Cristian Antonelli

List of Publications by Year
in descending order

111 papers	2,613 citations	236925 25 h-index	206112 48 g-index
111 all docs	111 docs citations	111 times ranked	1433 citing authors

#	Article	IF	Citations
1	Kramersâ€“Kronig coherent receiver. Optica, 2016, 3, 1220.	9.3	494
2	Modeling of Nonlinear Propagation in Space-Division Multiplexed Fiber-Optic Transmission. Journal of Lightwave Technology, 2016, 34, 36-54.	4.6	140
3	Nonlinear propagation in multi-mode fibers in the strong coupling regime. Optics Express, 2012, 20, 11673.	3.4	134
4	Stokes-space analysis of modal dispersion in fibers with multiple mode transmission. Optics Express, 2012, 20, 11718.	3.4	133
5	Coupled Manakov equations in multimode fibers with strongly coupled groups of modes. Optics Express, 2012, 20, 23436.	3.4	127
6	Kramersâ€“Kronig Receivers for 100-km Datacenter Interconnects. Journal of Lightwave Technology, 2018, 36, 79-89.	4.6	119
7	Kramersâ€“Kronig receivers. Advances in Optics and Photonics, 2019, 11, 480.	25.5	76
8	Reduced Model for the Nonlinear Response of Reflective Semiconductor Optical Amplifiers. IEEE Photonics Technology Letters, 2013, 25, 2243-2246.	2.5	70
9	Random coupling between groups of degenerate fiber modes in mode multiplexed transmission. Optics Express, 2013, 21, 9484.	3.4	65
10	Polarization Multiplexing With the Kramers-Kronig Receiver. Journal of Lightwave Technology, 2017, 35, 5418-5424.	4.6	63
11	Sudden Death of Entanglement Induced by Polarization Mode Dispersion. Physical Review Letters, 2011, 106, 080404.	7.8	55
12	Loss of polarization entanglement in a fiber-optic system with polarization mode dispersion in one optical path. Optics Letters, 2011, 36, 43.	3.3	54
13	The delay spread in fibers for SDM transmission: dependence on fiber parameters and perturbations. Optics Express, 2015, 23, 2196.	3.4	54
14	218-Gb/s Single-Wavelength, Single-Polarization, Single-Photodiode Transmission Over 125-km of Standard Singlemode Fiber Using Kramers-Kronig Detection. , 2017, , .		51
15	Nonlinear interference noise in space-division multiplexed transmission through optical fibers. Optics Express, 2017, 25, 13055.	3.4	49
16	Intensity impulse response of SDM links. Optics Express, 2015, 23, 5738.	3.4	45
17	Statistics of polarization dependent loss in an installed long-haul WDM system. Optics Express, 2011, 19, 6790.	3.4	44
18	Field-Deployed Multi-Core Fiber Testbed. , 2019, , .		44

#	Article	IF	Citations
19	Modeling and performance metrics of MIMO-SDM systems with different amplification schemes in the presence of mode-dependent loss. Optics Express, 2015, 23, 2203.	3.4	40
20	Nonlocal compensation of polarization mode dispersion in the transmission of polarization entangled photons. Optics Express, 2011, 19, 1728.	3.4	38
21	Outage probabilities for fiber routes with finite number of degrees of freedom. IEEE Photonics Technology Letters, 2005, 17, 345-347.	2.5	32
22	Statistics of the DGD in PMD Emulators. IEEE Photonics Technology Letters, 2004, 16, 1840-1842.	2.5	30
23	Theoretical Characterization and System Impact of the Hinge Model of PMD. Journal of Lightwave Technology, 2006, 24, 4064-4074.	4.6	30
24	Raman amplification in multimode fibers with random mode coupling. Optics Letters, 2013, 38, 1188.	3.3	30
25	Comparison of system penalties from first- and multiorder polarization-mode dispersion. IEEE Photonics Technology Letters, 2005, 17, 1650-1652.	2.5	28
26	Roadmap on multimode photonics. Journal of Optics (United Kingdom), 2022, 24, 083001.	2.2	27
27	Assessing the Effects of Mode-Dependent Loss in Space-Division Multiplexed Systems. Journal of Lightwave Technology, 2014, 32, 1317-1322.	4.6	26
28	Kramersâ€"Kronig PAM Transceiver and Two-Sided Polarization-Multiplexed Kramersâ€"Kronig Transceiver. Journal of Lightwave Technology, 2018, 36, 468-475.	4.6	26
29	Intracavity pulse dynamics and stability for passively mode-locked lasers. Optics Express, 2007, 15, 5919.	3.4	25
30	Stokes-Space Analysis of Modal Dispersion of SDM Fibers With Mode-Dependent Loss: Theory and Experiments. Journal of Lightwave Technology, 2020, 38, 1668-1677.	4.6	24
31	Role of polarization-mode coupling in the crosstalk between cores of weakly-coupled multi-core fibers. Optics Express, 2020, 28, 12847.	3.4	23
32	Kramers-Kronig PAM transceiver. , 2017, , .		23
33	Exploiting flexible functional split in converged software defined access networks. Journal of Optical Communications and Networking, 2019, 11, 536.	4.8	22
34	Characterization of the time dependence of polarization mode dispersion. Optics Letters, 2004, 29, 2599.	3.3	20
35	Analytic Study of the Modulation Response of Reflective Semiconductor Optical Amplifiers. Journal of Lightwave Technology, 2015, 33, 4367-4376.	4.6	18
36	Software Defined 5G Converged Access as a viable Techno-Economic Solution. , 2018, , .		17

#	Article	IF	Citations
37	PMD-induced penalty statistics in fiber links. IEEE Photonics Technology Letters, 2005, 17, 1013-1015.	2.5	16
38	High-capacity direct-detection systems. , 2020, , 419-441.		14
39	Periodic locking of chaos in semiconductor lasers with optical feedback. Optics Communications, 2009, 282, 2917-2920.	2.1	13
40	Quantum Limits on the Energy Consumption of Optical Transmission Systems. Journal of Lightwave Technology, 2014, 32, 1853-1860.	4.6	13
41	Network Solutions for CoMP Coordinated Scheduling. IEEE Access, 2019, 7, 176624-176633.	4.2	13
42	The Enhanced Kramers Kronig Receiver. , 2018, , .		13
43	Transmission in 125-km SMF with 3.9 bit/s/Hz spectral efficiency using a single-drive MZM and a direct-detection Kramers-Kronig receiver without optical CD compensation. , 2018, , .		11
44	Method for characterizing single photon detectors in saturation regime by cw laser. Optics Express, 2010, 18, 5906.	3.4	10
45	Coincidence Rates for Photon Pairs in WDM Environment. Journal of Lightwave Technology, 2011, 29, 324-329.	4.6	10
46	Autocorrelation of the polarization-dependent loss in fiber routes. Optics Letters, 2011, 36, 4005.	3.3	10
47	Transmission over Randomly-Coupled 4-Core Fiber in Field-Deployed Multi-Core Fiber Cable. , 2020, , .		10
48	Unified Treatment of Forward and Backward Propagating Polarized Lightwaves. Journal of Lightwave Technology, 2011, 29, 642-655.	4.6	9
49	Nonlinear propagation equations in fibers with multiple modesâ€"Transitions between representation bases. APL Photonics, 2019, 4, 022806.	5.7	9
50	Exploring classical correlations in noise to recover quantum information using local filtering. New Journal of Physics, 2020, 22, 073037.	2.9	9
51	The Ergodic GN Model for Space-Division Multiplexing With Strong Mode Coupling. Journal of Lightwave Technology, 2022, 40, 3263-3276.	4.6	9
52	Statistics of the polarization mode dispersion dynamics. Optics Letters, 2007, 32, 3032.	3.3	8
53	Characterization and stability measurement of deployed multicore fibers for quantum applications. Photonics Research, 2021, 9, 1992.	7.0	8
54	The Kramersâ€"Kronig Receiver. , 2018, , .		8

#	Article	IF	Citations
55	Simple method for optimizing the DC bias of Kramers-Kronig receivers based on AC-coupled photodetectors. Optics Express, 2020, 28, 4067.	3.4	8
56	A Model for Temporal Evolution of PMD. IEEE Photonics Technology Letters, 2008, 20, 1012-1014.	2.5	7
57	Scaling of inter-channel nonlinear interference noise and capacity with the number of strongly coupled modes in SDM systems. , 2016, , .		7
58	Pulse broadening due to polarization mode dispersion with first-order compensation. Optics Letters, 2005, 30, 1626.	3.3	6
59	Theory of the effect of geomagnetic field on plug-and-play schemes for fiber-based quantum key distribution systems. Optics Letters, 2008, 33, 1476.	3.3	6
60	Chaos self-synchronization in a semiconductor laser. Optics Letters, 2009, 34, 1387.	3.3	6
61	Impairments Due to Polarization-Mode Dispersion in Chaos-Encrypted Communication Systems. IEEE Photonics Technology Letters, 2009, 21, 1387-1389.	2.5	6
62	Simultaneous Decoherence and Mode Filtering in Quantum Channels: Theory and Experiment. Physical Review Applied, 2021, 15, .	3.8	6
63	Space-Division Multiplexing. Springer Handbooks, 2020, , 353-393.	0.6	6
64	Degree of Coherence in Space-Division Multiplexed Transmission. Journal of Lightwave Technology, 2014, 32, 63-69.	4.6	5
65	Dynamic Skew Measurements in a Deployed 4-Core Fiber. , 2020, , .		5
66	Non-Maxwellian probability density function of fibers with lumped polarization mode dispersion elements. Optics Letters, 2004, 29, 1057.	3.3	4
67	Efficient and Accurate Modeling of Multiwavelength Propagation in SOAs: A Generalized Coupled-Mode Approach. Journal of Lightwave Technology, 2016, 34, 2188-2197.	4.6	4
68	Propagation effects in few-mode fibers. , 2017, , .		4
69	Nonlinear Equations of Propagation in Multi-Mode Fibers with Random Mode Coupling. , 2013, , .		3
70	Characterization of mode-dependent loss in SDM systems. , 2014, , .		3
71	Delay spread in strongly coupled multi-core fibers for SDM transmission. , 2015, , .		3
72	Near-Zero Modal-Dispersion (NEMO) Coupled-Core Multi-Core Fibers. Journal of Lightwave Technology, 2021, 39, 7517-7528.	4.6	3

#	Article	IF	Citations
73	Enhancing the Kramersâ€“Kronig receiver via dispersion-based spatial diversity. Optics Letters, 2020, 45, 3494.	3.3	3
74	Effect of fiber-spinning profile on plug-and-play quantum-key distribution systems. Optics Letters, 2008, 33, 1096.	3.3	2
75	Mode-division multiplexing for next-generation optical transport. , 2012, , .		2
76	Modeling Raman amplification in multimode and multicore fibers. , 2014, , .		2
77	Use of the Kramersâ€“Kronig receiver with a low-cost dual-drive Machâ€“Zehnder transmitter. Optics Communications, 2019, 453, 124419.	2.1	2
78	RSOA-based colorless multilevel transmitter with electrical signal predistortion. Optics Communications, 2020, 456, 124654.	2.1	2
79	Fundamental Limits to the Measurement of the Polarization of Classical Light. Journal of Lightwave Technology, 2021, 39, 2387-2396.	4.6	2
80	A statistical theory of PMD-induced power penalty. , 2005, , .		2
81	A Model of the Nonlinear Interference in Space-Division Multiplexed Systems with Arbitrary Modal Dispersion. , 2021, , .		2
82	Broad-band PMD mitigation with a single polarization controller. IEEE Photonics Technology Letters, 2005, 17, 2574-2576.	2.5	1
83	Chaos Encrypted Optical Communication System. Fiber and Integrated Optics, 2008, 27, 308-316.	2.5	1
84	Nonintrusive characterization of long-fiber-link birefringence. Optics Letters, 2008, 33, 2740.	3.3	1
85	Duration of PMD-induced system outages. , 2008, , .		1
86	Quantum bit-error rate in plug-and-play quantum key distribution systems caused by axial magnetic fields. Fortschritte Der Physik, 2009, 57, 1084-1093.	4.4	1
87	Disappearance of polarization entanglement due to the relative orientation of two fiber's PMD vectors. , 2010, , .		1
88	Optical Nonlinearity in Multi-Mode Fibers with Random Mode Coupling. , 2012, , .		1
89	Modeling of linear and nonlinear coupling in multiple-mode fiber optic transmission with MIMO signal processing. , 2012, , .		1
90	Nonlinear propagation in Space-Division Multiplexed fiber-optic transmission. , 2015, , .		1

#	Article	IF	Citations
91	Inter-modal nonlinear interference in SDM systems and its impact on information capacity. , 2016, , .		1
92	Nonlinear Propagation in Multimode Fibers with Random Mode Coupling. , 2013, , .		1
93	Analytical expression for the modulation bandwidth of a reflective semiconductor optical amplifier. , 2014, , .		1
94	Distributed measurement of birefringence in uncoupled multicore fibers. , 2021, , .		1
95	Correction to "Comparison of System Penalties From First and Multiorder Polarization-Mode Dispersion". IEEE Photonics Technology Letters, 2007, 19, 628-628.	2.5	0
96	A non-intrusive characterization of long fiber link birefringence. , 2008, , .		0
97	Propagation of polarization-entangled photon pairs in optical fibers. , 2010, , .		0
98	Abrupt disappearance of entangelement in fibers with polarization mode dispersion. , 2011, , .		0
99	Modeling linear and nonlinear transmission in multi-mode fibers. Proceedings of SPIE, 2013, , .	0.8	0
100	Criticality of assumptions in the study of performance degradation caused by mode-dependent loss in SDM systems. , 2014, , .		0
101	Digital Coherence Enhancement in Space-Division Multiplexed Transmission. , 2017, , .		0
102	Reproducing the most general quantum channel in the lab: is it possible?. , 2020, , .		0
103	Transmission of Polarization Entangled Photons in Fiber-optics Networks. , 2011, , .		0
104	Nonlinear Propagation in Fibers for Space Division Multiplexing. , 2017, , .		0
105	The Kramersâ€“Kronig Receiver. , 2017, , .		0
106	Kramers-Kronig coherent receiver. , 2018, , .		0
107	Kramersâ€“Kronig receivers: erratum. Advances in Optics and Photonics, 2019, 11, 826.	25.5	0
108	Entanglement preservation based on classical correlations. , 2020, , .		0

#	Article	IF	Citations
109	Upper bound on mutual quantum information between two partially mixed qubits. , 2020, , .		0
110	Directional asymmetry of quantum channels. , 2020, , .		0
111	Mapping quantum channel decoherence. , 2020, , .		0