A Low-Latency Traffic Estimation Based TDM-PON Mobile Front-Haul for Small Cell Cloud-RAN Employing Feed-Forward Artificial Neural Network. , 2018, , .		7
39	Traffic-Estimation-Based Low-Latency XGS-PON Mobile Front-Haul for Small-Cell C-RAN Based on an Adaptive Learning Neural Network. Applied Sciences (Switzerland), 2018, 8, 1097.	1.3	18
40	Flexible Wavelength and Dynamic Bandwidth Allocation for NG-EPONs. Journal of Optical Communications and Networking, 2018, 10, 643.	3.3	34
41	On the efficiency and fairness of dynamic wavelength and bandwidth allocation algorithms for scheduling multi-type ONUs in NG-EPON. Optical Fiber Technology, 2018, 45, 208-216.	1.4	9
42	Adaptive wavelength allocation pattern for an online DWBA in the NG-EPON. OSA Continuum, 2018, 1, 690.	1.8	4
43	High tolerance against chirp induced distortions in PAM4-based digital mobile fronthaul by sample bits interleaving. Optics Express, 2018, 26, 28206.	1.7	4
44	Chaotic Walshâ€“Hadamard Transform for Physical Layer Security in OFDM-PON. IEEE Photonics Technology Letters, 2017, 29, 527-530.	1.3	51
45	Spectral function modulation based on nonlinear frequency division multiplexing. Scientific Reports, 2017, 7, 6058.	1.6	2
46	Low-Latency Dynamic Wavelength and Bandwidth Allocation Algorithm for NG-EPON. Journal of Optical Communications and Networking, 2017, 9, 1108.	3.3	42
47	Intensity-directed Equalizer for Chirp Compensation Enabling DML-based 56Gb/s PAM4 C-band Delivery over 35.9km SSMF. , 2017, , .		0
48	Experimental Comparative Investigation of 10G-Class and 25G-Class Receivers in 100G-EPON with O-band DML. , 2017, , .		1
49	Performance Evaluation of XG-PON Based Mobile Front-Haul Transport in Cloud-RAN Architecture. Journal of Optical Communications and Networking, 2017, 9, 984.	3.3	36
50	Performance investigation of polar coded IM/DD optical OFDM for short reach interconnection. , 2017, , .		2
51	Fair DWBA for WA-PON based NG-EPON (100G-EPON) to mitigate frame resequencing problem. , 2017, , .		6
52	Microwave photonic filter with variable selectivity and shape by SBS and dispersion-induced phase mismatching. , 2017, , .		0
53	Fidelity enhancement in high-data-rate digital mobile fronthaul with sample bits interleaving and unequally-spaced PAM4. Optics Express, 2017, 25, 5559.	1.7	18
54	Intensity directed equalizer for the mitigation of DML chirp induced distortion in dispersion-unmanaged C-band PAM transmission. Optics Express, 2017, 25, 28123.	1.7	35

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55	Low-Cost WDM Fronthaul Enabled by Partitioned Asymmetric AWGR With Simultaneous Flexible Transceiver Assignment and Chirp Management. Journal of Optical Communications and Networking, 2017, 9, 876.	3.3	19
56	Chaotic Radial Constellation Rotation for Physical-layer Security in OFDM-PON. , 2017, , .		2
57	40-Gbit/s Honeycomb 2D-PAM4 TCM Transmission for Short Reach Applications. , 2017, , .		0
58	Soft-Stacked PON for Soft C-RAN. Journal of Optical Communications and Networking, 2016, 8, B12.	3.3	14
59	Key technologies in chaotic optical communications. Frontiers of Optoelectronics, 2016, 9, 508-517.	1.9	5
60	Chaotic Encryption Algorithm Against Chosen-Plaintext Attacks in Optical OFDM Transmission. IEEE Photonics Technology Letters, 2016, 28, 2499-2502.	1.3	27
61	Impact of TWDM on CATV and fronthaul channels. , 2015, , .		0
62	Secure optical OFDM signal transmission using electro-optic chaos. , 2015, , .		0
63	Chaos-Based Partial Transmit Sequence Technique for Physical Layer Security in OFDM-PON. IEEE Photonics Technology Letters, 2015, 27, 2429-2432.	1.3	82
64	A Resource Sharing C-RAN Architecture with Wavelength Selective Switching and Parallel Uplink Signal Detection. , 2015, , .		2
65	Power Budget Improved Symmetric 40-Gb/s Long Reach Stacked WDM-OFDM-PON System Based on Single Tunable Optical Filter. IEEE Photonics Journal, 2014, 6, 1-8.	1.0	18
66	Optical cross-connects switches for multiple stacked rings interconnected datacenter networks. , 2014, , .		0
67	Key technologies and system proposals of TWDM-PON. Frontiers of Optoelectronics, 2013, 6, 46-56.	1.9	21
68	A novel metric for quantitatively measuring memory effects in OOFDM system. , 2013, , .		0
69	25-GHz-Spaced DWDM-PON With Mitigated Rayleigh Backscattering and Back-Reflection Effects. IEEE Photonics Journal, 2013, 5, 7901407-7901407.	1.0	4
70	Cladding-Mode Backward-Recoupling-Based Displacement Sensor Incorporating Fiber Up Taper and Bragg Grating. IEEE Photonics Journal, 2013, 5, 7100608-7100608.	1.0	12
71	Symmetric 40-Gb/s TWDM-PON With 39-dB Power Budget. IEEE Photonics Technology Letters, 2013, 25, 644-647.	1.3	62
72	80/10Gb/s downstream/upstream capacity multi-wavelength TDM-PON. , 2012, , .		1

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73	Reduced Complexity Maximum-Likelihood Detection for MIMO-OFDM Systems. , 2012, , .		4
74	Complementary Decoder Based on Polarization Modulation for the SAC-OCDMA PON. IEEE Photonics Technology Letters, 2012, 24, 335-337.	1.3	12
75	A Hybrid Dynamic QRDM and ZF Detection Algorithm for MIMO-OFDM Systems. , 2012, , .		2
76	Upstream bandwidth allocation supporting differentiated services in OFDMA PONs. , 2012, , .		2
77	A simple and accurate timing synchronization algorithm for IMDD optical OFDM. , 2012, , .		0
78	Simulation on high-speed all-optical pattern recognition using SOA-MZIs. , 2012, , .		2
79	Compatible TDM/WDM PON Using a Single Tunable Optical Filter for Both Downstream Wavelength Selection and Upstream Wavelength Generation. IEEE Photonics Technology Letters, 2012, 24, 797-799.	1.3	24
80	Theoretical Analysis of High-Speed All-Optical Turbo-Switches. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 662-669.	1.9	18
81	Blind Zone of electronic header processing in an asynchronous optical packet switch. , 2010, , .		0
82	Using wavelength-tunable self-seeding Fabry-Perot laser for upstream transmission in hybrid WDM/TDM PON. , 2010, , .		0
83	A polarization-independent ultra-fast 2×2 multicast-capable optical switch. , 2008, , .		0
84	An All-optical Metro-Access Interface for a PON System Based on NRZ to FSK Format Conversion. , 2008, , .		1
85	Propagation of 10-Gb/s RZ data through a slow-light fiber delay-line based on parametric process. , 2006, , .		3