

# Nelson Muga

## List of Publications by Year in descending order

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99  
papers

683  
citations

566801

15  
h-index

676716

22  
g-index

100  
all docs

100  
docs citations

100  
times ranked

458  
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive 3-D Stokes Space-Based Polarization Demultiplexing Algorithm. Journal of Lightwave Technology, 2014, 32, 3290-3298.	2.7	50
2	Digital PDL Compensation in 3D Stokes Space. Journal of Lightwave Technology, 2013, 31, 2122-2130.	2.7	41
3	Broadband polarization pulling using Raman amplification. Optics Express, 2011, 19, 18707.	1.7	30
4	Extended Kalman Filter vs. Geometrical Approach for Stokes Space-Based Polarization Demultiplexing. Journal of Lightwave Technology, 2015, 33, 4826-4833.	2.7	30
5	200 G Outdoor Free-Space-Optics Link Using a Single-Photodiode Receiver. Journal of Lightwave Technology, 2020, 38, 394-400.	2.7	29
6	QBER Estimation in QKD Systems With Polarization Encoding. Journal of Lightwave Technology, 2011, 29, 355-361.	2.7	25
7	Low Complexity Advanced DBP Algorithms for Ultra-Long-Haul 400 G Transmission Systems. Journal of Lightwave Technology, 2016, 34, 1793-1799.	2.7	25
8	Influence of the Stimulated Raman Scattering on the Four-Wave Mixing Process in Birefringent Fibers. Journal of Lightwave Technology, 2009, 27, 4979-4988.	2.7	24
9	Uniform Polarization Scattering With Fiber-Coil-Based Polarization Controllers. Journal of Lightwave Technology, 2006, 24, 3932-3943.	2.7	19
10	Effective Nonlinear Parameter Measurement Using FWM in Optical Fibers in a Low Power Regime. IEEE Journal of Quantum Electronics, 2010, 46, 285-291.	1.0	19
11	Experimental Assessment of the Adaptive Stokes Space-Based Polarization Demultiplexing for Optical Metro and Access Networks. Journal of Lightwave Technology, 2015, 33, 4968-4974.	2.7	19
12	Tunable Mode Conversion Using Acoustic Waves in Optical Microwires. Journal of Lightwave Technology, 2014, 32, 3257-3265.	2.7	17
13	Switching in multicore fibers using flexural acoustic waves. Optics Express, 2015, 23, 26313.	1.7	17
14	Towards Enhanced Mobile Broadband Communications: A Tutorial on Enabling Technologies, Design Considerations, and Prospects of 5G and beyond Fixed Wireless Access Networks. Applied Sciences (Switzerland), 2021, 11, 10427.	1.3	17
15	Exchange bias of MnPt/CoFe films prepared by ion beam deposition. Journal of Applied Physics, 2004, 95, 6317-6321.	1.1	16
16	Polarization Mode Dispersion in High-Speed Optical Communication Systems. Fiber and Integrated Optics, 2005, 24, 261-285.	1.7	15
17	Optical Signal Phase Retrieval With Low Complexity DC-Value Method. Journal of Lightwave Technology, 2020, 38, 4205-4212.	2.7	15
18	Secret key rate of multi-ring M-APSK continuous variable quantum key distribution. Optics Express, 2021, 29, 38669.	1.7	14

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19	All-Optical Packet Alignment Using Polarization Attraction Effect. IEEE Photonics Technology Letters, 2015, 27, 541-544.	1.3	13
20	Non-Gaussian ASE Noise in Raman Amplification Systems. Journal of Lightwave Technology, 2009, 27, 3389-3398.	2.7	12
21	Using quantum technologies to improve fiber optic communication systems. , 2013, 51, 42-48.		12
22	Space-demultiplexing based on higher-order Poincaré spheres. Optics Express, 2017, 25, 3899.	1.7	11
23	Adaptive Stokes-Based Polarization Demultiplexing for Long-Haul Multi-Subcarrier Systems. IEEE Photonics Technology Letters, 2019, 31, 759-762.	1.3	11
24	A Review of Self-Coherent Optical Transceivers: Fundamental Issues, Recent Advances, and Research Directions. Applied Sciences (Switzerland), 2021, 11, 7554.	1.3	11
25	Reversal operator to compensate polarization random drifts in quantum communications. Optics Express, 2020, 28, 5035.	1.7	11
26	Continuous Control of Random Polarization Rotations for Quantum Communications. Journal of Lightwave Technology, 2016, , 1-1.	2.7	10
27	Implementation of a two-state quantum bit commitment protocol in optical fibers. Journal of Optics (United Kingdom), 2016, 18, 015202.	1.0	10
28	Generation and Distribution of Quantum Oblivious Keys for Secure Multiparty Computation. Applied Sciences (Switzerland), 2020, 10, 4080.	1.3	10
29	Simplified Volterra Series Nonlinear Equalizer by Intra-Channel Cross-Phase Modulation Oriented Pruning. , 2013, , .		9
30	Evolution of first-order sidebands from multiple FWM processes in HiBi optical fibers. Optics Communications, 2011, 284, 3408-3415.	1.0	8
31	200 Gbit/s Free-Space Optics Transmission Using a Kramers-Kronig Receiver. , 2019, , .		8
32	PMD tolerance in Stokes space based polarization de-multiplexing algorithms. Optical and Quantum Electronics, 2017, 49, 1.	1.5	7
33	Stokes Space Based Digital PolDemux for Polarization Switched-QPSK Signals. , 2013, , .		7
34	Experimental demonstration of the parallel split-step method in ultra-long-haul 400G transmission. , 2015, , .		6
35	Simple and robust transmit diversity based free-space optical communications for 5G and beyond networks. Optics Communications, 2020, 476, 126306.	1.0	6
36	Adaptive Stokes Space Based Polarization Demultiplexing for Flexible UDWDM Metro-Access Networks. , 2017, , .		6

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37	Characterization of a Quantum Random Number Generator Based on Vacuum Fluctuations. Applied Sciences (Switzerland), 2021, 11, 7413.	1.3	6
38	Full polarization random drift compensation method for quantum communication. Optics Express, 2022, 30, 6907.	1.7	6
39	Nonlinear Mitigation of a 400G Frequency-Hybrid Superchannel for the 62.5-GHz Slot. Journal of Lightwave Technology, 2017, 35, 3963-3973.	2.7	5
40	Self-coherent optical detection for access and metro networks. , 2019, , .		5
41	FPGA-Assisted state-of-polarisation generation for polarisation-encoded optical communications. IET Optoelectronics, 2020, 14, 350-355.	1.8	5
42	Evolution of the degree of co-polarization in high-birefringence fibers. Optics Communications, 2010, 283, 2125-2132.	1.0	4
43	Single-photon source using stimulated FWM in optical fibers for quantum communication. Proceedings of SPIE, 2011, , .	0.8	4
44	Optical quantum communications: an experimental approach. Proceedings of SPIE, 2011, , .	0.8	4
45	Virtual Carrier Assisted Self-Coherent Detection Employing DC-Value Method. , 2021, , .		4
46	Ferroelectric Phase in Glycinium Phosphite Studied by Raman Scattering. Ferroelectrics, 2005, 320, 83-89.	0.3	3
47	Lattice Dynamics and Negative Search for Pyroelectricity in Sr(1 - 1.5x)LaxTiO3Ceramics. Ferroelectrics, 2005, 318, 147-153.	0.3	3
48	Polarization-entangled photon pairs using spontaneous four-wave mixing in a fiber loop. , 2011, , .		3
49	A brief review on quantum bit commitment. Proceedings of SPIE, 2014, , .	0.8	3
50	Calculation of the number of bits required for the estimation of the bit error ratio. , 2014, , .		3
51	Quantum communications: An engineering approach. , 2017, , .		3
52	Towards a Sustainable Green Design for Next-Generation Networks. Wireless Personal Communications, 2021, 121, 1123-1138.	1.8	3
53	6G CloudNet: Towards a Distributed, Autonomous, and Federated AI-Enabled Cloud and Edge Computing. Computer Communications and Networks, 2021, , 251-283.	0.8	3
54	Optimization of polarization control schemes for QKD systems. , 2011, , .		2

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55	Generation and Distribution of Oblivious Keys through Quantum Communications. , 2018, , .		2
56	Reduced-complexity algorithm for space-demultiplexing based on higher-order Poincaré spheres. Optics Express, 2018, 26, 13506.	1.7	2
57	Role of Device Imperfections on the Practical Performance of Continuous-Variable Quantum Key Distribution Systems. , 2019, , .		2
58	The Impact of Fiber Random Birefringence in Polarization-Encoded Quantum Communications. , 2019, , .		2
59	Digital monitoring and compensation of MDL based on higher-order Poincaré spheres. Optics Express, 2019, 27, 19996.	1.7	2
60	Impact of the carrier contribution factor in the self-coherent DC-value method. Optics Express, 2021, 29, 41234.	1.7	2
61	Critical issues in polarization encoded quantum key distribution systems. , 2011, , .		1
62	Wavelength-shift-free Mamyshev regenerator. Proceedings of SPIE, 2013, , .	0.8	1
63	Enabling quantum communications through accurate photons polarization control. , 2013, , .		1
64	Digital equalization of optical nonlinearities in very high-speed optical communication systems. , 2014, , .		1
65	Clock and carrier recovery in high-speed coherent optical communication systems. , 2014, , .		1
66	Polarization Effects on the Non-Linearity of a Highly Non-Linear Fiber. Fiber and Integrated Optics, 2015, 34, 3-13.	1.7	1
67	Real-time digital signal processing for coherent optical systems. , 2015, , .		1
68	Using the Stokes space for equalization of polarization impairments in digital coherent optical receivers. , 2016, , .		1
69	Practical Imperfections Affecting the Performance of CV-QKD Based on Coherent Detection. , 2020, , .		1
70	Quantum Enabled Private Recognition of Composite Signals in Genome and Proteins. , 2020, , .		1
71	Homodyne Noise Characterization in Quantum Random Number Generators. , 2021, , .		1
72	Demonstration of an Algorithm for Quantum State Generation in Polarization-Encoding QKD Systems. , 2022, , .		1

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73	Phase Transition in Betaine Cadmium Chloride Monohydrate. <i>Ferroelectrics</i> , 2004, 302, 127-131.	0.3	0
74	Dielectric Properties and Lattice Dynamics in Betaine Calcium Perchlorate Monohydrate. <i>Ferroelectrics</i> , 2005, 314, 223-232.	0.3	0
75	Polarization Scattering Property of Cascaded Polarization Controllers. <i>ETRI Journal</i> , 2007, 29, 838-840.	1.2	0
76	Non-white noise generation method for ASE noise simulation in systems with Raman amplification. , 2009, , .		0
77	Generalized analysis of the polarization evolution in high-birefringence fibers. , 2010, , .		0
78	Polarization-dependent gain in Raman amplification based all-optical polarization control schemes. , 2012, , .		0
79	Engineering quantum communication systems. <i>Proceedings of SPIE</i> , 2012, , .	0.8	0
80	Equalization of fiber impairments using high-speed digital signal processing. , 2013, , .		0
81	Experimental characterization of a highly nonlinear fiber. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
82	Nonlinear polarizers in low-birefringence optical fibers. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
83	Pump and filtering optimization in Mamyshev regenerator. , 2013, , .		0
84	EFFECTIVE NONLINEAR PARAMETER MEASUREMENT USING FWM IN A HIGHLY NONLINEAR FIBER. , 2013, , .		0
85	Using single photons to improve fiber optic communication systems. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
86	Mode conversion based on the acousto-optic effect for mode division multiplexed transmission. , 2014, , .		0
87	Dynamic method for Stokes space based polarization demultiplexing of advanced modulation formats. , 2014, , .		0
88	Assessment of nonlinear equalization algorithms for coherent optical transmission systems using an FPGA. , 2015, , .		0
89	Optimizing polarization related dynamic equalization in coherent optical communications. , 2015, , .		0
90	Four-Wave Mixing in Microwires to All-Optical Signal Processing in Mode-Division Multiplexing Systems. <i>Fiber and Integrated Optics</i> , 2015, 34, 38-52.	1.7	0

#	ARTICLE	IF	CITATIONS
91	Multi-carrier high-speed optical communication systems supported by digital signal processing. , 2016, , .		0
92	Flexible and hybrid bidirectional optical metro networking using adaptive stokes space polarization demultiplexing. , 2016, , .		0
93	Advanced digital signal processing techniques based on Stokes space analysis for high-capacity coherent optical systems. , 2017, , .		0
94	Coherent UDWDM Transceivers Based on Adaptive Stokes Space Polarization Demultiplexing in Real-Time. , 2017, , .		0
95	Optical and Digital Key Enabling Techniques for SDM-Based Optical Networks. , 2018, , .		0
96	DSP optimization for simplified coherent receivers. , 2020, , .		0
97	400G Frequency-Hybrid Superchannel for the 62.5 GHz Slot. , 2017, , .		0
98	MIMO processing based on higher-order Poincaré spheres. , 2017, , .		0
99	Deterministic State-of-Polarization Generation for Polarization-Encoded Optical Communications. , 2019, , .		0