

Mengfan Cheng

List of Publications by Year in descending order

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106
papers

1,775
citations

279798

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106
all docs

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106
times ranked

895
citing authors

#	ARTICLE	IF	CITATIONS
1	Simultaneous RF Self-Interference Cancellation, Local Oscillator Generation, Frequency up- and down-Conversion in an Integrated In-Band Full-Duplex 5G RF Transceiver Front-End. Journal of Lightwave Technology, 2022, 40, 511-518.	4.6	8
2	Experimental Demonstration of Simultaneously Precise Tx and Rx Skew Calibration for Coherent Optical Transceiver. Journal of Lightwave Technology, 2022, 40, 1043-1054.	4.6	8
3	An Enhanced Electro-Optic Chaos Secure Communication System Immune to Time Delay Signature Extraction. IEEE Photonics Journal, 2022, 14, 1-7.	2.0	3
4	A Hierarchical Modulation Enabled SNR Allocable Delta-Sigma Digital Mobile Fronthaul System. IEEE Photonics Journal, 2022, 14, 1-6.	2.0	8
5	An SNR-improved Transmitter of Delta-sigma Modulation Supported Ultra-High-Order QAM Signal for Fronthaul/WiFi Applications. Journal of Lightwave Technology, 2022, 40, 2780-2790.	4.6	23
6	Capacity expansion of chaotic secure transmission system based on coherent optical detection and space division multiplexing over multi-core fiber. Optics Letters, 2022, 47, 726.	3.3	9
7	56-Gb/s C-band DSB IM/DD PAM-4 40-km SSMF transmission employing a multiplier-free MLSE equalizer. Optics Express, 2022, 30, 11275.	3.4	4
8	Fast and simple calibration of frequency response and IQ skew for a coherent optical transmitter using a low-bandwidth photodetector. Optics Letters, 2022, 47, 118.	3.3	3
9	Real-time In-field Automatic Bias Control and Self-calibration Module for High-baud Coherent Driver Modulator. , 2022, , .		1
10	Simple and ultrafast automatic bias control for optical IQ modulators enabled by dither vector mapping monitoring. , 2022, , .		3
11	Simultaneously precise frequency response and IQ skew calibration in a self-homodyne coherent optical transmission system. Optics Express, 2022, 30, 20894.	3.4	4
12	Cyclic silicon waveguide four-mode converter for mode division multiplexing transmission. Optics Express, 2022, 30, 22986.	3.4	3
13	Optical Multipath Interference Mitigation for High-Speed PAM4 IMDD Transmission System. Journal of Lightwave Technology, 2022, 40, 5490-5501.	4.6	11
14	Secure Spread Spectrum Communication Using Super-Orthogonal Optical Chaos Signals. IEEE Photonics Journal, 2022, 14, 1-6.	2.0	4
15	A Robust Sparse RLS-Volterra Nonlinear Equalizer Using $\hat{\lambda}$ -Regularization for 4 Å– 150 Gbit/s IMDD-Based Optical Interconnect. IEEE Access, 2021, 9, 30881-30892.	4.2	5
16	Experimental Investigation on Low-Complexity Adaptive Equalizer Including RSOP Tracking and Phase Recovery for 112 ÅGbit/s PDM-QPSK Transmission System. IEEE Photonics Journal, 2021, 13, 1-15.	2.0	6
17	Time delay estimation from the time series for optical chaos systems using deep learning. Optics Express, 2021, 29, 7904.	3.4	28
18	Experimental demonstration of secure 100 Gb/s IMDD transmission over a 50 Å...km SSMF using a quantum noise stream cipher and optical coarse-to-fine modulation. Optics Express, 2021, 29, 5475.	3.4	6

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19	Analog-digital hybrid chaos-based long-haul coherent optical secure communication. Optics Letters, 2021, 46, 1506.	3.3	37
20	Simple and precise characterization of differential modal group delay arising in few-mode fiber. Optics Letters, 2021, 46, 2856.	3.3	3
21	DSP-free remote antenna unit in a coherent radio over fiber mobile fronthaul for 5G mm-wave mobile communication. Optics Express, 2021, 29, 27481.	3.4	7
22	Asymmetric dual-SSB modulation for photonic co-frequency mm-wave signals generation and DSP-free receiver. Optics Letters, 2021, 46, 4366.	3.3	4
23	Identify the Device Fingerprint of OFDM-PONs With a Noise-Model-Assisted CNN for Enhancing Security. IEEE Photonics Journal, 2021, 13, 1-4.	2.0	11
24	Experimental demonstration of a broadband optoelectronic chaos system based on highly nonlinear configuration of IQ modulator. Optics Letters, 2021, 46, 4654.	3.3	5
25	Chaos Synchronization Based on Hybrid Entropy Sources and Applications to Secure Communication. IEEE Photonics Technology Letters, 2021, 33, 1038-1041.	2.5	15
26	Experimental investigation of environmental interference mitigation and blocked LEDs using a memory-artificial neural network in 3D indoor visible light positioning systems. Optics Express, 2021, 29, 33937.	3.4	7
27	Simultaneously Precise Calibration of Frequency Response and IQ Skew for 100Gbaud Optical Transceiver. , 2021, , .		4
28	Experimental Demonstration of Delta-sigma Modulation Supported 65536-QAM OFDM Transmission for Fronthaul/WiFi Applications. , 2021, , .		7
29	High-speed secure key distribution using local polarization modulation driven by optical chaos in reciprocal fiber channel. Optics Letters, 2021, 46, 5910.	3.3	18
30	A Machine Learning Assisted Device Fingerprint Identification Technique for TDM-PON System. , 2021, , .		3
31	Machine Learning Assisted Hardware Fingerprint Identification for TDM-PON from Eye-diagram. , 2021, , .		2
32	A Ditherless Bias Control Technique for IQ Mach-Zehnder Modulator Based on Partial Derivative and Neural Network. , 2021, , .		2
33	Improved multiplier-free Mueller-Müller Baud-rate timing error detector for optical IM/DD system. Optics Express, 2021, 29, 44129.	3.4	1
34	Unveil the Time Delay Signature in Delayed Chaotic Communication System via CNN. , 2020, , .		1
35	Enhancing the Physical Layer Security of OFDM-PONs With Hardware Fingerprint Authentication: A Machine Learning Approach. Journal of Lightwave Technology, 2020, 38, 3238-3245.	4.6	33
36	Adaptive Blind Stokes-Space Based Equalizer for RSOP in SV-DD Systems With High Chromatic Dispersion Tolerance. IEEE Photonics Journal, 2020, 12, 1-13.	2.0	1

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37	180 Gb/s PAM8 Signal Transmission in Bandwidth-Limited IMDD System Enabled by Tap Coefficient Decision Directed Volterra Equalizer. IEEE Access, 2020, 8, 19890-19899.	4.2	7
38	Reconfigurable Optical Boolean Function Generator Based on Electro-Optical Nonlinear Dynamics. Physical Review Applied, 2020, 13, .	3.8	0
39	Secure 100 Gb/s IMDD Transmission Over 100 km SSMF Enabled by Quantum Noise Stream Cipher and Sparse RLS-Volterra Equalizer. IEEE Access, 2020, 8, 63585-63594.	4.2	14
40	Unveil the time delay signature of optical chaos systems with a convolutional neural network. Optics Express, 2020, 28, 15221.	3.4	16
41	Robust chaotic-shift-keying scheme based on electro-optical hybrid feedback system. Optics Express, 2020, 28, 10847.	3.4	27
42	Inverse design of a single-step-etched ultracompact silicon polarization rotator. Optics Express, 2020, 28, 28343.	3.4	36
43	1.25 Gb/s Correlated Random Bit Generation Over 200 km Using Electro-Optic Hybrid Chaotic Entropy Source. , 2020, , .		1
44	Low-complexity equalization scheme for suppressing FFE-enhanced in-band noise and ISI in 100 Gbps PAM4 optical IMDD system. Optics Letters, 2020, 45, 2555.	3.3	15
45	An Image Encryption Scheme Based on Hybrid Electro-Optic Chaotic Sources and Compressive Sensing. IEEE Access, 2019, 7, 156582-156591.	4.2	20
46	Amplifier-free 4Å–96 Gb/s PAM8 transmission enabled by modified Volterra equalizer for short-reach applications using directly modulated lasers. Optics Express, 2019, 27, 17927.	3.4	17
47	Optimized self-interference cancellation based on optical dual-parallel MZM for co-frequency and co-time full duplex wireless communication under nonlinear distortion and emulated multipath effect. Optics Express, 2019, 27, 37286.	3.4	20
48	Inverse design and demonstration of ultracompact silicon polarization rotator. , 2019, , .		3
49	Semiconductor-laser-based hybrid chaos source and its application in secure key distribution. Optics Letters, 2019, 44, 2605.	3.3	33
50	High-speed optical secure communication with an external noise source and an internal time-delayed feedback loop. Photonics Research, 2019, 7, 1306.	7.0	43
51	A Novel Self-Interfere Cancellation Technique Based on Operating-point-optimized Optical IQ Modulator for Co-frequency Co-time Full Duplex Wireless Communication. , 2019, , .		2
52	Robust digital-controllable broadband analog optical chaos generation. , 2019, , .		0
53	Maximizing the security of digital chaos based OFDM-PON with a dynamical nonlinear transformation. , 2019, , .		1
54	Microwave photonic RF front-end for co-frequency co-time full duplexâ€™5G communication with integrated RF signal self-interference cancellation, optoelectronic oscillator and frequency down-conversion. Optics Express, 2019, 27, 32147.	3.4	11

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55	Computational Temporal Ghost Imaging Using Intensity-Only Detection Over a Single Optical Fiber. IEEE Photonics Journal, 2018, 10, 1-9.	2.0	6
56	Secure Key Distribution Strategy in OFDM-PON by Utilizing the Redundancy of Training Symbol and Digital Chaos Technique. IEEE Photonics Journal, 2018, 10, 1-8.	2.0	17
57	Secure Optical Communication System Based on ASE Noise with No Need for Key Distribution. , 2018, , .		1
58	Single-Shot Temporal Ghost Imaging Based on Orthogonal Frequency-Division Multiplexing. IEEE Photonics Technology Letters, 2018, 30, 1555-1558.	2.5	11
59	Stable and Compact Dual-Loop Optoelectronic Oscillator Using Self-Polarization-Stabilization Technique and Multicore Fiber. Journal of Lightwave Technology, 2018, 36, 5196-5202.	4.6	8
60	Inverse design and demonstration of an ultracompact broadband dual-mode 3 dB power splitter. Optics Express, 2018, 26, 24135.	3.4	82
61	Bidirectional long-reach PON using Kramers-Kronig-based receiver for Rayleigh Backscattering noise and SSBI interference elimination. Optics Express, 2018, 26, 19020.	3.4	9
62	Synchronized Random Bit Sequences Generation Based on Analog-Digital Hybrid Electro-Optic Chaotic Sources. Journal of Lightwave Technology, 2018, 36, 4995-5002.	4.6	16
63	An Ultracompact Multimode Waveguide Crossing Based on Subwavelength Asymmetric Y-Junction. IEEE Photonics Journal, 2018, 10, 1-8.	2.0	30
64	Ultra-compact mode (de) multiplexer based on subwavelength asymmetric Y-junction. Optics Express, 2018, 26, 8162.	3.4	162
65	Ultracompact dual-mode waveguide crossing based on subwavelength multimode-interference couplers. Photonics Research, 2018, 6, 660.	7.0	93
66	Wavelength division multiplexing secure communication scheme based on an optically coupled phase chaos system and PM-to-IM conversion mechanism. Nonlinear Dynamics, 2018, 94, 1949-1959.	5.2	30
67	Arbitrary Bias Point Control Technique for Optical IQ Modulator Based on Dither-Correlation Detection. Journal of Lightwave Technology, 2018, 36, 3824-3836.	4.6	32
68	An Electrooptic Chaotic System Based on a Hybrid Feedback Loop. Journal of Lightwave Technology, 2018, 36, 4259-4266.	4.6	33
69	Secure Strategy for OFDM-PON Using Digital Chaos Algorithm With Fixed-Point Implementation. Journal of Lightwave Technology, 2018, 36, 4826-4833.	4.6	22
70	Bistatic radar scheme based on the digital-analog hybrid chaos system. Optics Express, 2018, 26, 22491.	3.4	8
71	BOMA and OFDM/OQAM modulation for a radio-over-fiber system with enhanced spectral efficiency. Optics Letters, 2018, 43, 4859.	3.3	1
72	Simultaneous Suppression of Even-Order and Third-Order Distortions in Directly Modulated Analog Photonic Links. IEEE Photonics Journal, 2017, 9, 1-12.	2.0	15

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73	An Optically Coupled Electro-Optic Chaos System With Suppressed Time-Delay Signature. IEEE Photonics Journal, 2017, 9, 1-9.	2.0	19
74	Extracting the time delay signature of coupled optical chaotic systems by mutual statistical analysis. Frontiers of Optoelectronics, 2017, 10, 378-387.	3.7	3
75	Experimental Investigation on Improved Predistortion Circuit for Directly Modulated Radio Over Fiber System. IEEE Photonics Journal, 2017, 9, 1-9.	2.0	3
76	Two-dimensional coupled electro-optic delayed feedback system with varying parameters. Journal of Modern Optics, 2017, 64, 547-554.	1.3	5
77	Broadband optical chaos generation by constructing a simple hybrid feedback loop. , 2017, , .		2
78	Experimental demonstration of high spectral efficient 4-4 MIMO SCMA-OFDM/OQAM radio over multi-core fiber system. Optics Express, 2017, 25, 18431.	3.4	13
79	Inverse-designed ultra-compact star-crossings based on PhC-like subwavelength structures for optical intercross connect. Optics Express, 2017, 25, 18355.	3.4	47
80	Novel dual-loop optoelectronic oscillator based on self-polarization-stabilization technique. Optics Express, 2017, 25, 21993.	3.4	16
81	Reproducible optical noise-like signal generation subjected by digital sequences. Optics Express, 2017, 25, 29189.	3.4	7
82	Modulation-format-free and automatic bias control for optical IQ modulators based on dither-correlation detection. Optics Express, 2017, 25, 9333.	3.4	27
83	Non-orthogonal Multiple Access Based on SCMA and OFDM/OQAM Techniques in Bidirectional RoF System. , 2017, , .		4
84	Reproducible Broadband Optical Noise Generation Based on Phase Modulation to Intensity Modulation Conversion and a Nonlinear Transformation. , 2017, , .		1
85	Electro-optic chaotic system based on the reverse-time chaos theory and a nonlinear hybrid feedback loop. Optics Express, 2016, 24, 28804.	3.4	17
86	Phase logistic chaotic sequence and its application for image encryption. IET Signal Processing, 2016, 10, 1096-1104.	1.5	30
87	A new switching parameter varying optoelectronic delayed feedback model with computer simulation. Scientific Reports, 2016, 6, 22295.	3.3	14
88	Experimental demonstration of a 10-Gb/s non-orthogonal multi-dimensional CAP-PON system based on the ISI and CCI cancellation algorithm. Optics Letters, 2016, 41, 3988.	3.3	15
89	A pseudorandom bit generator based on new multi-delayed Chebyshev map. Information Processing Letters, 2016, 116, 674-681.	0.6	24
90	Adaptive impulsive synchronization of uncertain delayed chaotic system with full unknown parameters via discrete-time drive signals. Complexity, 2016, 21, 43-51.	1.6	8

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91	Improving the security of optoelectronic delayed feedback system by parameter modulation and system coupling. Optical Engineering, 2016, 55, 026101.	1.0	3
92	High-frequency reverse-time chaos generation using an optical matched filter. Optics Letters, 2016, 41, 1157.	3.3	19
93	Inverse-designed single-step-etched colorless 3-dB couplers based on RIE-lag-insensitive PhC-like subwavelength structures. Optics Letters, 2016, 41, 5051.	3.3	79
94	A Tunable Photonic Differentiator Based on Temporal Pulse Shaping System. , 2016, , .		0
95	2 ^Å –2 PolMux-MIMO RoF System Employing Interference Cancellation Based OFDM/OQAM Technique. , 2016, , .		2
96	A Broadband and High Linearity Directly-Modulated Analog Photonic Link based on Push-Pull structure and Digital Signal Post-Compensation. , 2016, , .		2
97	Permutation Entropy for Random Binary Sequences. Entropy, 2015, 17, 8207-8216.	2.2	4
98	Security-Enhanced OFDM-PON Using Hybrid Chaotic System. IEEE Photonics Technology Letters, 2015, 27, 326-329.	2.5	66
99	Time-Delay Concealment in a Three-Dimensional Electro-Optic Chaos System. IEEE Photonics Technology Letters, 2015, 27, 1030-1033.	2.5	31
100	A novel chaotic system with suppressed time-delay signature based on multiple electro-optic nonlinear loops. Nonlinear Dynamics, 2015, 82, 611-617.	5.2	18
101	Novel design of N-dimensional CAP filters for 10-Gb/s CAP-PON system. Optics Letters, 2015, 40, 2409.	3.3	21
102	Enhanced Secure Strategy for OFDM-PON System by Using Hyperchaotic System and Fractional Fourier Transformation. IEEE Photonics Journal, 2014, 6, 1-9.	2.0	24
103	Enhanced secure strategy for electro-optic chaotic systems with delayed dynamics by using fractional Fourier transformation. Optics Express, 2014, 22, 5241.	3.4	44
104	Secure OFDM-PON System Based on Chaos and Fractional Fourier Transform Techniques. Journal of Lightwave Technology, 2014, 32, 2629-2635.	4.6	65
105	Theoretical investigations of impulsive synchronization on semiconductor laser chaotic systems. Chinese Optics Letters, 2012, 10, 101901-101904.	2.9	0
106	A Novel Chaotic Synchronization Scheme Based on Impulsive Stability Theory. Journal of Computers, 2012, 7, .	0.4	2