Guifang Li

List of Publications by Year
in descending order

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110 papers	2,323 citations	257450 24 h-index	223800 46 g-index
111 all docs	111 docs citations	111 times ranked	1865 citing authors

#	Article	IF	Citations
1	Prototype of DSP-Free IM/DD MDM Transceiver for Datacenter Interconnection. Journal of Lightwave Technology, 2022, 40, 1283-1295.	4.6	4
2	Impulse Response Characterization of a Commercial Multimode Fiber Using Superconducting Nanowire Single-Photon Detectors. Journal of Lightwave Technology, 2022, 40, 5107-5117.	4.6	0
3	Waveguide-Based Photonic Antenna Tweezer for Optical Trapping. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-7.	2.9	1
4	Optical Diffraction Tomography by Use of Optimization and Phase-Based Fidelity Criterion. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-9.	2.9	2
5	Training of Mixed-Signal Optical Convolutional Neural Networks With Reduced Quantization Levels. IEEE Access, 2021, 9, 56645-56652.	4.2	0
6	High-Speed Random-Channel Cryptography in Multimode Fibers. IEEE Photonics Journal, 2021, 13, 1-9.	2.0	5
7	Perspective on mode-division multiplexing. Applied Physics Letters, 2021, 118, .	3.3	39
8	Miniaturized Silicon Photonics Devices for Integrated Optical Signal Processors. Journal of Lightwave Technology, 2020, 38, 6-17.	4.6	52
9	An Ultra-Broadband Polarization-Insensitive Optical Hybrid Using Multiplane Light Conversion. Journal of Lightwave Technology, 2020, 38, 6286-6291.	4.6	12
10	Measurement of Principal Modes in Few-Mode Fibers by S² Method. IEEE Photonics Journal, 2020, 12, 1-8.	2.0	5
11	Metasurface-Based Wide-Angle Beam Steering for Optical Trapping. IEEE Access, 2020, 8, 37275-37280.	4.2	12
12	Reconstructing complex refractive-index of multiply-scattering media by use of iterative optical diffraction tomography. Optics Express, 2020, 28, 6846.	3.4	11
13	Optical Broadcasting and Steering by Demultiplexing Incoherent Spatial Modes. , 2020, , .		1
14	Optical Broadcasting Employing Incoherent And Low-Coherence Spatial Modes for Bi-Directional Optical Wireless Communications. Journal of Lightwave Technology, 2020, , 1-1.	4.6	7
15	Ultrabroadband Polarization Insensitive Hybrid using Multiplane Light Conversion. , 2020, , .		1
16	Mode-Group Demultiplexers Using Thin-Film Filters. , 2020, , .		0
17	A Reconfigurable Broadband Space-Mode Router using Multiplane Light Conversion. , 2020, , .		1
18	Corrections to â€œEfficient Grating Couplers for Space Division Multiplexing Applicationsâ€•[Nov/Dec 18 Art. no. 8200605]. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-1.	2.9	0

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19	A Degenerate-Mode-Selective Coupler for Stable DSP-free MDM Transmission. Journal of Lightwave Technology, 2019, 37, 4410-4420.	4.6	29
20	Few-Mode SDM Receivers Exploiting Parallelism of Free Space. IEEE Photonics Journal, 2019, 11, 1-11.	2.0	7
21	An Integrated Few-Mode Power Splitter Based on Multimode Interference. Journal of Lightwave Technology, 2019, 37, 3000-3008.	4.6	17
22	Turbulence-Resistant FSO Communication Using a Few-Mode Pre-Amplified Receiver. Scientific Reports, 2019, 9, 16247.	3.3	12
23	Simultaneous Temperature and Strain Measurements Using Polarization-Maintaining Few-Mode Bragg Gratings. Sensors, 2019, 19, 5221.	3.8	10
24	Ultrafast Pulse Manipulation in Dispersion-Flattened Waveguides With Four Zero-Dispersion Wavelengths. Journal of Lightwave Technology, 2019, 37, 6174-6182.	4.6	8
25	Remote key establishment by random mode mixing in multimode fibers and optical reciprocity. Optical Engineering, 2019, 58, 1.	1.0	24
26	Mode demultiplexing hybrids for mode-division multiplexing coherent receivers. Photonics Research, 2019, 7, 917.	7.0	14
27	Slab Waveguide-to-Fiber Coupling based on Multiplane Light Conversion. , 2019, , .		2
28	Prototype system for real-time IM/DD MDM transmission based on multiple-ring-core FMF and degenerate-mode-selective reception. Optics Express, 2019, 27, 38281.	3.4	11
29	Optical Implementation of Butler Matrix for Hardware-Efficient Multiuser Beamforming. IEEE Photonics Journal, 2018, 10, 1-8.	2.0	2
30	Minimizing the Number of Spans for Terrestrial Fiber-Optic Systems Using Quasi-Single-Mode Transmission. IEEE Photonics Journal, 2018, 10, 1-10.	2.0	3
31	Efficient Grating Couplers for Space Division Multiplexing Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-5.	2.9	10
32	Error analyses for simultaneous measurement of temperature and strain based on polarization-maintaining few-mode fibers. , 2018, , .		3
33	Application of few-mode fibers for optical access networks and microwave photonics. , 2018, , .		0
34	Optical Fiber Refractive Index Profiling by Iterative Optical Diffraction Tomography. Journal of Lightwave Technology, 2018, 36, 5754-5763.	4.6	29
35	Few-Mode Lensed Fibers. Journal of Lightwave Technology, 2018, 36, 5794-5799.	4.6	2
36	An Octave-Spanning Optical Parametric Amplifier Based on a Low-Dispersion Silicon-Rich Nitride Waveguide. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-7.	2.9	19

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37	Power-efficient generation of two-octave mid-IR frequency combs in a germanium microresonator. Nanophotonics, 2018, 7, 1461-1467.	6.0	16
38	Robust cavity soliton formation with hybrid dispersion. Photonics Research, 2018, 6, 647.	7.0	9
39	Reducing group delay spread using uniform long-period gratings. Scientific Reports, 2018, 8, 3882.	3.3	10
40	Demonstration of 6 <inline-formula> <tex-math notation="LaTeX">$imes$ </tex-math> </inline-formula> 10-Gb/s MIMO-Free Polarization- and Mode-Multiplexed Transmission. IEEE Photonics Technology Letters, 2018, 30, 1372-1375.	2.5	17
41	Demonstration of stable 3x10 Gb/s mode group-multiplexed transmission over a 20 km few-mode fiber. , 2018, , .		10
42	Few-mode fibre-optic microwave photonic links. Light: Science and Applications, 2017, 6, e17021-e17021.	16.6	32
43	An iterative reconstruction algorithm for optical diffraction tomography. , 2017, , .		2
44	Accurate measurement of total mode coupling in few mode fibers (FMFs) based on a modified spatial and spectral resolved (S²) imaging system. , 2017, , .		0
45	A Comparative Analysis on Fully Integrated Spectral Broadening of Kerr Frequency Combs. IEEE Photonics Journal, 2017, 9, 1-9.	2.0	2
46	Bilayer dispersion-flattened waveguides with four zero-dispersion wavelengths. Optics Letters, 2016, 41, 4939.	3.3	41
47	Novel applications of space-division multiplexing. Frontiers of Optoelectronics, 2016, 9, 270-276.	3.7	5
48	Robust generation of Kerr frequency combs with strong and localized spectral loss. , 2016, , .		0
49	Invited Article: Four-mode semiconductor optical amplifier. APL Photonics, 2016, 1, 070801.	5.7	9
50	First Demonstration of Six-Mode PON Achieving a Record Gain of 4 dB in Upstream Transmission Loss Budget. Journal of Lightwave Technology, 2016, 34, 1990-1996.	4.6	37
51	All-fiber mode-group-selective photonic lantern using graded-index multimode fibers. Optics Express, 2015, 23, 224.	3.4	122
52	Time-division-multiplexed few-mode passive optical network. Optics Express, 2015, 23, 1151.	3.4	55
53	Capacity limits of spatially multiplexed free-space communication. Nature Photonics, 2015, 9, 822-826.	31.4	215
54	Demonstration of world's first few-mode GPON. , 2014, , .		14

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55	Space-division multiplexing: the next frontier in optical communication. Advances in Optics and Photonics, 2014, 6, 413.	25.5	606
56	Long-distance mode-division multiplexed transmission using normalized adaptive frequency-domain equalization. , 2013, , .		1
57	Improving fairness of OBS routing protocols in multimode fiber networks. , 2013, , .		5
58	Think Outside the Fiber: Imaging Amplifier for Space-Multiplexed Optical Transmission. IEEE Photonics Journal, 2012, 4, 1316-1324.	2.0	5
59	Adaptive frequency domain equalization for mode-division multiplexed transmission. , 2012, , .		6
60	Optical fiber amplifiers for space-division multiplexing. Frontiers of Optoelectronics, 2012, 5, 351-357.	3.7	7
61	Multimode fiber amplifier with tunable modal gain using a reconfigurable multimode pump. , 2011, , .		7
62	Selective Post-Compensation of Nonlinear Impairments in Polarization-Division Multiplexed WDM Systems With Different Channel Granularities. IEEE Journal of Quantum Electronics, 2011, 47, 109-116.	1.9	9
63	Amplifying to perfection. Nature Photonics, 2011, 5, 385-386.	31.4	3
64	Joint Fiber and SOA Impairment Compensation Using Digital Backward Propagation. IEEE Photonics Journal, 2010, 2, 753-758.	2.0	7
65	Nonlinear Impairment Compensation for Polarization-Division Multiplexed WDM Transmission Using Digital Backward Propagation. IEEE Photonics Journal, 2010, 2, 816-832.	2.0	51
66	Silicon photonic crystal fiber. , 2010, , .		1
67	Polarization Demultiplexing by Independent Component Analysis. IEEE Photonics Technology Letters, 2010, 22, 805-807.	2.5	27
68	Coherent optical transmission for digital and analog applications. , 2009, , .		0
69	Addressing conversion cascading constraint in OBS networks through proactive routing. Photonic Network Communications, 2009, 18, 90-104.	2.7	4
70	Static Gain, Optical Modulation Response, and Nonlinear Phase Noise in Saturated Quantum-Dot Semiconductor Optical Amplifiers. IEEE Journal of Quantum Electronics, 2009, 45, 499-505.	1.9	5
71	Nonlinear Impairment Compensation for Polarization-Division Multiplexed WDM Transmission Using Digital Backward Propagation. IEEE Photonics Journal, 2009, 1, 144-152.	2.0	68
72	Phase and Amplitude Regeneration of Differential Phase-Shift Keyed Signals Using Phase-Sensitive Amplification. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 648-658.	2.9	94

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73	Experimental Demonstration of Fiber Impairment Compensation Using the Split-Step Finite-Impulse-Response Filtering Method. IEEE Photonics Technology Letters, 2008, 20, 1887-1889.	2.5	34
74	Experimental Study of Pattern-Independent Phase Noise Accumulation in an All-Optical Clock Recovery Chain Based on Two-Section Gain-Coupled DFB Lasers. Journal of Lightwave Technology, 2008, 26, 1661-1670.	4.6	1
75	BPSK phase and amplitude regeneration using a traveling-wave phase-sensitive amplifier. , 2008, , .		3
76	Dispersion Compensation of up to 25,200ps/nm Using IIR Filtering. , 2008, , .		0
77	Experimental demonstration of fiber impairment compensation using the split-step infinite impulse response method. , 2008, , .		5
78	Control of FWM Phase-matching Condition Using the Brillouin Slow Light Effect in Fibers. , 2008, , .		1
79	All-Optical Carrier Phase and Polarization Recovery Using a Phase-Sensitive Oscillator. , 2007, , .		4
80	All-Optical Regeneration of Phase Modulated Signals. , 2007, , .		0
81	Vectorial Modulational Instability in a Bismuth Fiber. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
82	Phase Regeneration of DPSK Signals Based on Symmetric-Pump Phase-Sensitive Amplification in Bismuth Oxide Highly Nonlinear Fiber. , 2007, , .		2
83	Dispersion Compensation using All-Pass Digital IIR Filters. , 2007, , .		1
84	Chromatic Dispersion Compensation Using Digital IIR Filtering With Coherent Detection. IEEE Photonics Technology Letters, 2007, 19, 969-971.	2.5	59
85	Orthogonal Wavelength-Division Multiplexing Using Coherent Detection. IEEE Photonics Technology Letters, 2007, 19, 2015-2017.	2.5	42
86	Phase-Regenerative DPSK Wavelength Conversion. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
87	All-Optical Carrier Synchronization Using a Phase-Sensitive Oscillator. IEEE Photonics Technology Letters, 2007, 19, 987-989.	2.5	14
88	Using constrained preemption to improve dropping fairness in optical burst switching networks. Telecommunication Systems, 2007, 34, 181-194.	2.5	3
89	Comparison of quasi-symmetrical and asymmetrical mode beatings in two-section partially gain-coupled DFB lasers. Optical and Quantum Electronics, 2007, 38, 1045-1051.	3.3	2
90	Improved chromatic dispersion tolerance for optical duobinary transmission using coherent detection. IEEE Photonics Technology Letters, 2006, 18, 517-519.	2.5	2

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91	Comments on â€œTheoretical Analysis of Gain-Recovery Time and Chirp in QD-SOAâ€• IEEE Photonics Technology Letters, 2006, 18, 2434-2435.	2.5	26
92	Theoretical sensitivity of direct-detection multilevel modulation formats for high spectral efficiency optical communications. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 571-580.	2.9	30
93	Experimental demonstration of coherent optical polarization multiple-input-multiple-output. , 2006, , .		1
94	Experimental demonstration of differential polarization-phase-shift keying (DPolPSK). , 2006, , .		0
95	All-optical phase and amplitude regeneration of DPSK signals based on phase-sensitive amplification. , 2006, , .		3
96	Nonlinear phase noise in polarization-division-multiplexed DPSK systems. , 2006, , .		0
97	Impact of RZ pulse carver phase errors on optical DQPSK. , 2005, , .		2
98	180-Gb/s clock recovery using a multi-section gaincoupled distributed feedback laser. , 2005, , .		0
99	Routing and Wavelength Assignment in Optical Networks Using Logical Link Representation and Efficient Bitwise Computation. Photonic Network Communications, 2005, 10, 333-346.	2.7	8
100	Self-consistent Simulation of self-pulsating two-section gain-coupled DFB lasers. IEEE Journal of Quantum Electronics, 2005, 41, 525-531.	1.9	10
101	Optical microwave/millimeter-wave links using direct modulation of two-section gain-coupled DFB lasers. IEEE Photonics Technology Letters, 2005, 17, 1734-1736.	2.5	25
102	Sensitivity limits and degradations in OD8PSK. IEEE Photonics Technology Letters, 2005, 17, 720-722.	2.5	39
103	180-GHz clock recovery using a multisection gain-coupled distributed feedback laser. IEEE Photonics Technology Letters, 2005, 17, 1295-1297.	2.5	33
104	Wavelength and polarization insensitive all-optical clock recovery from 96-Gb/s data by using a two-section gain-coupled DFB laser. IEEE Photonics Technology Letters, 2003, 15, 590-592.	2.5	34
105	All-optical clock recovery for both RZ and NRZ data. IEEE Photonics Technology Letters, 2002, 14, 873-875.	2.5	28
106	All-optical enhancement of clock and clock-to-data suppression ratio of NRZ data. IEEE Photonics Technology Letters, 2001, 13, 239-241.	2.5	23
107	Self-pulsating DFB lasers for 60 GHz broadband wireless networks. , 2001, , .		0
108	Optical generation of microwave/millimeter-wave signals using two-section gain-coupled DFB lasers. IEEE Photonics Technology Letters, 1999, 11, 1292-1294.	2.5	26

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109	Nonlinear dynamics for all-optical 3R regeneration. , 0, , .		2
110	All-optical clock recovery using self-pulsing two-section gain-coupled DFB lasers. , 0, , .		1