Kai Pang

List of Publications by Year
in descending order

46 papers	873 citations	516561 16 h-index	501076 28 g-index
47 all docs	47 docs citations	47 times ranked	503 citing authors

#	ARTICLE	IF	CITATIONS
1	Orbital angular momentum of light for communications. Applied Physics Reviews, 2021, 8, .	5.5	137
2	High-Capacity Free-Space Optical Communications Between a Ground Transmitter and a Ground Receiver via a UAV Using Multiplexing of Multiple Orbital-Angular-Momentum Beams. Scientific Reports, 2017, 7, 17427.	1.6	81
3	Underwater optical communications using orbital angular momentum-based spatial division multiplexing. Optics Communications, 2018, 408, 21-25.	1.0	70
4	400-Gbit/s QPSK free-space optical communication link based on four-fold multiplexing of Hermite–Gaussian or Laguerre–Gaussian modes by varying both modal indices. Optics Letters, 2018, 43, 3889.	1.7	55
5	Perspectives on advances in high-capacity, free-space communications using multiplexing of orbital-angular-momentum beams. APL Photonics, 2021, 6, .	3.0	53
6	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
7	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
8	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
9	Adiabatic Frequency Conversion Using a Time-Varying Epsilon-Near-Zero Metasurface. Nano Letters, 2021, 21, 5907-5913.	4.5	30
10	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
11	Photon Acceleration Using a Time-Varying Epsilon-near-Zero Metasurface. ACS Photonics, 2021, 8, 716-720.	3.2	24
12	Spatially multiplexed orbital-angular-momentum-encoded single photon and classical channels in a free-space optical communication link. Optics Letters, 2017, 42, 4881.	1.7	22
13	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
14	Performance of real-time adaptive optics compensation in a turbulent channel with high-dimensional spatial-mode encoding. Optics Express, 2020, 28, 15376.	1.7	21
15	Single-End Adaptive Optics Compensation for Emulated Turbulence in a Bi-Directional 10-Mbit/s per Channel Free-Space Quantum Communication Link Using Orbital-Angular-Momentum Encoding. Research, 2019, 2019, 8326701.	2.8	21
16	Utilizing multiplexing of structured THz beams carrying orbital-angular-momentum for high-capacity communications. Optics Express, 2022, 30, 25418.	1.7	19
17	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
18	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

#	Article	IF	Citations
19	Multiprobe Time Reversal for High-Fidelity Vortex-Mode-Division Multiplexing Over a Turbulent Free-Space Link. Physical Review Applied, 2021, 15, .	1.5	13
20	Dependence of the coupling properties between a plasmonic antenna array and a sub-wavelength epsilon-near-zero film on structural and material parameters. Applied Physics Letters, 2021, 118, .	1.5	13
21	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
22	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
23	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
24	Simulation of near-diffraction- and near-dispersion-free OAM pulses with controllable group velocity by combining multiple frequencies, each carrying a Bessel mode. Optics Letters, 2021, 46, 4678.	1.7	9
25	Experimental demonstration of beaconless beam displacement tracking for an orbital angular momentum multiplexed free-space optical link. Optics Letters, 2018, 43, 2392.	1.7	8
26	Modal properties of a beam carrying OAM generated by a circular array of multiple ring-resonator emitters. Optics Letters, 2021, 46, 4722.	1.7	8
27	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
28	Synthesis of near-diffraction-free orbital-angular-momentum space-time wave packets having a controllable group velocity using a frequency comb. Optics Express, 2022, 30, 16712.	1.7	7
29	Tunable Doppler shift using a time-varying epsilon-near-zero thin film near 1550â€‰â€‰nm. Optics Letters, 2021, 46, 3444.	1.7	6
30	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
31	Demonstration of generating a 100 Gbit/s orbital-angular-momentum beam with a tunable mode order over a range of wavelengths using an integrated broadband pixel-array structure. Optics Letters, 2021, 46, 4765.	1.7	5
32	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
33	Localization from the unique intensity gradient of an orbital-angular-momentum beam. Optics Letters, 2017, 42, 395.	1.7	5
34	MIMO Equalization to Mitigate Turbulence in a 2-Channel 40-Gbit/s QPSK Free-Space Optical 100-m Round-Trip Orbital-Angular-Momentum-Multiplexed Link Between a Ground Station and a Retro-Reflecting UAV. , 2018, , .		4
35	Demonstration of Recovering Orbital-Angular-Momentum Multiplexed Channels Using a Tunable, Broadband Pixel-Array-Based Photonic-Integrated-Circuit Receiver. Journal of Lightwave Technology, 2022, 40, 1346-1352.	2.7	4
36	Demonstration of turbulence mitigation in a 200-Gbit/s orbital-angular-momentum multiplexed free-space optical link using simple power measurements for determining the modal crosstalk matrix. Optics Letters, 0, , .	1.7	4

#	Article	IF	Citations
37	Experimental Demonstration of an Integrated Broadband Pixel-Array Structure Generating Two Tunable Orbital-Angular-Momentum Mode Values and Carrying 100-Gbit/s QPSK Data. , 2021, , .		3
38	Plasmonic Nanoantenna-Enhanced Adiabatic Wavelength Conversion using a Time-varying Epsilon-near-zero-based Metasurface. , 2020, , .		2
39	Experimental Demonstration of a 100-Gbit/s 16-QAM Free-Space Optical Link Using a Structured Optical â€œBottle Beamâ€•to Circumvent Obstructions. Journal of Lightwave Technology, 2022, 40, 3277-3284.	2.7	2
40	Demonstration of Turbulence Resilient Self-Coherent Free-Space Optical Communications Using a Pilot Tone and an Array of Smaller Photodiodes for Bandwidth Enhancement. , 2022, , .		2
41	Causes and mitigation of modal crosstalk in OAM multiplexed optical communication links. , 2021, , 259-289.		1
42	Near-Diffraction- and Near-Dispersion-Free OAM Pulse Having a Controllable Group Velocity by Coherently Combining Different Bessel Beams Based on Space-Time Correlations. , 2020, , .		1
43	Single-End Adaptive Optics Compensation for Emulated Turbulence in a Bi-Directional 10-Mbit/s per Channel Free-Space Quantum Communication Link Using Orbital-Angular-Momentum Encoding. Research, 2019, 2019, 1-10.	2.8	1
44	Switchable detector array scheme to reduce the effect of single-photon detectorâ€™s deadtime in a multi-bit/photon quantum link. Optics Communications, 2019, 441, 132-137.	1.0	0
45	"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
46	Spaceâ€“time light sheet with a controllable group velocity and reduced diffraction by combining multiple frequencies each carrying multiple Laguerreâ€“Gaussian modes. Optics Communications, 2022, 520, 128477.	1.0	0