Yan Yan

List of Publications by Year in Descending Order

86 papers	5,916 citations	29 h-index	76 g-index
98 ext. papers	7,557 ext. citations	4.1 avg, IF	5.05 L-index

#	Paper	IF	Citations
86	Perspectives on advances in high-capacity, free-space communications using multiplexing of orbital-angular-momentum beams. *APL Photonics*, **2021**, 6, 030901	5.2	20
85	Highly dispersive coupled ring-core fiber for orbital angular momentum modes. *Applied Physics Letters*, **2020**, 117, 191101	3.4	10
84	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,	3	85
83	Experimental demonstration of a dual-channel E-band communication link using commercial impulse radios with orbital angular momentum multiplexing **2017**,		3
82	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	9.6	90
81	High-order dispersion in Kerr comb oscillators. *Journal of the Optical Society of America B: Optical Physics*, **2017**, 34, 715	1.7	31
80	Power loss mitigation of orbital-angular-momentum-multiplexed free-space optical links using nonzero radial index Laguerre□Gaussian beams. *Journal of the Optical Society of America B: Optical Physics*, **2017**, 34, 1	1.7	19
79	Spatial light structuring using a combination of multiple orthogonal orbital angular momentum beams with complex coefficients. *Optics Letters*, **2017**, 42, 991-994	3	20
78	Orbital angular momentum beams generated by passive dielectric phase masks and their performance in a communication link. *Optics Letters*, **2017**, 42, 2746-2749	3	10
77	Tunable insertion of multiple lines into a Kerr frequency comb using electro-optical modulators. *Optics Letters*, **2017**, 42, 3765-3768	3	7
76	Dual-pump generation of high-coherence primary Kerr combs with multiple sub-lines. *Optics Letters* , **2017**, 42, 595-598	3	10
75	Localization from the unique intensity gradient of an orbital-angular-momentum beam. *Optics Letters*, **2017**, 42, 395-398	3	4
74	Power loss mitigation of orbital-angular-momentum-multiplexed free-space optical links using nonzero radial index Laguerre□Gaussian beams. *Journal of the Optical Society of America B: Optical Physics*, **2017**, 34, 2656	1.7	
73	**2016**,		8
72	Experimental demonstration of a 200-Gbit/s free-space optical link by multiplexing Laguerre-Gaussian beams with different radial indices. *Optics Letters*, **2016**, 41, 3447-50	3	56
71	**2016**,		16
70	Design challenges and guidelines for free-space optical communication links using orbital-angular-momentum multiplexing of multiple beams. *Journal of Optics (United Kingdom)*, **2016**, 18, 074014	1.7	29

69	Experimental characterization of a 400 Gbit/s orbital angular momentum multiplexed free-space optical link over 120 m. *Optics Letters*, **2016**, 41, 622-5	3	94
68	Orbital-angular-momentum-multiplexed free-space optical communication link using transmitter lenses. *Applied Optics*, **2016**, 55, 2098-103	0.2	19
67	4 Gbit/s Underwater Optical Transmission Using OAM Multiplexing and Directly Modulated Green Laser **2016**,		7
66	Demonstration of OAM-based MIMO FSO link using spatial diversity and MIMO equalization for turbulence mitigation **2016**,		3
65	Orbital Angular Momentum-based Space Division Multiplexing for High-capacity Underwater Optical Communications. *Scientific Reports*, **2016**, 6, 33306	4.9	99
64	OFDM over mm-Wave OAM Channels in a Multipath Environment with Intersymbol Interference **2016**,		12
63	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	4.9	49
62	Multipath Effects in Millimetre-Wave Wireless Communication using Orbital Angular Momentum Multiplexing. *Scientific Reports*, **2016**, 6, 33482	4.9	22
61	Invited Article: Division and multiplication of the state order for data-carrying orbital angular momentum beams. *APL Photonics*, **2016**, 1, 090802	5.2	5
60	Demonstration of Tunable Steering and Multiplexing of Two 28 GHz Data Carrying Orbital Angular Momentum Beams Using Antenna Array. *Scientific Reports*, **2016**, 6, 37078	4.9	15
59	Effect of a breather soliton in Kerr frequency combs on optical communication systems. *Optics Letters*, **2016**, 41, 1764-7	3	6
58	Atmospheric turbulence mitigation in an OAM-based MIMO free-space optical link using spatial diversity combined with MIMO equalization. *Optics Letters*, **2016**, 41, 2406-9	3	51
57	Orbital-angular-momentum-based reconfigurable optical switching and routing. *Photonics Research* , **2016**, 4, B5	6	25
56	32-Gbit/s 60-GHz millimeter-wave wireless communication using orbital angular momentum and polarization multiplexing **2016**,		17
55	Demonstration of optical multicasting using Kerr frequency comb lines. *Optics Letters*, **2016**, 41, 3876-9	3	11
54	Phase correction for a distorted orbital angular momentum beam using a Zernike polynomials-based stochastic-parallel-gradient-descent algorithm. *Optics Letters*, **2015**, 40, 1197-200	3	65
53	Performance metrics and design considerations for a free-space optical orbital-angular-momentum-multiplexed communication link. *Optica*, **2015**, 2, 357	8.6	110
52	Turbulence compensation of an orbital angular momentum and polarization-multiplexed link using a data-carrying beacon on a separate wavelength. *Optics Letters*, **2015**, 40, 2249-52	3	38

51	Increased bandwidth with flattened and low dispersion in a horizontal double-slot silicon waveguide. *Journal of the Optical Society of America B: Optical Physics*, **2015**, 32, 26	1.7	26
50	Experimental demonstration of 16-Gbit/s millimeter-wave communications link using thin metamaterial plates to generate data-carrying orbital-angular-momentum beams **2015**,		11
49	400-Gbit/s Free-Space Optical Communications Link Over 120-meter Using Multiplexing of 4 Collocated Orbital-Angular-Momentum Beams **2015**,		9
48	Performance Enhancement of an Orbital-Angular-Momentum-Based Free-Space Optical Communication Link through Beam Divergence Controlling **2015**,		1
47	Free-space optical communications using orbital-angular-momentum multiplexing combined with MIMO-based spatial multiplexing. *Optics Letters*, **2015**, 40, 4210-3	3	51
46	Experimental Demonstration of a 400-Gbit/s Free Space Optical Link Using Multiple Orbital-Angular-Momentum Beams with Higher Order Radial Indices **2015**,		2
45	Dividing and multiplying the mode order for orbital-angular-momentum beams **2015**,		2
44	Experimental measurements of multipath-induced intra- and inter-channel crosstalk effects in a millimeter-wave communications link using orbital-angular-momentum multiplexing **2015**,		11
43	Demonstration of Distance Emulation for an Orbital-Angular-Momentum Beam **2015**,		1
42	Performance Metrics for a Free-space Communication Link Based on Multiplexing of Multiple Orbital Angular Momentum Beams with Higher Order Radial Indices **2015**,		2
41	Experimental demonstration of 20 Gbit/s data encoding and 2 ns channel hopping using orbital angular momentum modes. *Optics Letters*, **2015**, 40, 5810-3	3	50
40	Adaptive optics compensation of multiple orbital angular momentum beams propagating through emulated atmospheric turbulence. *Optics Letters*, **2014**, 39, 2845-8	3	95
39	Reconfigurable 2 □2 orbital angular momentum based optical switching of 50-Gbaud QPSK channels. *Optics Express*, **2014**, 22, 756-61	3.3	19
38	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**,		12
37	100 Tbit/s free-space data link enabled by three-dimensional multiplexing of orbital angular momentum, polarization, and wavelength. *Optics Letters*, **2014**, 39, 197-200	3	309
36	Performance metrics and design parameters for an FSO communications link based on multiplexing of multiple orbital-angular-momentum beams **2014**,		3
35	Adaptive-optics-based simultaneous pre- and post-turbulence compensation of multiple orbital-angular-momentum beams in a bidirectional free-space optical link. *Optica*, **2014**, 1, 376	8.6	123
34	Tunable orbital angular momentum mode filter based on optical geometric transformation. *Optics Letters*, **2014**, 39, 1689-92	3	14

33	Crosstalk mitigation in a free-space orbital angular momentum multiplexed communication link using 4⁄4 MIMO equalization. *Optics Letters*, **2014**, 39, 4360-3	3	78
32	Demonstration of 8-mode 32-Gbit/s millimeter-wave free-space communication link using 4 orbital-angular-momentum modes on 2 polarizations **2014**,		6
31	Nonlinear conversion efficiency in Kerr frequency comb generation. *Optics Letters*, **2014**, 39, 6126-9	3	81
30	High-capacity millimetre-wave communications with orbital angular momentum multiplexing. *Nature Communications*, **2014**, 5, 4876	17.4	623
29	Tailoring of a Broader and Flatter Frequency Comb using a Microring Resonator with a Low-Index Slot **2014**,		1
28	Experimental Analysis of Multiplexing/demultiplexing Laguerre Gaussian Beams with Different Radial Index **2014**,		2
27	Multimode Communications Using Orbital Angular Momentum **2013**, 569-615		4
26	Performance analysis of spectrally efficient free-space data link using spatially multiplexed orbital angular momentum beams **2013**,		1
25	100 Tbit/s Free-Space Data Link using Orbital Angular Momentum Mode Division Multiplexing Combined with Wavelength Division Multiplexing **2013**,		16
24	Liquid-crystal-on-silicon-based optical add/drop multiplexer for orbital-angular-momentum-multiplexed optical links. *Optics Letters*, **2013**, 38, 5142-5	3	17
23	Multicasting in a spatial division multiplexing system based on optical orbital angular momentum. *Optics Letters*, **2013**, 38, 3930-3	3	47
22	Tailoring of Low Chromatic Dispersion over a Broadband in Silicon Waveguides using a Double-Slot Design **2013**,		2
21	Phase-shift interference-based wavefront characterization for orbital angular momentum modes. *Optics Letters*, **2013**, 38, 2348-50	3	27
20	Reconfigurable switching of orbital-angular-momentum-based free-space data channels. *Optics Letters*, **2013**, 38, 5118-21	3	27
19	Reconfigurable orbital angular momentum and polarization manipulation of 100 Gbit/s QPSK data channels. *Optics Letters*, **2013**, 38, 5240-3	3	12
18	Broadband low chromatic dispersion and supercontinuum generation in a step-index fiber and an OAM-supporting vortex fiber with a submicron slot **2013**,		3
17	Increasing the spectral bandwidth of optical frequency comb generation in a microring resonator using dispersion tailoring slotted waveguide **2013**,		1
16	Atmospheric turbulence effects on the performance of a free space optical link employing orbital angular momentum multiplexing. *Optics Letters*, **2013**, 38, 4062-5	3	154

15	. *IEEE Photonics Journal*, **2012**, 4, 535-543	1.8	127
14	Silicon waveguide with four zero-dispersion wavelengths and its application in on-chip octave-spanning supercontinuum generation. *Optics Express*, **2012**, 20, 1685-90	3.3	112
13	On-Chip Octave-Spanning Supercontinuum in Nanostructured Silicon Waveguides Using Ultralow Pulse Energy. *IEEE Journal of Selected Topics in Quantum Electronics*, **2012**, 18, 1799-1806	3.8	28
12	Terabit free-space data transmission employing orbital angular momentum multiplexing. *Nature Photonics*, **2012**, 6, 488-496	33.9	2390
11	Fiber structure to convert a Gaussian beam to higher-order optical orbital angular momentum modes. *Optics Letters*, **2012**, 37, 3294-6	3	45
10	Experimental Demonstration of 100-Gbit/s DQPSK Data Exchange between Orbital-Angular-Momentum Modes **2012**,		5
9	Efficient generation and multiplexing of optical orbital angular momentum modes in a ring fiber by using multiple coherent inputs. *Optics Letters*, **2012**, 37, 3645-7	3	47
8	Octave-spanning supercontinuum generation of vortices in an As2S3 ring photonic crystal fiber. *Optics Letters*, **2012**, 37, 1889-91	3	76
7	2 Tbit/s free-space data transmission on two orthogonal orbital-angular-momentum beams each carrying 25 WDM channels. *Optics Letters*, **2012**, 37, 4753-5	3	27
6	On-chip two-octave supercontinuum generation by enhancing self-steepening of optical pulses. *Optics Express*, **2011**, 19, 11584-90	3.3	49
5	Nondegenerate mirrorless oscillation in silicon waveguide. *Optics Letters*, **2011**, 36, 4113-5	3	3
4	Fiber coupler for generating orbital angular momentum modes. *Optics Letters*, **2011**, 36, 4269-71	3	69
3	Demonstration of 12.8-bit/s/Hz Spectral Efficiency using 16-QAM Signals over Multiple Orbital-Angular-Momentum Modes **2011**,		8
2	25.6-bit/s/Hz spectral efficiency using 16-QAM signals over pol-muxed multiple orbital-angular-momentum modes **2011**,		14
1	Demonstration of 2-Tbit/s Data Link using Orthogonal Orbital-Angular-Momentum Modes and WDM **2011**,		5