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	Roadmap on all-optical processing. Journal of Optics (United Kingdom), 2019, 21, 063001.	1.0	128
2	All-Optical Signal Processing Techniques for Flexible Networks. Journal of Lightwave Technology, 2019, 37, 21-35.	2.7	71
3	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
4	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
5	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
6	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
7	Orthogonally polarized frequency comb generation from a Kerr comb via cross-phase modulation. Optics Letters, 2019, 44, 1472.	1.7	32
8	Spatial light structuring using a combination of multiple orthogonal orbital angular momentum beams with complex coefficients. Optics Letters, 2017, 42, 991.	1.7	31
9	Adiabatic Frequency Conversion Using a Time-Varying Epsilon-Near-Zero Metasurface. Nano Letters, 2021, 21, 5907-5913.	4.5	30
10	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
11	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
12	Identifying structured light modes in a desert environment using machine learning algorithms. Optics Express, 2020, 28, 9753.	1.7	25
13	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
14	Photon Acceleration Using a Time-Varying Epsilon-near-Zero Metasurface. ACS Photonics, 2021, 8, 716-720.	3.2	24
15	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
16	Digital optical processing of optical communications: towards an Optical Turing Machine. Nanophotonics, 2017, 6, 507-530.	2.9	22
17	Pilot-tone-based self-homodyne detection using optical nonlinear wave mixing. Optics Letters, 2017, 42, 1840.	1.7	21
18	Dependence of a microresonator Kerr frequency comb on the pump linewidth. Optics Letters, 2017, 42, 779.	1.7	21

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19	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
20	Utilizing multiplexing of structured THz beams carrying orbital-angular-momentum for high-capacity communications. Optics Express, 2022, 30, 25418.	1.7	19
21	Dual-pump generation of high-coherence primary Kerr combs with multiple sub-lines. Optics Letters, 2017, 42, 595.	1.7	17
22	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
23	Tunable optical correlator using an optical frequency comb and a nonlinear multiplexer. Optics Express, 2014, 22, 84.	1.7	15
24	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
25	Optical Nyquist channel generation using a comb-based tunable optical tapped-delay-line. Optics Letters, 2014, 39, 6585.	1.7	14
26	Pump-linewidth-tolerant wavelength multicasting using soliton Kerr frequency combs. Optics Letters, 2017, 42, 3177.	1.7	14
27	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
28	Demonstration of tunable optical generation of higher-order modulation formats using nonlinearities and coherent frequency comb. Optics Letters, 2014, 39, 4915.	1.7	13
29	Phase noise mitigation of QPSK signal utilizing phase-locked multiplexing of signal harmonics and amplitude saturation. Optics Letters, 2015, 40, 3328.	1.7	13
30	Demonstration of optical multicasting using Kerr frequency comb lines. Optics Letters, 2016, 41, 3876.	1.7	13
31	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
32	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
33	Demonstration of using two aperture pairs combined with multiple-mode receivers and MIMO signal processing for enhanced tolerance to turbulence and misalignment in a 10 Gbit/s QPSK FSO link. Optics Letters, 2020, 45, 3042.	1.7	13
34	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
35	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 Laguerre–Gaussian modes. Optics Letters, 2020, 45, 6310.	1.7	11
36	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

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37	Tunable insertion of multiple lines into a Kerr frequency comb using electro-optical modulators. Optics Letters, 2017, 42, 3765.	1.7	10
38	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
39	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
40	Demonstration of all-optical phase noise suppression scheme using optical nonlinearity and conversion/dispersion delay. Optics Letters, 2014, 39, 2928.	1.7	9
41	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
42	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
43	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
44	Single-pixel identification of 2-dimensional objects by using complex Laguerre–Gaussian spectrum containing both azimuthal and radial modal indices. Optics Communications, 2021, 481, 126557.	1.0	8
45	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
46	Sagnac Loop Based Sensing System for Intrusion Localization Using Machine Learning. Photonics, 2022, 9, 275.	0.9	8
47	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
48	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
49	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
50	Effect of a breather soliton in Kerr frequency combs on optical communication systems. Optics Letters, 2016, 41, 1764.	1.7	6
51	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
52	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
53	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
54	Tunable Doppler shift using a time-varying epsilon-near-zero thin film near 1550 nm. Optics Letters, 2021, 46, 3444.	1.7	6

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55	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
56	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
57	Higher-order QAM data transmission using a high-coherence hybrid Si/IIIâ€"V semiconductor laser. Optics Letters, 2020, 45, 1499.	1.7	6
58	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
59	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
60	Optical channel de-aggregator of 30-Gbaud QPSK and 20-Gbaud 8-PSK data using mapping onto constellation axes. , 2014, , .		3
61	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
62	Experimental Demonstration of Optical Regeneration of DP-BPSK/QPSK Using Polarization-Diversity PSA. , 2014, , .		3
63	Experimental Demonstration of Optical Nyquist Generation of 32-Gbaud QPSK using a Comb-based Tunable Optical Tapped-Delay-Line FIR Filter. , 2014, , .		3
64	Experimental Demonstration of All-Optical Phase Noise Mitigation of 40-Gbits/s QPSK Signals by Mixing Differentially Delayed Nonlinear Products. , 2014, , .		3
65	Flexible spectrum sharing of two asynchronous phase-shift keying signals using power division multiplexing. Optics Letters, 2020, 45, 1176.	1.7	3
66	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
67	Experimental Demonstration of Optical Signal Level Swapping and Multi-level Amplitude Noise Mitigation using Three Parametric Gain Regions. , 2015, , .		2
68	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
69	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
70	Demonstration of Tunable Optical Generation of Higher-Order Modulation Formats using Nonlinearities and Coherent Frequency Comb. , 2013, , .		2
71	Tunable All-Optical WDM Channel Selection using Raman Assisted Cascaded Parametric Amplification. , 2016, , .		2
72	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

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73	Reconfigurable photonics-based millimeter wave signal aggregation for non-orthogonal multiple access. Optics Express, 2022, 30, 16812.	1.7	2
74	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
75	Reconfigurable 2D optical tapped-delay-line to perform correlation on images. Optics Letters, 2014, 39, 6573.	1.7	1
76	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
77	A candidate approach for optical in-network computation. , 2016, , .		1
78	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
79	Raman-assisted phase sensitive amplifier using a fiber Bragg grating-based tunable phase shifter. Optics Letters, 2018, 43, 3949.	1.7	1
80	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
81	Generating a Twisted Spatiotemporal Wave Packet Using Coherent Superposition of Structured Beams with Different Frequencies. , 2019, , .		1
82	Experimental Demonstration of Phase-Sensitive Regeneration of a 10-20 Gb/s BPSK Channel without a Phase-Locked Loop using Brillouin Amplification. , 2016, , .		1
83	Inter-channel Interference Mitigation of Heterogeneous Wavelength-Overlapped Channels of Different Baud Rates and Pulse Shapes using Nonlinear Optical Signal Processing. , 2016, , .		1
84	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
85	Using an Integrated Silicon Emitter to Generate Two Coaxial Orbital-Angular-Momentum Beams with Tunable Mode Orders and Broad Bandwidth. , 2019, , .		1
86	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
87	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
88	Experimental Demonstration of Inserting Phase-Locked Lines into Kerr Combs using Electro-Optical Modulation. , 2016, , .		0
89	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
90	"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

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91	Tunable optical second-order Volterra nonlinear filter using wave mixing and delays to equalize a 10–20 Gbaud 4-APSK channel. Optics Letters, 2021, 46, 1325.	1.7	0
92	Differential pulse-width pair BOTDA using simultaneous frequency domain interrogation. , 2013, , .		0
93	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
94	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
95	Analog Performance of Multiple, Discretely Tunable Time Delays based on a Frequency Comb and a Chromatic Dispersion Element. , 2016, , .		0
96	Demonstration of Automatically Phase-Locked Self-Homodyne Detection with a Low-Power Pilot Tone based on Brillouin Amplification and Optical Frequency Combs. , 2016, , .		0
97	Wavelength and Pump Power Characterization of Low-phase-noise Kerr Frequency Comb Lines. , 2016, , .		0
98	Tunable ROADM with Crosstalk Reduction for Overlapped 20-25 Gbaud QPSK WDM Channels using Wave Mixing. , 2016, , .		0
99	Pump-Phase-Noise-Tolerant Wavelength Multicasting for Coherent Communications using Kerr Frequency Combs. , 2016, , .		0
100	Experimental Generation of High-Coherence Sub-Prime Comb Lines with Multiple Sub-Lines in a Kerr Frequency Comb using Dual Pumps. , 2016, , .		0
101	Experimental Demonstration of 7-fold Multicasting of a 20-Gbaud QPSK Signal using Kerr Frequency Combs. , 2016, , .		0
102	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
103	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
104	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
105	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
106	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