# Yan Yan

## List of Publications by Citations



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|---|---|---|---|
| 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 | Terabit free-space data transmission employing orbital angular momentum multiplexing. *Nature Photonics*, **2012**, 6, 488-496 | 33.9 | 2390 |
| 85 | High-capacity millimetre-wave communications with orbital angular momentum multiplexing. *Nature Communications*, **2014**, 5, 4876 | 17.4 | 623 |
| 84 | 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 |
| 83 | 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 |
| 82 | . *IEEE Photonics Journal*, **2012**, 4, 535-543 | 1.8 | 127 |
| 81 | 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 |
| 80 | 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 |
| 79 | Performance metrics and design considerations for a free-space optical orbital-angular-momentum-multiplexed communication link. *Optica*, **2015**, 2, 357 | 8.6 | 110 |
| 78 | Orbital Angular Momentum-based Space Division Multiplexing for High-capacity Underwater Optical Communications. *Scientific Reports*, **2016**, 6, 33306 | 4.9 | 99 |
| 77 | Adaptive optics compensation of multiple orbital angular momentum beams propagating through emulated atmospheric turbulence. *Optics Letters*, **2014**, 39, 2845-8 | 3 | 95 |
| 76 | 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 |
| 75 | 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 |
| 74 | 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 |
| 73 | Nonlinear conversion efficiency in Kerr frequency comb generation. *Optics Letters*, **2014**, 39, 6126-9 | 3 | 81 |
| 72 | 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 |
| 71 | Octave-spanning supercontinuum generation of vortices in an As2S3 ring photonic crystal fiber. *Optics Letters*, **2012**, 37, 1889-91 | 3 | 76 |
| 70 | Fiber coupler for generating orbital angular momentum modes. *Optics Letters*, **2011**, 36, 4269-71 | 3 | 69 |

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| 69 | 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 |
| 68 | 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 |
| 67 | Free-space optical communications using orbital-angular-momentum multiplexing combined with MIMO-based spatial multiplexing. *Optics Letters*, **2015**, 40, 4210-3 | 3 | 51 |
| 66 | 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 |
| 65 | 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 |
| 64 | On-chip two-octave supercontinuum generation by enhancing self-steepening of optical pulses. *Optics Express*, **2011**, 19, 11584-90 | 3.3 | 49 |
| 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 | Multicasting in a spatial division multiplexing system based on optical orbital angular momentum. *Optics Letters*, **2013**, 38, 3930-3 | 3 | 47 |
| 61 | 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 |
| 60 | Fiber structure to convert a Gaussian beam to higher-order optical orbital angular momentum modes. *Optics Letters*, **2012**, 37, 3294-6 | 3 | 45 |
| 59 | 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 |
| 58 | High-order dispersion in Kerr comb oscillators. *Journal of the Optical Society of America B: Optical Physics*, **2017**, 34, 715 | 1.7 | 31 |
| 57 | 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 |
| 56 | 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 |
| 55 | Phase-shift interference-based wavefront characterization for orbital angular momentum modes. *Optics Letters*, **2013**, 38, 2348-50 | 3 | 27 |
| 54 | Reconfigurable switching of orbital-angular-momentum-based free-space data channels. *Optics Letters*, **2013**, 38, 5118-21 | 3 | 27 |
| 53 | 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 |
| 52 | 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 |

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| 51 | Orbital-angular-momentum-based reconfigurable optical switching and routing. *Photonics Research* , **2016**, 4, B5 | 6 | 25 |
| 50 | Multipath Effects in Millimetre-Wave Wireless Communication using Orbital Angular Momentum Multiplexing. *Scientific Reports*, **2016**, 6, 33482 | 4.9 | 22 |
| 49 | Spatial light structuring using a combination of multiple orthogonal orbital angular momentum beams with complex coefficients. *Optics Letters*, **2017**, 42, 991-994 | 3 | 20 |
| 48 | Perspectives on advances in high-capacity, free-space communications using multiplexing of orbital-angular-momentum beams. *APL Photonics*, **2021**, 6, 030901 | 5.2 | 20 |
| 47 | 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 |
| 46 | Orbital-angular-momentum-multiplexed free-space optical communication link using transmitter lenses. *Applied Optics*, **2016**, 55, 2098-103 | 0.2 | 19 |
| 45 | Reconfigurable 2 □2 orbital angular momentum based optical switching of 50-Gbaud QPSK channels. *Optics Express*, **2014**, 22, 756-61 | 3.3 | 19 |
| 44 | Liquid-crystal-on-silicon-based optical add/drop multiplexer for orbital-angular-momentum-multiplexed optical links. *Optics Letters*, **2013**, 38, 5142-5 | 3 | 17 |
| 43 | 32-Gbit/s 60-GHz millimeter-wave wireless communication using orbital angular momentum and polarization multiplexing **2016**, | | 17 |
| 42 | **2016**, | | 16 |
| 41 | 100 Tbit/s Free-Space Data Link using Orbital Angular Momentum Mode Division Multiplexing Combined with Wavelength Division Multiplexing **2013**, | | 16 |
| 40 | 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 |
| 39 | Tunable orbital angular momentum mode filter based on optical geometric transformation. *Optics Letters*, **2014**, 39, 1689-92 | 3 | 14 |
| 38 | 25.6-bit/s/Hz spectral efficiency using 16-QAM signals over pol-muxed multiple orbital-angular-momentum modes **2011**, | | 14 |
| 37 | 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 |
| 36 | Reconfigurable orbital angular momentum and polarization manipulation of 100 Gbit/s QPSK data channels. *Optics Letters*, **2013**, 38, 5240-3 | 3 | 12 |
| 35 | OFDM over mm-Wave OAM Channels in a Multipath Environment with Intersymbol Interference **2016**, | | 12 |
| 34 | Experimental demonstration of 16-Gbit/s millimeter-wave communications link using thin metamaterial plates to generate data-carrying orbital-angular-momentum beams **2015**, | | 11 |

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| 33 | Experimental measurements of multipath-induced intra- and inter-channel crosstalk effects in a millimeter-wave communications link using orbital-angular-momentum multiplexing **2015**, | | 11 |
| 32 | Demonstration of optical multicasting using Kerr frequency comb lines. *Optics Letters*, **2016**, 41, 3876-9 | 3 | 11 |
| 31 | 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 |
| 30 | Dual-pump generation of high-coherence primary Kerr combs with multiple sub-lines. *Optics Letters* , **2017**, 42, 595-598 | 3 | 10 |
| 29 | Highly dispersive coupled ring-core fiber for orbital angular momentum modes. *Applied Physics Letters*, **2020**, 117, 191101 | 3.4 | 10 |
| 28 | 400-Gbit/s Free-Space Optical Communications Link Over 120-meter Using Multiplexing of 4 Collocated Orbital-Angular-Momentum Beams **2015**, | | 9 |
| 27 | **2016**, | | 8 |
| 26 | Demonstration of 12.8-bit/s/Hz Spectral Efficiency using 16-QAM Signals over Multiple Orbital-Angular-Momentum Modes **2011**, | | 8 |
| 25 | Tunable insertion of multiple lines into a Kerr frequency comb using electro-optical modulators. *Optics Letters*, **2017**, 42, 3765-3768 | 3 | 7 |
| 24 | 4 Gbit/s Underwater Optical Transmission Using OAM Multiplexing and Directly Modulated Green Laser **2016**, | | 7 |
| 23 | Demonstration of 8-mode 32-Gbit/s millimeter-wave free-space communication link using 4 orbital-angular-momentum modes on 2 polarizations **2014**, | | 6 |
| 22 | Effect of a breather soliton in Kerr frequency combs on optical communication systems. *Optics Letters*, **2016**, 41, 1764-7 | 3 | 6 |
| 21 | Demonstration of 2-Tbit/s Data Link using Orthogonal Orbital-Angular-Momentum Modes and WDM **2011**, | | 5 |
| 20 | Experimental Demonstration of 100-Gbit/s DQPSK Data Exchange between Orbital-Angular-Momentum Modes **2012**, | | 5 |
| 19 | Invited Article: Division and multiplication of the state order for data-carrying orbital angular momentum beams. *APL Photonics*, **2016**, 1, 090802 | 5.2 | 5 |
| 18 | Multimode Communications Using Orbital Angular Momentum **2013**, 569-615 | | 4 |
| 17 | Localization from the unique intensity gradient of an orbital-angular-momentum beam. *Optics Letters*, **2017**, 42, 395-398 | 3 | 4 |
| 16 | Experimental demonstration of a dual-channel E-band communication link using commercial impulse radios with orbital angular momentum multiplexing **2017**, | | 3 |

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| 15 | Performance metrics and design parameters for an FSO communications link based on multiplexing of multiple orbital-angular-momentum beams **2014**, | | 3 |
| 14 | Broadband low chromatic dispersion and supercontinuum generation in a step-index fiber and an OAM-supporting vortex fiber with a submicron slot **2013**, | | 3 |
| 13 | Nondegenerate mirrorless oscillation in silicon waveguide. *Optics Letters*, **2011**, 36, 4113-5 | 3 | 3 |
| 12 | Demonstration of OAM-based MIMO FSO link using spatial diversity and MIMO equalization for turbulence mitigation **2016**, | | 3 |
| 11 | Experimental Demonstration of a 400-Gbit/s Free Space Optical Link Using Multiple Orbital-Angular-Momentum Beams with Higher Order Radial Indices **2015**, | | 2 |
| 10 | Dividing and multiplying the mode order for orbital-angular-momentum beams **2015**, | | 2 |
| 9 | Performance Metrics for a Free-space Communication Link Based on Multiplexing of Multiple Orbital Angular Momentum Beams with Higher Order Radial Indices **2015**, | | 2 |
| 8 | Tailoring of Low Chromatic Dispersion over a Broadband in Silicon Waveguides using a Double-Slot Design **2013**, | | 2 |
| 7 | Experimental Analysis of Multiplexing/demultiplexing Laguerre Gaussian Beams with Different Radial Index **2014**, | | 2 |
| 6 | Performance Enhancement of an Orbital-Angular-Momentum-Based Free-Space Optical Communication Link through Beam Divergence Controlling **2015**, | | 1 |
| 5 | Demonstration of Distance Emulation for an Orbital-Angular-Momentum Beam **2015**, | | 1 |
| 4 | Performance analysis of spectrally efficient free-space data link using spatially multiplexed orbital angular momentum beams **2013**, | | 1 |
| 3 | Increasing the spectral bandwidth of optical frequency comb generation in a microring resonator using dispersion tailoring slotted waveguide **2013**, | | 1 |
| 2 | Tailoring of a Broader and Flatter Frequency Comb using a Microring Resonator with a Low-Index Slot **2014**, | | 1 |
| 1 | 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 | |