

# Zhe Zhao

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3266712/publications.pdf>

Version: 2024-02-01

49  
papers

2,346  
citations

361296  
20  
h-index

501076  
28  
g-index

50  
all docs

50  
docs citations

50  
times ranked

1770  
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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
3	Space-time light sheet with a controllable group velocity and reduced diffraction by combining multiple frequencies each carrying multiple Laguerre-Gaussian modes. Optics Communications, 2022, 520, 128477.	1.0	0
4	Utilizing multiplexing of structured THz beams carrying orbital-angular-momentum for high-capacity communications. Optics Express, 2022, 30, 25418.	1.7	19
5	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
6	Causes and mitigation of modal crosstalk in OAM multiplexed optical communication links. , 2021, , 259-289.		1
7	Photon Acceleration Using a Time-Varying Epsilon-near-Zero Metasurface. ACS Photonics, 2021, 8, 716-720.	3.2	24
8	Perspectives on advances in high-capacity, free-space communications using multiplexing of orbital-angular-momentum beams. APL Photonics, 2021, 6, .	3.0	53
9	Adiabatic Frequency Conversion Using a Time-Varying Epsilon-Near-Zero Metasurface. Nano Letters, 2021, 21, 5907-5913.	4.5	30
10	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
11	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
12	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
13	Experimental Generation of OAM +1 and +3 Spatiotemporal Beams with a Time-Dependent Beam Radius of ~0.24-to~0.68 mm Using a Coherent Combination of Multiple Frequencies Each Containing Multiple LG Modes. , 2021, , .		0
14	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
15	Fundamental System-Degrading Effects in THz Communications Using Multiple OAM beams With Turbulence. , 2020, , .		6
16	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
17	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
18	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

#	ARTICLE	IF	CITATIONS
19	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
20	â€œHidingâ€“ a low-intensity 50â€“Gbit/s QPSK free-space OAM beam using an orthogonal coaxial high-intensity 50â€“Gbit/s QPSK beam. Applied Optics, 2020, 59, 7448.	0.9	1
21	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
22	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
23	"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
24	Generating a Twisted Spatiotemporal Wave Packet Using Coherent Superposition of Structured Beams with Different Frequencies. , 2019, , .		1
25	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
26	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
27	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
28	400-Gbit/s QPSK free-space optical communication link based on four-fold multiplexing of Hermiteâ€“Gaussian or Laguerreâ€“Gaussian modes by varying both modal indices. Optics Letters, 2018, 43, 3889.	1.7	55
29	Recent advances in high-capacity free-space optical and radio-frequency communications using orbital angular momentum multiplexing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150439.	1.6	131
30	Experimental demonstration of a dual-channel E-band communication link using commercial impulse radios with orbital angular momentum multiplexing. , 2017, , .		8
31	Line-of-Sight Millimeter-Wave Communications Using Orbital Angular Momentum Multiplexing Combined With Conventional Spatial Multiplexing. IEEE Transactions on Wireless Communications, 2017, 16, 3151-3161.	6.1	130
32	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
33	Spatial light structuring using a combination of multiple orthogonal orbital angular momentum beams with complex coefficients. Optics Letters, 2017, 42, 991.	1.7	31
34	Orbital Angular Momentum-based Space Division Multiplexing for High-capacity Underwater Optical Communications. Scientific Reports, 2016, 6, 33306.	1.6	156
35	OFDM over mm-Wave OAM Channels in a Multipath Environment with Intersymbol Interference. , 2016, , .		17
36	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

#	ARTICLE	IF	CITATIONS
37	Multipath Effects in Millimetre-Wave Wireless Communication using Orbital Angular Momentum Multiplexing. Scientific Reports, 2016, 6, 33482.	1.6	37
38	Invited Article: Division and multiplication of the state order for data-carrying orbital angular momentum beams. APL Photonics, 2016, 1, .	3.0	16
39	Demonstration of Tunable Steering and Multiplexing of Two 28GHz Data Carrying Orbital Angular Momentum Beams Using Antenna Array. Scientific Reports, 2016, 6, 37078.	1.6	20
40	Orbital-angular-momentum-based reconfigurable optical switching and routing. Photonics Research, 2016, 4, B5.	3.4	31
41	32-Gbit/s 60-GHz millimeter-wave wireless communication using orbital angular momentum and polarization multiplexing. , 2016, , .		29
42	A dual-channel 60 GHz communications link using patch antenna arrays to generate data-carrying orbital-angular-momentum beams. , 2016, , .		22
43	Dividing and multiplying the mode order for orbital-angular-momentum beams. , 2015, , .		2
44	Exploiting the unique intensity gradient of an orbital-angular-momentum beam for accurate receiver alignment monitoring in a free-space communication link. , 2015, , .		0
45	Performance metrics and design considerations for a free-space optical orbital-angular-momentum multiplexed communication link. Optica, 2015, 2, 357.	4.8	164
46	Experimental demonstration of 16-Gbit/s millimeter-wave communications link using thin metamaterial plates to generate data-carrying orbital-angular-momentum beams. , 2015, , .		17
47	Experimental demonstration of 16 Gbit/s millimeter-wave communications using MIMO processing of 2 OAM modes on each of two transmitter/receiver antenna apertures. , 2014, , .		17
48	Performance metrics and design parameters for an FSO communications link based on multiplexing of multiple orbital-angular-momentum beams. , 2014, , .		6
49	High-capacity millimetre-wave communications with orbital angular momentum multiplexing. Nature Communications, 2014, 5, 4876.	5.8	972