Benjamin J Puttnam

List of Publications by Year
in descending order

165 papers	3,130 citations	236925 25 h-index	197818 49 g-index
165 all docs	165 docs citations	165 times ranked	1543 citing authors

#	Article	IF	Citations
1	Space-division multiplexing for optical fiber communications. Optica, 2021, 8, 1186.	9.3	265
2	19-core MCF transmission system using EDFA with shared core pumping coupled via free-space optics. Optics Express, 2014, 22, 90.	3.4	226
3	305 Tb/s Space Division Multiplexed Transmission Using Homogeneous 19-Core Fiber. Journal of Lightwave Technology, 2013, 31, 554-562.	4.6	196
4	Wavelength division multiplexing of continuous variable quantum key distribution and 18.3 Tbit/s data channels. Communications Physics, 2019, 2, .	5.3	108
5	Time and Modulation Frequency Dependence of Crosstalk in Homogeneous Multi-Core Fibers. Journal of Lightwave Technology, 2016, 34, 441-447.	4.6	90
6	Investigating self-homodyne coherent detection in a 19 channel space-division-multiplexed transmission link. Optics Express, 2013, 21, 1561.	3.4	89
7	10.66 Peta-Bit/s Transmission over a 38-Core-Three-Mode Fiber. , 2020, , .		84
8	Free-Space Coupling Optics for Multicore Fibers. IEEE Photonics Technology Letters, 2012, 24, 1902-1905.	2.5	83
9	Long-Haul Transmission Over Few-Mode Fibers With Space-Division Multiplexing. Journal of Lightwave Technology, 2018, 36, 1382-1388.	4.6	80
10	Crosstalk dynamics in multi-core fibers. Optics Express, 2017, 25, 12020.	3.4	79
11	Peta-bit-per-second optical communications system using a standard cladding diameter 15-mode fiber. Nature Communications, 2021, 12, 4238.	12.8	78
12	Advanced Space Division Multiplexing Technologies for Optical Networks. Journal of Optical Communications and Networking, 2017, 9, C1.	4.8	69
13	19-core fiber transmission of 19Ã—100Ã—172-Gb/s SDM-WDM-PDM-QPSK signals at 305Tb/s. , 2012, , .		64
14	OSNR Penalty of Self-Homodyne Coherent Detection in Spatial-Division-Multiplexing Systems. IEEE Photonics Technology Letters, 2014, 26, 477-479.	2.5	64
15	High Capacity Transmission With Few-Mode Fibers. Journal of Lightwave Technology, 2019, 37, 425-432.	4.6	64
16	High Capacity Transmission Systems Using Homogeneous Multi-Core Fibers. Journal of Lightwave Technology, 2017, 35, 1157-1167.	4.6	61
17	Self-Homodyne Detection in Optical Communication Systems. Photonics, 2014, 1, 110-130.	2.0	46
18	High-capacity self-homodyne PDM-WDM-SDM transmission in a 19-core fiber. Optics Express, 2014, 22, 21185.	3.4	45

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19	1.2 Pb/s Throughput Transmission Using a 160Âmum Cladding, 4-Core, 3-Mode Fiber. Journal of Lightwave Technology, 2019, 37, 1798-1804.	4.6	45
20	Modulation formats for multi-core fiber transmission. Optics Express, 2014, 22, 32457.	3.4	44
21	Phase-squeezing properties of non-degenerate PSAs using PPLN waveguides. Optics Express, 2011, 19, B131.	3.4	42
22	S-, C- and L-band transmission over a 157â€...nm bandwidth using doped fiber and distributed Raman amplification. Optics Express, 2022, 30, 10011.	3.4	42
23	High-capacity transmission over multi-core fibers. Optical Fiber Technology, 2017, 35, 100-107.	2.7	37
24	Dispersion Impact on the Crosstalk Amplitude Response of Homogeneous Multi-Core Fibers. IEEE Photonics Technology Letters, 2016, 28, 1858-1861.	2.5	36
25	19-core fiber transmission of 19Ã—100Ã—172-Gb/s SDM-WDM-PDM-QPSK signals at 305Tb/s. , 2012, , .		35
26	Characteristics of homogeneous multi-core fibers for SDM transmission. APL Photonics, 2019, 4, .	5.7	35
27	159 Tbit/s C+L Band Transmission over 1045 km 3-Mode Graded-Index Few-Mode Fiber. , 2018, , .		32
28	High Data-Rate and Long Distance MCF Transmission With 19-Core <i>C</i>+<i>L</i> band Cladding-Pumped EDFA. Journal of Lightwave Technology, 2020, 38, 123-130.	4.6	29
29	Ultra High Capacity Self-Homodyne PON With Simplified ONU and Burst-Mode Upstream. IEEE Photonics Technology Letters, 2014, 26, 686-689.	2.5	28
30	Wavelength Division Multiplexing of 194 Continuous Variable Quantum Key Distribution Channels. Journal of Lightwave Technology, 2020, 38, 2214-2218.	4.6	28
31	S, C and Extended L-Band Transmission with Doped Fiber and Distributed Raman Amplification. , 2021, , .		26
32	Investigation of Intermodal Four-Wave Mixing for Nonlinear Signal Processing in Few-Mode Fibers. IEEE Photonics Technology Letters, 2018, 30, 1527-1530.	2.5	25
33	Performance evaluation of a burst-mode EDFA in an optical packet and circuit integrated network. Optics Express, 2013, 21, 32589.	3.4	24
34	93.34 Tbit/s/mode (280 Tbit/s) Transmission in a 3-Mode Graded-Index Few-Mode Fiber. , 2018, , .		24
35	Highly Spectral Efficient C + L-Band Transmission Over a 38-Core-3-Mode Fiber. Journal of Lightwave Technology, 2021, 39, 1048-1055.	4.6	22
36	0.61 Pb/s S, C, and L-Band Transmission in a 125Î¼m Diameter 4-Core Fiber Using a Single Wideband Comb Source. Journal of Lightwave Technology, 2021, 39, 1027-1032.	4.6	22

#	ARTICLE	IF	CITATIONS
37	172 Tb/s C+L Band Transmission over 2040 km Strongly Coupled 3-Core Fiber. , 2020, , .		22
38	<italic>K</italic>-Over-<italic>L</italic> Multidimensional Position Modulation. Journal of Lightwave Technology, 2014, 32, 2254-2262.	4.6	21
39	High Capacity Transmission in a Coupled-Core Three-Core Multi-Core Fiber. Journal of Lightwave Technology, 2021, 39, 757-762.	4.6	21
40	Comparing Inter-Core Skew Fluctuations in Multi-Core and Single-Core Fibers. , 2015, , .		20
41	0.715 Pb/s Transmission over 2,009.6 km in 19-core cladding pumped EDFA amplified MCF link. , 2019, , .		20
42	Investigation of Intermodal Nonlinear Signal Distortions in Few-Mode Fiber Transmission. Journal of Lightwave Technology, 2019, 37, 1273-1279.	4.6	19
43	Large Phase Sensitive Gain in Periodically Poled Lithiumâ€“Niobate With High Pump Power. IEEE Photonics Technology Letters, 2011, 23, 426-428.	2.5	18
44	Intercore crosstalk in direct-detection homogeneous multicore fiber systems impaired by laser phase noise. Optics Express, 2017, 25, 29417.	3.4	18
45	Performance of adaptive DD-OFDM multicore fiber links and its relation with intercore crosstalk. Optics Express, 2017, 25, 16017.	3.4	17
46	Long distance crosstalk-supported transmission using homogeneous multicore fibers and SDM-MIMO demultiplexing. Optics Express, 2018, 26, 24044.	3.4	17
47	Crosstalk Impact on Continuous Variable Quantum Key Distribution in Multicore Fiber Transmission. IEEE Photonics Technology Letters, 2019, 31, 467-470.	2.5	17
48	Self-Homodyne Detection-Based Fully Coherent Reflective PON Using RSOA and Simplified DSP. IEEE Photonics Technology Letters, 2015, 27, 2226-2229.	2.5	16
49	Optimization of Wavelength-Locking Loops for Fast Tunable Laser Stabilization in Dynamic Optical Networks. Journal of Lightwave Technology, 2009, 27, 2117-2124.	4.6	15
50	Field Trial of a Flexible Real-Time Software-Defined GPU-Based Optical Receiver. Journal of Lightwave Technology, 2021, 39, 2358-2367.	4.6	15
51	3500-km Mode-Multiplexed Transmission Through a Three-Mode Graded-Index Few-Mode Fiber Link. , 2017, , .		14
52	Investigation of Receiver DSP Carrier Phase Estimation Rate for Self-homodyne Space-division Multiplexing Communication Systems. , 2013, , .		14
53	All-Optical Packet Alignment Using Polarization Attraction Effect. IEEE Photonics Technology Letters, 2015, 27, 541-544.	2.5	13
54	Single parity check-coded 16QAM over spatial superchannels in multicore fiber transmission. Optics Express, 2015, 23, 14569.	3.4	13

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55	Digital Self-Homodyne Detection. IEEE Photonics Technology Letters, 2015, 27, 608-611.	2.5	12
56	Wideband Intermodal Nonlinear Signal Processing With a Highly Nonlinear Few-Mode Fiber. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-7.	2.9	12
57	Crosstalk Impact on the Performance of Wideband Multicore-Fiber Transmission Systems. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-9.	2.9	12
58	Transmission of PM-QPSK and PS-QPSK with different fiber span lengths. Optics Express, 2012, 20, 7544.	3.4	11
59	Long Distance Transmission in a Multi-Core Fiber with Self-Homodyne Detection. , 2015, , .		11
60	Optically equalized 10 Gb/s NRZ digital burstmode receiver for dynamic optical networks. Optics Express, 2007, 15, 9520.	3.4	10
61	Investigation of an All-Optical Black-Box PPLN-PPLN BPSK Phase Regenerator. IEEE Photonics Technology Letters, 2012, 24, 2087-2089.	2.5	10
62	Impact of spatial channel skew on the performance of spatial-division multiplexed self-homodyne transmission systems. , 2015, , .		10
63	Experimental demonstration of a polarization-insensitive self-homodyne detection receiver for optical access. , 2015, , .		10
64	Crosstalk-Induced System Outage in Intensity-Modulated Direct-Detection Multi-Core Fiber Transmission. Journal of Lightwave Technology, 2020, 38, 291-296.	4.6	10
65	Space-division multiplexed transmission in the S-band over 55 km few-mode fibers. Optics Express, 2020, 28, 27037.	3.4	10
66	Investigating the Limits of Optical Packet Transmission Through Cascaded Transient-Suppressed EDFAs Without Regeneration or Active Gain Control. , 2010, , .		9
67	On the Use of High-Order MIMO for Long-Distance Homogeneous Single-Mode Multicore Fiber Transmission. , 2017, , .		9
68	Pilot-Aided Joint-Channel Carrier-Phase Estimation in Space-Division Multiplexed Multicore Fiber Transmission. Journal of Lightwave Technology, 2019, 37, 1133-1142.	4.6	9
69	Experimental Demonstration of a Petabit per Second SDM Network Node. Journal of Lightwave Technology, 2020, , 1-1.	4.6	9
70	Clock and Data Recovery-Free Data Communications Enabled by Multi-Core Fiber With Low Thermal Sensitivity of Skew. Journal of Lightwave Technology, 2020, 38, 1636-1643.	4.6	9
71	Experimental characterization of the phase squeezing properties of a phase-sensitive parametric amplifier in non-degenerate idler configuration. , 2010, , .		8
72	Free-space coupling optics for multi-core fibers. , 2012, , .		8

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73	SDM-WDM hybrid reconfigurable add-drop nodes for self-homodyne photonic networks. , 2013, , .		8
74	Demonstration of Wavelength-Shared Coherent PON Using RSOA and Simplified DSP. IEEE Photonics Technology Letters, 2014, 26, 2142-2145.	2.5	8
75	Numerical Comparison of WDM Interchannel Crosstalk in FOPA- and PPLN-Based PSAs. IEEE Photonics Technology Letters, 2014, 26, 1503-1506.	2.5	8
76	Master-slave carrier recovery for M-QAM multicore fiber transmission. Optics Express, 2019, 27, 22226.	3.4	8
77	Simple method for optimizing the DC bias of Kramers-Kronig receivers based on AC-coupled photodetectors. Optics Express, 2020, 28, 4067.	3.4	8
78	High-Throughput and Long-Distance Transmission With >120 nm S-, C- and L-Band Signal in a 125Î¼m 4-Core Fiber. Journal of Lightwave Technology, 2022, 40, 1633-1639.	4.6	8
79	Real-Time 10,000 km Straight-Line Transmission Using a Software-Defined GPU-Based Receiver. IEEE Photonics Technology Letters, 2021, 33, 1519-1522.	2.5	8
80	Free-space coupling conditions for multi-core few-mode fibers. , 2014, , .		7
81	Inter-Core Crosstalk Penalties in Wideband WDM, MCF Transmission Over Transoceanic Distances. , 2018, , .		7
82	Inter-Core Crosstalk Impact of Classical Channels on CV-QKD in Multicore Fiber Transmission. , 2019, , .		7
83	High Capacity and Long-Haul Transmission with Space-Division Multiplexing. , 2021, , .		7
84	Experimental investigation of optically gain-clamped EDFAs in dynamic optical- burst-switched networks. Journal of Optical Networking, 2008, 7, 151.	2.5	6
85	Burst-Mode Optical Amplifier. , 2010, , .		6
86	210Tb/s self-homodyne PDM-WDM-SDM transmission with DFB lasers in a 19-core fiber. , 2013, , .		6
87	Multi-channel phase squeezing in a PPLN-PPLN PSA. , 2012, , .		6
88	Wide-Band Intermodal Wavelength Conversion in a Dispersion Engineered Highly Nonlinear FMF. , 2019, , .		6
89	Experimental Evaluation of the Time and Frequency Crosstalk Dependency in a 7-Core Multi-Core Fiber. , 2015, , .		5
90	Spectrally Efficient Enhanced-Performance Bidirectional Coherent PON With Laserless 10â€‰â€‰Gb/s ONU [Invited]. Journal of Optical Communications and Networking, 2015, 7, A403.	4.8	5

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91	Spectrally-Efficient Seed-Lightwave-Distribution System using Space-Division-Multiplexed Distribution Channel for Multi-core 3-Mode-Multiplexed DP-64QAM Transmission. , 2017, , .		5
92	Hybrid Circuit and Packet Switching SDM Network Testbed Using Joint Spatial Switching and Multi-Core Fibers. , 2017, , .		5
93	Demonstration of an SDM Network Testbed for Joint Spatial Circuit and Packet Switching â€. Photonics, 2018, 5, 20.	2.0	5
94	Crosstalk Fluctuations in Homogeneous Multi-Core Fibers. , 2017, , .		5
95	Fast Equalizer Kernel Initialization for Coherent PDM-QPSK Burst-mode Receivers Based on Stokes Estimator. , 2013, , .		5
96	Phase-sensitive amplification in a single bi-directional PPLN waveguide. Optics Express, 2013, 21, 22063.	3.4	4
97	Space division multiplexing (SDM) transmission and related technologies. , 2014, , .		4
98	Investigation of PPLN-Based PSAs for High-Gain Optical Amplification. Journal of Lightwave Technology, 2015, 33, 2802-2810.	4.6	4
99	Experimental investigation of phase-sensitive amplification of data signals in a four-mode fiber-based PSA. Optics Letters, 2015, 40, 288.	3.3	4
100	Impact of GVD on Polarization-Insensitive Self-Homodyne Detection Receiver. IEEE Photonics Technology Letters, 2017, 29, 631-634.	2.5	4
101	DD-OFDM multicore fiber systems impaired by intercore crosstalk and laser phase noise. , 2017, , .		4
102	Investigation of Higher Order Modulation Formats for Few-Mode Fiber SDM Transmission Systems. , 2018, , .		4
103	Compensation of inter-core skew in multi-core fibers with group velocity dispersion. Optics Express, 2021, 29, 28104.	3.4	4
104	Real-time, Software-Defined, GPU-Based Receiver Field Trial. , 2020, , .		4
105	Experimental evaluation of the impact of the light source on the measurement of short-term average crosstalk in homogeneous single-mode multi-core fibers. Optics Express, 2020, 28, 35099.	3.4	4
106	Demonstration of a 90 Tb/s, 234.8 km, C+L band unrepeatered SSMF link with bidirectional Raman amplification. Optics Express, 2022, 30, 13114.	3.4	4
107	10 Gb/s AC-Coupled Digital Burst-Mode Optical Receiver. , 2007, , .		3
108	Performance of an Adaptive Threshold Receiver in a Dynamic Optical Burst-Switched Network. IEEE Photonics Technology Letters, 2008, 20, 223-225.	2.5	3

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109	Experimental investigation of optically gain-clamped EDFAs in dynamic optical-burst-switched networks: publisher's note. Journal of Optical Networking, 2008, 7, 197.	2.5	3
110	105Tb/s Transmission System Using Low-cost, MHz Linewidth DFB Lasers Enabled by Self-Homodyne Coherent Detection and a 19-Core Fiber. , 2013, , .		3
111	Progress of space division multiplexing technology for future optical networks. , 2014, , .		3
112	Large-scale, heterogeneous, few-mode multi-core fiber technologies with over 100 spatial channels. , 2015, , .		3
113	Space division multiplexing (SDM) transmission and related technologies. , 2016, , .		3
114	Performance Fluctuations in Direct Detection Multi-Core Fiber Transmission Systems. , 2017, , .		3
115	Modulation format-dependence of crosstalk fluctuations in homogeneous multi-core fibers. , 2017, , .		3
116	Intermodal Nonlinear Signal Distortions in Multi-Span Transmission With Few-Mode Fibers. IEEE Photonics Technology Letters, 2020, 32, 1175-1178.	2.5	3
117	Digital Back Propagation in Long-Haul, MIMO-Supported, Multicore Fiber Transmission. IEEE Photonics Technology Letters, 2020, 32, 730-732.	2.5	3
118	Large-capacity transmission over a 19-core fiber. , 2013, , .		3
119	Eliminating gain transience in RoF signals in dynamic WDM networks using a transient-suppressed-EDFA with additional gain-stabilization. , 2010, , .		2
120	Evaluation of a Fiber-Optic Parametric Amplifier with Optical Feedback in Multi-Channel Dynamic Networks. , 2011, , .		2
121	Signal-signal crosstalk measurements in a PPLN-PPLN PSA with narrow channel spacing. , 2012, , .		2
122	Self-homodyne coherent OFDM packet transmission without carrier frequency or common phase error estimation. , 2013, , .		2
123	Investigation of black-box phase regeneration using single bi-directional PPLN waveguide. , 2013, , .		2
124	Optical technologies for space division multiplexing. , 2014, , .		2
125	Experimental assessment of the time-varying impact of multi-core fiber crosstalk on a SSB-OFDM signal. , 2015, , .		2
126	Self-homodyne and phase measurements for MCF transmission with wideband comb transmitter. , 2016, , .		2

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127	Hybrid optical packet and circuit switching in spatial division multiplexing fiber networks. , 2017, , .		2
128	10,000 km Straight-line Transmission using a Real-time Software-defined GPU-Based Receiver. , 2021, , .		2
129	Impact of differential group-velocity dispersion on intermodal four-wave mixing in few-mode fibers. , 2018, , .		2
130	Impact of Modulation Format on Dynamic Channel Crosstalk Behavior in Multi-Core Fibers. , 2019, , .		2
131	Digital Self-Coherent Continuous Variable Quantum Key Distribution System. , 2020, , .		2
132	372 Tb/s Unrepeatered 213 km Transmission Over a 125 Âµm Cladding Diameter, 4-Core MCF. , 2022, , .		2
133	Supplementary transient suppression in a Burst-mode EDFA using optical feedback. , 2009, , .		1
134	Modelling all-optical phase-sensitive BPSK and QPSK regenerators. , 2013, , .		1
135	PPLN-based all-optical QPSK regenerator. , 2013, , .		1
136	Self-homodyne coherent detection in multi-core fiber links. , 2014, , .		1
137	Coherent detection in self-homodyne systems with single and multi-core transmission. , 2015, , .		1
138	Impact of Intercore Crosstalk on Achievable Information Rates. , 2018, , .		1
139	Joint Phase Tracking for Multicore Transmission with Correlated Phase Noise. , 2018, , .		1
140	Experimental Investigation of Intermodal Nonlinear Signal Degradation in a Few-Mode Fiber Transmission System. , 2018, , .		1
141	Corrections to â€œHigh Capacity Transmission With Few-Mode Fibersâ€• Journal of Lightwave Technology, 2019, 37, 3433-3433.	4.6	1
142	Experimental Investigation of Phase Squeezing in a Non-Degenerate PSA Based on a PPLN Waveguide. , 2011, , .		1
143	Large-scale space division multiplexed transmission through multi-core fiber. , 2012, , .		1
144	Experimental Investigation of Phase-Sensitive Amplification in Quantum-Dot Semiconductor Optical Amplifier. , 2016, , .		1

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145	Impact of Crosstalk-Power and -Polarization Variations on Short-Haul Multi-Core Fiber Transmission Systems. , 2017, , .		1
146	Challenges in Parallel Operation of Quantum Key Distribution and Data Transmission. , 2019, , .		1
147	Enabling Future Fiber Networks Using Integrated Ultrafast Laser-Written Multicore Fiber Fan-outs. , 2020, , .		1
148	Channel Dynamics in Few-Mode Fiber Transmission Under Mechanical Vibrations. , 2020, , .		1
149	Characterization and Optical Compensation of LP01 and LP11 Intra-modal Nonlinearity in Few-Mode Fibers. , 2020, , .		1
150	Investigation of PPSLT waveguides for applications in optical communication systems. , 2014, , .		0
151	Self-homodyne AWG-based coherent optical packet switching architecture for data centers. , 2015, , .		0
152	PPLN-based all-optical signal processing and phase-sensitive amplification. , 2015, , .		0
153	High-Capacity Transmission in Multi-core Fiber Systems Using Advanced Modulation Formats. , 2016, , .		0
154	Homogeneous, single-mode MCF transmission. , 2016, , .		0
155	Record achievements in SDM transmission capacity. , 2016, , .		0
156	Impact of GVD on polarization-insensitive self-homodyne detection receiver. , 2017, , .		0
157	Record Spectral Efficient Transmission of 11.24 Bit/s/Hz/mode over 30 km Few-Mode Fiber. , 2018, , .		0
158	Free-Space Few-Mode Kramers-Kronig Receiver. , 2018, , .		0
159	OSNR penalties for non-zero skew in space-division multiplexed transmission link with self-homodyne detection. , 2015, , .		0
160	Parallel transmission loops for MCF system investigations. , 2017, , .		0
161	High-capacity transmission with homogeneous multi-core fibers and wideband optical comb sources. , 2018, , .		0
162	Spectral efficiency in crosstalk-impaired multi-core fiber links. , 2018, , .		0

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163	Experimental Evaluation of the Crosstalk Impulse Response of a Temperature Controlled Homogeneous Multi-Core Fiber. , 2021, , .		0
164	High data-rate and long-distance wideband transmission in 125 Î¼m diameter fibers. , 2022, , .		0
165	Investigation of Wideband Distributed Raman Amplification in a Few-Mode Fiber Link. , 2022, , .		0