Ahmed S Almaiman

List of Publications by Year
in descending order

106 papers	1,157 citations	393982 19 h-index	476904 29 g-index
106 all docs	106 docs citations	106 times ranked	1101 citing authors

#	Article	IF	Citations
1	Demonstration of QPSK data correlation and equalization using a tunable optical tapped delay line based on orbital angular momentum mode delays. Optics Communications, 2022, 503, 127438.	1.0	2
2	Demonstration of Turbulence Resiliency in a Mode-, Polarization-, and Wavelength-Multiplexed Free-Space Optical Link Using Pilot-Assisted Optoelectronic Beam Mixing. Journal of Lightwave Technology, 2022, 40, 588-596.	2.7	14
3	Sagnac Loop Based Sensing System for Intrusion Localization Using Machine Learning. Photonics, 2022, 9, 275.	0.9	8
4	Reconfigurable photonics-based millimeter wave signal aggregation for non-orthogonal multiple access. Optics Express, 2022, 30, 16812.	1.7	2
5	Utilizing multiplexing of structured THz beams carrying orbital-angular-momentum for high-capacity communications. Optics Express, 2022, 30, 25418.	1.7	19
6	Increasing system tolerance to turbulence in a 100-Gbit/s QPSK free-space optical link using both mode and space diversity. Optics Communications, 2021, 480, 126488.	1.0	13
7	Single-pixel identification of 2-dimensional objects by using complex Laguerreâ€"Gaussian spectrum containing both azimuthal and radial modal indices. Optics Communications, 2021, 481, 126557.	1.0	8
8	Modal coupling and crosstalk due to turbulence and divergence on free space THz links using multiple orbital angular momentum beams. Scientific Reports, 2021, 11, 2110.	1.6	21
9	Photon Acceleration Using a Time-Varying Epsilon-near-Zero Metasurface. ACS Photonics, 2021, 8, 716-720.	3.2	24
10	Tunable optical second-order Volterra nonlinear filter using wave mixing and delays to equalize a 10â€"20 Gbaud 4-APSK channel. Optics Letters, 2021, 46, 1325.	1.7	0
11	Tunable Doppler shift using a time-varying epsilon-near-zero thin film near 1550â€‰â€‰nm. Optics Letters, 2021, 46, 3444.	1.7	6
12	Adiabatic Frequency Conversion Using a Time-Varying Epsilon-Near-Zero Metasurface. Nano Letters, 2021, 21, 5907-5913.	4.5	30
13	Turbulence-resilient pilot-assisted self-coherent free-space optical communications using automatic optoelectronic mixing of many modes. Nature Photonics, 2021, 15, 743-750.	15.6	45
14	Simultaneous turbulence mitigation and channel demultiplexing using a single multi-plane light convertor for a free-space optical link with two 100-Gbit/s OAM channels. Optics Communications, 2021, 501, 127359.	1.0	7
15	Experimental Mitigation of Atmospheric Turbulence Effect Using Pre-Signal Combining for Uni- and Bi-Directional Free-Space Optical Links With Two 100-Gbit/s OAM-Multiplexed Channels. Journal of Lightwave Technology, 2020, 38, 82-89.	2.7	33
16	Demonstration of Tunable Optical Aggregation of QPSK to 16-QAM Over Optically Generated Nyquist Pulse Trains Using Nonlinear Wave Mixing and a Kerr Frequency Comb. Journal of Lightwave Technology, 2020, 38, 359-365.	2.7	23
17	Demonstration of wavelength tunable optical modulation format conversion from 20 and 30 Gbit/s QPSK to PAM4 using nonlinear wave mixing. Optics Communications, 2020, 459, 124871.	1.0	6
18	Dynamic spatiotemporal beams that combine two independent and controllable orbital-angular-momenta using multiple optical-frequency-comb lines. Nature Communications, 2020, 11, 4099.	5.8	25

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19	Continuous delay tunability using a combination of three types of fiber Bragg gratings, wavelength conversion, and wavelength multicasting with a frequency comb. Optics Communications, 2020, 464, 125431.	1.0	1
20	Experimental Demonstration of Crosstalk Reduction to Achieve Turbulence-Resilient Multiple-OAM-Beam Free-Space Optical Communications using Pilot Tones to Mix Beams at the Receiver. , 2020, , .		5
21	Identifying structured light modes in a desert environment using machine learning algorithms. Optics Express, 2020, 28, 9753.	1.7	25
22	Simultaneous turbulence mitigation and channel demultiplexing for two 100â€‰â€‰Gbit/s orbital-angular-momentum multiplexed beams by adaptive wavefront shaping and diffusing. Optics Letters, 2020, 45, 702.	1.7	6
23	Demonstration of using two aperture pairs combined with multiple-mode receivers and MIMO signal processing for enhanced tolerance to turbulence and misalignment in a 10â€‰â€‰Gbit/s QPSK FSO link. Optics Letters, 2020, 45, 3042.	1.7	13
24	Utilizing adaptive optics to mitigate intra-modal-group power coupling of graded-index few-mode fiber in a 200-Gbit/s mode-division-multiplexed link. Optics Letters, 2020, 45, 3577.	1.7	10
25	Utilizing phase delays of an integrated pixel-array structure to generate orbital-angular-momentum beams with tunable orders and a broad bandwidth. Optics Letters, 2020, 45, 4144.	1.7	8
26	Experimental mitigation of the effects of the limited size aperture or misalignment by singular-value-decomposition-based beam orthogonalization in a free-space optical link using Laguerreâ€"Gaussian modes. Optics Letters, 2020, 45, 6310.	1.7	11
27	Flexible spectrum sharing of two asynchronous phase-shift keying signals using power division multiplexing. Optics Letters, 2020, 45, 1176.	1.7	3
28	â€œHidingâ€•a low-intensity 50â€‰â€‰Gbit/s QPSK free-space OAM beam using an orthogonal coaxial high-intensity 50â€‰â€‰Gbit/s QPSK beam. Applied Optics, 2020, 59, 7448.	0.9	1
29	Demonstrating the use of OAM modes to facilitate the networking functions of carrying channel header information and orthogonal channel coding. Optics Letters, 2020, 45, 4381.	1.7	0
30	Experimental Demonstration of an Optical Second-Order Volterra Nonlinear Filter using Wave Mixing and Delays to Equalize a 20-Gbaud 4-APSK Channel. , 2020, , .		3
31	Kramersâ€"Kronig detection of four 20â€‰â€‰Gbaud 16-QAM channels using Kerr combs for a shared phase estimation. Optics Letters, 2020, 45, 1794.	1.7	1
32	Higher-order QAM data transmission using a high-coherence hybrid Si/IIIâ€"V semiconductor laser. Optics Letters, 2020, 45, 1499.	1.7	6
33	16-QAM probabilistic constellation shaping by adaptively modifying the distribution of transmitted symbols based on errors at the receiver. Optics Letters, 2020, 45, 5283.	1.7	7
34	Tunable optical single-sideband generation for OOK and PAM4 data channels using an optical frequency comb and nonlinear wave-mixing. Optics Letters, 2020, 45, 6294.	1.7	0
35	Demonstration of Multiple Kerr-Frequency-Comb Generation Using Different Lines From Another Kerr Comb Located Up To 50 km Away. Journal of Lightwave Technology, 2019, 37, 579-584.	2.7	15
36	Experimental demonstration of tunable de-aggregation from 16-QAM to 4-PAM for two wavelength multiplexed channels using wave mixing in a single nonlinear element to map constellation onto axes. Optics Communications, 2019, 451, 74-79.	1.0	9

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37	Limited-size aperture effects in an orbital-angular-momentum-multiplexed free-space optical data link between a ground station and a retro-reflecting UAV. Optics Communications, 2019, 450, 241-245.	1.0	6
38	Roadmap on all-optical processing. Journal of Optics (United Kingdom), 2019, 21, 063001.	1.0	128
39	"Hiding" a Low-Intensity 50-Gbit/s QPSK Free-Space Optical Beam That Co-Axially Propagates on the Same Wavelength with a High-Intensity 50-Gbit/s QPSK Optical Beam using Orthogonal Mode Multiplexing. , 2019, , .		0
40	Optical Mitigation of Interchannel Crosstalk for Multiple Spectrally Overlapped 20-GBd QPSK/16-QAM WDM Channels Using Nonlinear Wave Mixing. Journal of Lightwave Technology, 2019, 37, 548-554.	2.7	6
41	All-Optical Signal Processing Techniques for Flexible Networks. Journal of Lightwave Technology, 2019, 37, 21-35.	2.7	71
42	Generating a Twisted Spatiotemporal Wave Packet Using Coherent Superposition of Structured Beams with Different Frequencies. , 2019, , .		1
43	Demonstration of Both Mode and Space Diversity in a 100-Gbit/s QPSK Free-Space Optical Link to Increase System Tolerance to Turbulence. , 2019, , .		6
44	Orthogonally polarized frequency comb generation from a Kerr comb via cross-phase modulation. Optics Letters, 2019, 44, 1472.	1.7	32
45	Mitigation for turbulence effects in a 40-Gbit/s orbital-angular-momentum-multiplexed free-space optical link between a ground station and a retro-reflecting UAV using MIMO equalization. Optics Letters, 2019, 44, 5181.	1.7	37
46	Using an Integrated Silicon Emitter to Generate Two Coaxial Orbital-Angular-Momentum Beams with Tunable Mode Orders and Broad Bandwidth. , 2019, , .		1
47	Demonstration of Kramers-Kronig Detection of Four 20-Gbaud 16-QAM Channels after 50-km Transmission Using Kerr Combs to Perform Shared Phase Estimation. , 2019, , .		2
48	Experimental demonstration of three-fold wavelength multicasting of a 64-QAM 120-Gbit/s data channel using a Kerr frequency comb and nonlinear wave mixing. , 2019, , .		0
49	Reconfigurable optical generation of nine Nyquist WDM channels with sinc-shaped temporal pulse trains using a single microresonator-based Kerr frequency comb. Optics Letters, 2019, 44, 1852.	1.7	11
50	Phase-sensitive QPSK channel phase quantization by amplifying the fourth-harmonic idler using counter-propagating Brillouin amplification. Optics Communications, 2018, 423, 48-52.	1.0	13
51	Reconfigurable Channel Slicing and Stitching for an Optical Signal to Enable Fragmented Bandwidth Allocation Using Nonlinear Wave Mixing and an Optical Frequency Comb. Journal of Lightwave Technology, 2018, 36, 440-446.	2.7	24
52	Scalable and Reconfigurable Optical Tap-Delay-Line for Multichannel Equalization and Correlation of 20-Gbaud QPSK Signals using Nonlinear Wave Mixing and a Microresonator Kerr Frequency Comb. , 2018, , .		0
53	Raman-assisted phase sensitive amplifier using a fiber Bragg grating-based tunable phase shifter. Optics Letters, 2018, 43, 3949.	1.7	1
54	Effects of erbium-doped fiber amplifier induced pump noise on soliton Kerr frequency combs for 64-quadrature amplitude modulation transmission. Optics Letters, 2018, 43, 2495.	1.7	8

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55	Scalable and reconfigurable optical tapped-delay-line for multichannel equalization and correlation using nonlinear wave mixing and a Kerr frequency comb. Optics Letters, 2018, 43, 5563.	1.7	13
56	Experimental utilization of repeated spatial-mode shifting for achieving discrete delays in a free-space recirculating loop. Optics Letters, 2018, 43, 5395.	1.7	1
57	Performance enhancement of an optical high-order QAM channel by adding correlated data to robust neighboring BPSK or QPSK channels. Optics Letters, 2018, 43, 5697.	1.7	0
58	Digital optical processing of optical communications: towards an Optical Turing Machine. Nanophotonics, 2017, 6, 507-530.	2.9	22
59	Tunable insertion of multiple lines into a Kerr frequency comb using electro-optical modulators. Optics Letters, 2017, 42, 3765.	1.7	10
60	Dual-pump generation of high-coherence primary Kerr combs with multiple sub-lines. Optics Letters, 2017, 42, 595.	1.7	17
61	Pump-linewidth-tolerant wavelength multicasting using soliton Kerr frequency combs. Optics Letters, 2017, 42, 3177.	1.7	14
62	Pilot-tone-based self-homodyne detection using optical nonlinear wave mixing. Optics Letters, 2017, 42, 1840.	1.7	21
63	Dependence of a microresonator Kerr frequency comb on the pump linewidth. Optics Letters, 2017, 42, 779.	1.7	21
64	Spatial light structuring using a combination of multiple orthogonal orbital angular momentum beams with complex coefficients. Optics Letters, 2017, 42, 991.	1.7	31
65	Experimental Demonstration of Inserting Phase-Locked Lines into Kerr Combs using Electro-Optical Modulation. , 2016, , .		0
66	Mode-Division-Multiplexing of Multiple Bessel-Gaussian Beams Carrying Orbital-Angular-Momentum for Obstruction-Tolerant Free-Space Optical and Millimetre-Wave Communication Links. Scientific Reports, 2016, 6, 22082.	1.6	63
67	Effect of a breather soliton in Kerr frequency combs on optical communication systems. Optics Letters, 2016, 41, 1764.	1.7	6
68	Demonstration of optical multicasting using Kerr frequency comb lines. Optics Letters, 2016, 41, 3876.	1.7	13
69	Reconfigurable optical inter-channel interference mitigation for spectrally overlapped QPSK signals using nonlinear wave mixing in cascaded PPLN waveguides. Optics Letters, 2016, 41, 3233.	1.7	8
70	A candidate approach for optical in-network computation. , 2016, , .		1
71	Experimental demonstration of tunable homodyne detection of WDM and dual-polarization PSK channels by automatically locking the channels to a local pump laser using nonlinear mixing. Optics Letters, 2016, 41, 2680.	1.7	2
72	All optical signal level swapping and multilevel amplitude noise mitigation based on different regions of optical parametric amplification. Optics Letters, 2016, 41, 677.	1.7	1

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73	Experimental Demonstration of Phase-Sensitive Regeneration of a 10-20 Gb/s BPSK Channel without a Phase-Locked Loop using Brillouin Amplification. , 2016, , .		1
74	Experimental demonstration of phase-sensitive regeneration of a binary phase-shift keying channel without a phase-locked loop using Brillouin amplification. Optics Letters, 2016, 41, 5434.	1.7	10
75	Analog Performance of Multiple, Discretely Tunable Time Delays based on a Frequency Comb and a Chromatic Dispersion Element. , 2016, , .		0
76	Demonstration of Automatically Phase-Locked Self-Homodyne Detection with a Low-Power Pilot Tone based on Brillouin Amplification and Optical Frequency Combs. , 2016, , .		0
77	Inter-channel Interference Mitigation of Heterogeneous Wavelength-Overlapped Channels of Different Baud Rates and Pulse Shapes using Nonlinear Optical Signal Processing. , 2016, , .		1
78	Wavelength and Pump Power Characterization of Low-phase-noise Kerr Frequency Comb Lines. , 2016, , .		0
79	Tunable ROADM with Crosstalk Reduction for Overlapped 20-25 Gbaud QPSK WDM Channels using Wave Mixing. , 2016, , .		0
80	Tunable All-Optical WDM Channel Selection using Raman Assisted Cascaded Parametric Amplification. , 2016, , .		2
81	Pump-Phase-Noise-Tolerant Wavelength Multicasting for Coherent Communications using Kerr Frequency Combs. , 2016, , .		0
82	Experimental Generation of High-Coherence Sub-Prime Comb Lines with Multiple Sub-Lines in a Kerr Frequency Comb using Dual Pumps. , 2016, , .		0
83	Experimental Demonstration of 7-fold Multicasting of a 20-Gbaud QPSK Signal using Kerr Frequency Combs. , 2016, , .		0
84	Simultaneous all-optical phase noise mitigation and automatically locked homodyne reception of an incoming QPSK data signal. Optics Letters, 2016, 41, 4779.	1.7	0
85	Experimental Demonstration of Optical Signal Level Swapping and Multi-level Amplitude Noise Mitigation using Three Parametric Gain Regions. , 2015, , .		2
86	Tunable Homodyne Detection of an Incoming QPSK Data Signal Using Two Fixed Pump Lasers. Journal of Lightwave Technology, 2015, 33, 1344-1350.	2.7	5
87	Optical channel de-aggregation of quadrature-phase-shift-keying and eight-phase-shift-keying data using mapping onto constellation axes. Optics Letters, 2015, 40, 4899.	1.7	16
88	Tunable radio frequency photonics filter using a comb-based optical tapped delay line with an optical nonlinear multiplexer. Optics Letters, 2015, 40, 3284.	1.7	7
89	Phase noise mitigation of QPSK signal utilizing phase-locked multiplexing of signal harmonics and amplitude saturation. Optics Letters, 2015, 40, 3328.	1.7	13
90	Experimental demonstration of robustness and accuracy of a DLI-based OSNR monitor under changes in the transmitter and link for different modulation formats and baud rates. Optics Letters, 2015, 40, 2012.	1.7	3

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91	Experimental Demonstration of Using Multi-Layer-Overlay Technique for Increasing Spectral Efficiency to 1.18 bits/s/Hz in a 3 Gbit/s Signal over 4-km Multimode Fiber. , 2015, , .		0
92	Enhanced Spectral Efficiency of 2.36 bits/s/Hz using Multiple Layer Overlay Modulation for QPSK over a 14-km Single Mode Fiber Link. , 2015, , .		0
93	Tunable homodyne detection using nonlinear optical signal processing to automatically lock a â€œlocalâ€•pump laser to an incoming 20-to-40-Gbaud QPSK data signal. , 2014, , .		1
94	Demonstration of in-service wavelength division multiplexing optical-signal-to-noise ratio performance monitoring and operating guidelines for coherent data channels with different modulation formats and various baud rates. Optics Letters, 2014, 39, 1605.	1.7	28
95	Optical channel de-aggregator of 30-Gbaud QPSK and 20-Gbaud 8-PSK data using mapping onto constellation axes. , 2014, , .		3
96	Reconfigurable 2D optical tapped-delay-line to perform correlation on images. Optics Letters, 2014, 39, 6573.	1.7	1
97	Demonstration of tunable optical generation of higher-order modulation formats using nonlinearities and coherent frequency comb. Optics Letters, 2014, 39, 4915.	1.7	13
98	Tunable optical correlator using an optical frequency comb and a nonlinear multiplexer. Optics Express, 2014, 22, 84.	1.7	15
99	Demonstration of all-optical phase noise suppression scheme using optical nonlinearity and conversion/dispersion delay. Optics Letters, 2014, 39, 2928.	1.7	9
100	Optical Nyquist channel generation using a comb-based tunable optical tapped-delay-line. Optics Letters, 2014, 39, 6585.	1.7	14
101	Experimental Demonstration of a Variable Bandwidth, Shape and Center-Frequency RF Photonics Filter using a Continuously Tunable Optical Tapped-Delay-Line and Having an Optical Output. , 2014, , .		1
102	Experimental Demonstration of Optical Regeneration of DP-BPSK/QPSK Using Polarization-Diversity PSA. , 2014, , .		3
103	Experimental Demonstration of Optical Nyquist Generation of 32-Gbaud QPSK using a Comb-based Tunable Optical Tapped-Delay-Line FIR Filter. , 2014, , .		3
104	Experimental Demonstration of All-Optical Phase Noise Mitigation of 40-Gbits/s QPSK Signals by Mixing Differentially Delayed Nonlinear Products. , 2014, , .		3
105	Demonstration of Tunable Optical Generation of Higher-Order Modulation Formats using Nonlinearities and Coherent Frequency Comb. , 2013, , .		2
106	Differential pulse-width pair BOTDA using simultaneous frequency domain interrogation. , 2013, , .		0