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	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
2	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
3	High data-rate and long-distance wideband transmission in 125 Î¼m diameter fibers. , 2022, , .		0
4	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
5	Investigation of Wideband Distributed Raman Amplification in a Few-Mode Fiber Link. , 2022, , .		0
6	372 Tb/s Unrepeatered 213 km Transmission Over a 125 Âµm Cladding Diameter, 4-Core MCF. , 2022, , .		2
7	High Capacity Transmission in a Coupled-Core Three-Core Multi-Core Fiber. Journal of Lightwave Technology, 2021, 39, 757-762.	4.6	21
8	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
9	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
10	Field Trial of a Flexible Real-Time Software-Defined GPU-Based Optical Receiver. Journal of Lightwave Technology, 2021, 39, 2358-2367.	4.6	15
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	Compensation of inter-core skew in multi-core fibers with group velocity dispersion. Optics Express, 2021, 29, 28104.	3.4	4
13	Space-division multiplexing for optical fiber communications. Optica, 2021, 8, 1186.	9.3	265
14	10,000 km Straight-line Transmission using a Real-time Software-defined GPU-Based Receiver. , 2021, , .		2
15	High Capacity and Long-Haul Transmission with Space-Division Multiplexing. , 2021, , .		7
16	S, C and Extended L-Band Transmission with Doped Fiber and Distributed Raman Amplification. , 2021, , .		26
17	Experimental Evaluation of the Crosstalk Impulse Response of a Temperature Controlled Homogeneous Multi-Core Fiber. , 2021, , .		0
18	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

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19	Crosstalk-Induced System Outage in Intensity-Modulated Direct-Detection Multi-Core Fiber Transmission. Journal of Lightwave Technology, 2020, 38, 291-296.	4.6	10
20	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
21	Intermodal Nonlinear Signal Distortions in Multi-Span Transmission With Few-Mode Fibers. IEEE Photonics Technology Letters, 2020, 32, 1175-1178.	2.5	3
22	Experimental Demonstration of a Petabit per Second SDM Network Node. Journal of Lightwave Technology, 2020, , 1-1.	4.6	9
23	Digital Back Propagation in Long-Haul, MIMO-Supported, Multicore Fiber Transmission. IEEE Photonics Technology Letters, 2020, 32, 730-732.	2.5	3
24	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
25	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
26	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
27	Wavelength Division Multiplexing of 194 Continuous Variable Quantum Key Distribution Channels. Journal of Lightwave Technology, 2020, 38, 2214-2218.	4.6	28
28	Space-division multiplexed transmission in the S-band over 55 km few-mode fibers. Optics Express, 2020, 28, 27037.	3.4	10
29	10.66 Peta-Bit/s Transmission over a 38-Core-Three-Mode Fiber. , 2020, , .		84
30	172 Tb/s C+L Band Transmission over 2040 km Strongly Coupled 3-Core Fiber. , 2020, , .		22
31	Enabling Future Fiber Networks Using Integrated Ultrafast Laser-Written Multicore Fiber Fan-outs. , 2020, , .		1
32	Digital Self-Coherent Continuous Variable Quantum Key Distribution System. , 2020, , .		2
33	Channel Dynamics in Few-Mode Fiber Transmission Under Mechanical Vibrations. , 2020, , .		1
34	Real-time, Software-Defined, GPU-Based Receiver Field Trial. , 2020, , .		4
35	Simple method for optimizing the DC bias of Kramers-Kronig receivers based on AC-coupled photodetectors. Optics Express, 2020, 28, 4067.	3.4	8
36	Characterization and Optical Compensation of LP01 and LP11 Intra-modal Nonlinearity in Few-Mode Fibers. , 2020, , .		1

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37	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
38	Corrections to â€œHigh Capacity Transmission With Few-Mode Fibersâ€. Journal of Lightwave Technology, 2019, 37, 3433-3433.	4.6	1
39	Wavelength division multiplexing of continuous variable quantum key distribution and 18.3 Tbit/s data channels. Communications Physics, 2019, 2, .	5.3	108
40	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
41	Crosstalk Impact on Continuous Variable Quantum Key Distribution in Multicore Fiber Transmission. IEEE Photonics Technology Letters, 2019, 31, 467-470.	2.5	17
42	High Capacity Transmission With Few-Mode Fibers. Journal of Lightwave Technology, 2019, 37, 425-432.	4.6	64
43	Characteristics of homogeneous multi-core fibers for SDM transmission. APL Photonics, 2019, 4, .	5.7	35
44	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
45	Investigation of Intermodal Nonlinear Signal Distortions in Few-Mode Fiber Transmission. Journal of Lightwave Technology, 2019, 37, 1273-1279.	4.6	19
46	Master-slave carrier recovery for M-QAM multicore fiber transmission. Optics Express, 2019, 27, 22226.	3.4	8
47	Inter-Core Crosstalk Impact of Classical Channels on CV-QKD in Multicore Fiber Transmission. , 2019, , .		7
48	0.715 Pb/s Transmission over 2,009.6 km in 19-core cladding pumped EDFA amplified MCF link. , 2019, , .		20
49	Wide-Band Intermodal Wavelength Conversion in a Dispersion Engineered Highly Nonlinear FMF. , 2019, , .		6
50	Impact of Modulation Format on Dynamic Channel Crosstalk Behavior in Multi-Core Fibers. , 2019, , .		2
51	Challenges in Parallel Operation of Quantum Key Distribution and Data Transmission. , 2019, , .		1
52	Long-Haul Transmission Over Few-Mode Fibers With Space-Division Multiplexing. Journal of Lightwave Technology, 2018, 36, 1382-1388.	4.6	80
53	Record Spectral Efficient Transmission of 11.24 Bit/s/Hz/mode over 30 km Few-Mode Fiber. , 2018, , .		0
54	Impact of Intercore Crosstalk on Achievable Information Rates. , 2018, , .		1

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55	Free-Space Few-Mode Kramers-Kronig Receiver. , 2018, , .		0
56	Joint Phase Tracking for Multicore Transmission with Correlated Phase Noise. , 2018, , .		1
57	Inter-Core Crosstalk Penalties in Wideband WDM, MCF Transmission Over Transoceanic Distances. , 2018, , .		7
58	Experimental Investigation of Intermodal Nonlinear Signal Degradation in a Few-Mode Fiber Transmission System. , 2018, , .		1
59	Demonstration of an SDM Network Testbed for Joint Spatial Circuit and Packet Switching â€. Photonics, 2018, 5, 20.	2.0	5
60	Long distance crosstalk-supported transmission using homogeneous multicore fibers and SDM-MIMO demultiplexing. Optics Express, 2018, 26, 24044.	3.4	17
61	Investigation of Higher Order Modulation Formats for Few-Mode Fiber SDM Transmission Systems. , 2018, , .		4
62	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
63	159 Tbit/s C+L Band Transmission over 1045 km 3-Mode Graded-Index Few-Mode Fiber. , 2018, , .		32
64	93.34 Tbit/s/mode (280 Tbit/s) Transmission in a 3-Mode Graded-Index Few-Mode Fiber. , 2018, , .		24
65	Impact of differential group-velocity dispersion on intermodal four-wave mixing in few-mode fibers. , 2018, , .		2
66	High-capacity transmission with homogeneous multi-core fibers and wideband optical comb sources. , 2018, , .		0
67	Spectral efficiency in crosstalk-impaired multi-core fiber links. , 2018, , .		0
68	High Capacity Transmission Systems Using Homogeneous Multi-Core Fibers. Journal of Lightwave Technology, 2017, 35, 1157-1167.	4.6	61
69	Advanced Space Division Multiplexing Technologies for Optical Networks. Journal of Optical Communications and Networking, 2017, 9, C1.	4.8	69
70	Impact of GVD on Polarization-Insensitive Self-Homodyne Detection Receiver. IEEE Photonics Technology Letters, 2017, 29, 631-634.	2.5	4
71	High-capacity transmission over multi-core fibers. Optical Fiber Technology, 2017, 35, 100-107.	2.7	37
72	DD-OFDM multicore fiber systems impaired by intercore crosstalk and laser phase noise. , 2017, , .		4

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73	Spectrally-Efficient Seed-Lightwave-Distribution System using Space-Division-Multiplexed Distribution Channel for Multi-core 3-Mode-Multiplexed DP-64QAM Transmission. , 2017, , .		5
74	3500-km Mode-Multiplexed Transmission Through a Three-Mode Graded-Index Few-Mode Fiber Link. , 2017, , .		14
75	Performance Fluctuations in Direct Detection Multi-Core Fiber Transmission Systems. , 2017, , .		3
76	On the Use of High-Order MIMO for Long-Distance Homogeneous Single-Mode Multicore Fiber Transmission. , 2017, , .		9
77	Hybrid Circuit and Packet Switching SDM Network Testbed Using Joint Spatial Switching and Multi-Core Fibers. , 2017, , .		5
78	Crosstalk dynamics in multi-core fibers. Optics Express, 2017, 25, 12020.	3.4	79
79	Intercore crosstalk in direct-detection homogeneous multicore fiber systems impaired by laser phase noise. Optics Express, 2017, 25, 29417.	3.4	18
80	Performance of adaptive DD-OFDM multicore fiber links and its relation with intercore crosstalk. Optics Express, 2017, 25, 16017.	3.4	17
81	Impact of GVD on polarization-insensitive self-homodyne detection receiver. , 2017, , .		0
82	Modulation format-dependence of crosstalk fluctuations in homogeneous multi-core fibers. , 2017, , .		3
83	Hybrid optical packet and circuit switching in spatial division multiplexing fiber networks. , 2017, , .		2
84	Crosstalk Fluctuations in Homogeneous Multi-Core Fibers. , 2017, , .		5
85	Parallel transmission loops for MCF system investigations. , 2017, , .		0
86	Impact of Crosstalk-Power and -Polarization Variations on Short-Haul Multi-Core Fiber Transmission Systems. , 2017, , .		1
87	High-Capacity Transmission in Multi-core Fiber Systems Using Advanced Modulation Formats. , 2016, , .		0
88	Dispersion Impact on the Crosstalk Amplitude Response of Homogeneous Multi-Core Fibers. IEEE Photonics Technology Letters, 2016, 28, 1858-1861.	2.5	36
89	Homogeneous, single-mode MCF transmission. , 2016, , .		0
90	Space division multiplexing (SDM) transmission and related technologies. , 2016, , .		3

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91	Self-homodyne and phase measurements for MCF transmission with wideband comb transmitter. , 2016, , .		2
92	Record achievements in SDM transmission capacity. , 2016, , .		0
93	Time and Modulation Frequency Dependence of Crosstalk in Homogeneous Multi-Core Fibers. Journal of Lightwave Technology, 2016, 34, 441-447.	4.6	90
94	Experimental Investigation of Phase-Sensitive Amplification in Quantum-Dot Semiconductor Optical Amplifier. , 2016, , .		1
95	Long Distance Transmission in a Multi-Core Fiber with Self-Homodyne Detection. , 2015, , .		11
96	Impact of spatial channel skew on the performance of spatial-division multiplexed self-homodyne transmission systems. , 2015, , .		10
97	Experimental demonstration of a polarization-insensitive self-homodyne detection receiver for optical access. , 2015, , .		10
98	All-Optical Packet Alignment Using Polarization Attraction Effect. IEEE Photonics Technology Letters, 2015, 27, 541-544.	2.5	13
99	Self-homodyne AWG-based coherent optical packet switching architecture for data centers. , 2015, , .		0
100	Experimental assessment of the time-varying impact of multi-core fiber crosstalk on a SSB-OFDM signal. , 2015, , .		2
101	Experimental Evaluation of the Time and Frequency Crosstalk Dependency in a 7-Core Multi-Core Fiber. , 2015, , .		5
102	Large-scale, heterogeneous, few-mode multi-core fiber technologies with over 100 spatial channels. , 2015, , .		3
103	Investigation of PPLN-Based PSAs for High-Gain Optical Amplification. Journal of Lightwave Technology, 2015, 33, 2802-2810.	4.6	4
104	Self-Homodyne Detection-Based Fully Coherent Reflective PON Using RSOA and Simplified DSP. IEEE Photonics Technology Letters, 2015, 27, 2226-2229.	2.5	16
105	PPLN-based all-optical signal processing and phase-sensitive amplification. , 2015, , .		0
106	Digital Self-Homodyne Detection. IEEE Photonics Technology Letters, 2015, 27, 608-611.	2.5	12
107	Single parity check-coded 16QAM over spatial superchannels in multicore fiber transmission. Optics Express, 2015, 23, 14569.	3.4	13
108	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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109	Experimental investigation of phase-sensitive amplification of data signals in a four-mode fiber-based PSA. Optics Letters, 2015, 40, 288.	3.3	4
110	Comparing Inter-Core Skew Fluctuations in Multi-Core and Single-Core Fibers. , 2015, , .		20
111	Coherent detection in self-homodyne systems with single and multi-core transmission. , 2015, , .		1
112	OSNR penalties for non-zero skew in space-division multiplexed transmission link with self-homodyne detection. , 2015, , .		0
113	Self-Homodyne Detection in Optical Communication Systems. Photonics, 2014, 1, 110-130.	2.0	46
114	Self-homodyne coherent detection in multi-core fiber links. , 2014, , .		1
115	High-capacity self-homodyne PDM-WDM-SDM transmission in a 19-core fiber. Optics Express, 2014, 22, 21185.	3.4	45
116	Demonstration of Wavelength-Shared Coherent PON Using RSOA and Simplified DSP. IEEE Photonics Technology Letters, 2014, 26, 2142-2145.	2.5	8
117	Space division multiplexing (SDM) transmission and related technologies. , 2014, , .		4
118	Modulation formats for multi-core fiber transmission. Optics Express, 2014, 22, 32457.	3.4	44
119	Investigation of PPSLT waveguides for applications in optical communication systems. , 2014, , .		0
120	Numerical Comparison of WDM Interchannel Crosstalk in FOPA- and PPLN-Based PSAs. IEEE Photonics Technology Letters, 2014, 26, 1503-1506.	2.5	8
121	Optical technologies for space division multiplexing. , 2014, , .		2
122	Progress of space division multiplexing technology for future optical networks. , 2014, , .		3
123	OSNR Penalty of Self-Homodyne Coherent Detection in Spatial-Division-Multiplexing Systems. IEEE Photonics Technology Letters, 2014, 26, 477-479.	2.5	64
124	Ultra High Capacity Self-Homodyne PON With Simplified ONU and Burst-Mode Upstream. IEEE Photonics Technology Letters, 2014, 26, 686-689.	2.5	28
125	19-core MCF transmission system using EDFA with shared core pumping coupled via free-space optics. Optics Express, 2014, 22, 90.	3.4	226
126	<italic>K</italic>-Over-<italic>L</italic> Multidimensional Position Modulation. Journal of Lightwave Technology, 2014, 32, 2254-2262.	4.6	21

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127	Free-space coupling conditions for multi-core few-mode fibers. , 2014, , .		7
128	305 Tb/s Space Division Multiplexed Transmission Using Homogeneous 19-Core Fiber. Journal of Lightwave Technology, 2013, 31, 554-562.	4.6	196
129	Self-homodyne coherent OFDM packet transmission without carrier frequency or common phase error estimation. , 2013, , .		2
130	SDM-WDM hybrid reconfigurable add-drop nodes for self-homodyne photonic networks. , 2013, , .		8
131	210Tb/s self-homodyne PDM-WDM-SDM transmission with DFB lasers in a 19-core fiber. , 2013, , .		6
132	Investigating self-homodyne coherent detection in a 19 channel space-division-multiplexed transmission link. Optics Express, 2013, 21, 1561.	3.4	89
133	Phase-sensitive amplification in a single bi-directional PPLN waveguide. Optics Express, 2013, 21, 22063.	3.4	4
134	Performance evaluation of a burst-mode EDFA in an optical packet and circuit integrated network. Optics Express, 2013, 21, 32589.	3.4	24
135	Modelling all-optical phase-sensitive BPSK and QPSK regenerators. , 2013, , .		1
136	PPLN-based all-optical QPSK regenerator. , 2013, , .		1
137	105Tb/s Transmission System Using Low-cost, MHz Linewidth DFB Lasers Enabled by Self-Homodyne Coherent Detection and a 19-Core Fiber. , 2013, , .		3
138	Investigation of black-box phase regeneration using single bi-directional PPLN waveguide. , 2013, , .		2
139	Investigation of Receiver DSP Carrier Phase Estimation Rate for Self-homodyne Space-division Multiplexing Communication Systems. , 2013, , .		14
140	Large-capacity transmission over a 19-core fiber. , 2013, , .		3
141	Fast Equalizer Kernel Initialization for Coherent PDM-QPSK Burst-mode Receivers Based on Stokes Estimator. , 2013, , .		5
142	19-core fiber transmission of 19Ã—100Ã—172-Gb/s SDM-WDM-PDM-QPSK signals at 305Tb/s. , 2012, , .		35
143	Transmission of PM-QPSK and PS-QPSK with different fiber span lengths. Optics Express, 2012, 20, 7544.	3.4	11
144	Signal-signal crosstalk measurements in a PPLN-PPLN PSA with narrow channel spacing. , 2012, , .		2

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145	Investigation of an All-Optical Black-Box PPLN-PPLN BPSK Phase Regenerator. IEEE Photonics Technology Letters, 2012, 24, 2087-2089.	2.5	10
146	Free-Space Coupling Optics for Multicore Fibers. IEEE Photonics Technology Letters, 2012, 24, 1902-1905.	2.5	83
147	Free-space coupling optics for multi-core fibers. , 2012, , .		8
148	19-core fiber transmission of 19Ã—100Ã—172-Gb/s SDM-WDM-PDM-QPSK signals at 305Tb/s. , 2012, , .		64
149	Multi-channel phase squeezing in a PPLN-PPLN PSA. , 2012, , .		6
150	Large-scale space division multiplexed transmission through multi-core fiber. , 2012, , .		1
151	Large Phase Sensitive Gain in Periodically Poled Lithiumâ€“Niobate With High Pump Power. IEEE Photonics Technology Letters, 2011, 23, 426-428.	2.5	18
152	Phase-squeezing properties of non-degenerate PSAs using PPLN waveguides. Optics Express, 2011, 19, B131.	3.4	42
153	Evaluation of a Fiber-Optic Parametric Amplifier with Optical Feedback in Multi-Channel Dynamic Networks. , 2011, , .		2
154	Experimental Investigation of Phase Squeezing in a Non-Degenerate PSA Based on a PPLN Waveguide. , 2011, , .		1
155	Burst-Mode Optical Amplifier. , 2010, , .		6
156	Investigating the Limits of Optical Packet Transmission Through Cascaded Transient-Suppressed EDFAs Without Regeneration or Active Gain Control. , 2010, , .		9
157	Experimental characterization of the phase squeezing properties of a phase-sensitive parametric amplifier in non-degenerate idler configuration. , 2010, , .		8
158	Eliminating gain transience in RoF signals in dynamic WDM networks using a transient-suppressed-EDFA with additional gain-stabilization. , 2010, , .		2
159	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
160	Supplementary transient suppression in a Burst-mode EDFA using optical feedback. , 2009, , .		1
161	Performance of an Adaptive Threshold Receiver in a Dynamic Optical Burst-Switched Network. IEEE Photonics Technology Letters, 2008, 20, 223-225.	2.5	3
162	Experimental investigation of optically gain-clamped EDFAs in dynamic optical- burst-switched networks. Journal of Optical Networking, 2008, 7, 151.	2.5	6

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163	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
164	10 Gb/s AC-Coupled Digital Burst-Mode Optical Receiver. , 2007, , .		3
165	Optically equalized 10 Gb/s NRZ digital burstmode receiver for dynamic optical networks. Optics Express, 2007, 15, 9520.	3.4	10