

Odile Liboiron-Ladouceur

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/592689/publications.pdf>

Version: 2024-02-01

132
papers

1,582
citations

304743

22
h-index

345221

36
g-index

132
all docs

132
docs citations

132
times ranked

1114
citing authors

#	ARTICLE	IF	CITATIONS
1	The Data Vortex Optical Packet Switched Interconnection Network. <i>Journal of Lightwave Technology</i> , 2008, 26, 1777-1789.	4.6	102
2	High-speed two-mode switch for mode-division multiplexing optical networks. <i>Optica</i> , 2017, 4, 1098.	9.3	98
3	A Scalable Space-Time Multi-plane Optical Interconnection Network Using Energy-Efficient Enabling Technologies [Invited]. <i>Journal of Optical Communications and Networking</i> , 2011, 3, A1.	4.8	92
4	A Thermally Tunable 1 Å– 4 Channel Wavelength Demultiplexer Designed on a Low-Loss Si ₃ N ₄ Waveguide Platform. <i>Photonics</i> , 2015, 2, 1065-1080.	2.0	81
5	Low-power, transparent optical network interface for high bandwidth off-chip interconnects. <i>Optics Express</i> , 2009, 17, 6550.	3.4	78
6	Energy-Efficient Design of a Scalable Optical Multiplane Interconnection Architecture. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2011, 17, 377-383.	2.9	65
7	A Single Layer Neural Network Implemented by a 4×4 MZI-Based Optical Processor. <i>IEEE Photonics Journal</i> , 2019, 11, 1-12.	2.0	46
8	Responsivity optimization of a high-speed germanium-on-silicon photodetector. <i>Optics Express</i> , 2016, 24, 27738.	3.4	44
9	Theoretical and Experimental Analysis of a 4 Å– 4 Reconfigurable MZI-Based Linear Optical Processor. <i>Journal of Lightwave Technology</i> , 2020, 38, 1258-1267.	4.6	41
10	A Reconfigurable Multimode Demultiplexer/Switch for Mode-Multiplexed Silicon Photonics Interconnects. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018, 24, 1-10.	2.9	40
11	The diamond mesh, a phase-error- and loss-tolerant field-programmable MZI-based optical processor for optical neural networks. <i>Optics Express</i> , 2020, 28, 23495.	3.4	39
12	Chip-Scale Silicon Photonic Interconnects: A Formal Study on Fabrication Non-Uniformity. <i>Journal of Lightwave Technology</i> , 2016, 34, 3682-3695.	4.6	36
13	Thermally-Reconfigurable Silicon Photonic Devices and Circuits. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2020, 26, 1-20.	2.9	36
14	Self-homodyne system for next generation intra-datacenter optical interconnects. <i>Optics Express</i> , 2017, 25, 27834.	3.4	35
15	A 16 GHz silicon-based monolithic balanced photodetector with on-chip capacitors for 25 Gbaud front-end receivers. <i>Optics Express</i> , 2013, 21, 32680.	3.4	31
16	High-speed grating-assisted all-silicon photodetectors for 850 nm applications. <i>Optics Express</i> , 2017, 25, 5107.	3.4	31
17	Reconfigurable and Scalable Multimode Silicon Photonics Switch for Energy-Efficient Mode-Division-Multiplexing Systems. <i>Journal of Lightwave Technology</i> , 2019, 37, 3851-3860.	4.6	31
18	Mode selecting switch using multimode interference for on-chip optical interconnects. <i>Optics Letters</i> , 2017, 42, 4131.	3.3	28

#	ARTICLE	IF	CITATIONS
19	A Study of Error Correction Codes for PAM Signals in Data Center Applications. IEEE Photonics Technology Letters, 2013, 25, 2274-2277.	2.5	25
20	Mode insensitive switch for on-chip interconnect mode division multiplexing systems. Optics Letters, 2020, 45, 811.	3.3	25
21	Topological inverse design of nanophotonic devices with energy constraint. Optics Express, 2021, 29, 12681.	3.4	23
22	A Ring-Based 25 Gb/s DAC-Less PAM-4 Modulator. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 123-130.	2.9	22
23	400-G Single Carrier 500-km Transmission With an InP Dual Polarization IQ Modulator. IEEE Photonics Technology Letters, 2016, 28, 1213-1216.	2.5	22
24	Polarization-Dependent Gain in SOA-Based Optical Multistage Interconnection Networks. Journal of Lightwave Technology, 2006, 24, 3959-3967.	4.6	21
25	Designing Energy-Efficient Data Center Networks Using Space-Time Optical Interconnection Architectures. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 3700209-3700209.	2.9	21
26	1.23-pJ/bit 25-Gb/s Inductor-Less Optical Receiver With Low-Voltage Silicon Photodetector. IEEE Journal of Solid-State Circuits, 2018, 53, 1793-1805.	5.4	21
27	100G and 200G single carrier transmission over 2880 and 320 km using an InP IQ modulator and Stokes vector receiver. Optics Express, 2016, 24, 30485.	3.4	20
28	Photonic Integrated Reconfigurable Linear Processors as Neural Network Accelerators. Applied Sciences (Switzerland), 2021, 11, 6232.	2.5	20
29	Dual-mode broadband compact 2×2 optical power splitter using sub-wavelength metamaterial structures. Optics Express, 2021, 29, 23864.	3.4	18
30	3×10 Gb/s silicon three-mode switch with 120° hybrid based unbalanced Mach-Zehnder interferometer. Optics Express, 2019, 27, 14199.	3.4	18
31	770-Gb/s PDM-32QAM Coherent Transmission Using InP Dual Polarization IQ Modulator. IEEE Photonics Technology Letters, 2017, 29, 442-445.	2.5	15
32	Heterogeneous Optical Space Switches for Scalable and Energy-Efficient Data Centers. Journal of Lightwave Technology, 2013, 31, 1713-1719.	4.6	13
33	Design and Modelling of a Low-Latency Centralized Controller for Optical Integrated Networks. IEEE Communications Letters, 2016, 20, 462-465.	4.1	13
34	A Source-Synchronous Architecture Using Mode-Division Multiplexing for On-Chip Silicon Photonic Interconnects. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 473-481.	2.9	12
35	8×8 SOA-based optical switch with zero fiber-to-fiber insertion loss. Optics Letters, 2020, 45, 4650.	3.3	12
36	Multichannel Transmission Through a Gold Strip Plasmonic Waveguide Embedded in Cytop. IEEE Photonics Journal, 2013, 5, 2201811-2201811.	2.0	11

#	ARTICLE	IF	CITATIONS
37	Experimental demonstration of robust nanophotonic devices optimized by topological inverse design with energy constraint. <i>Photonics Research</i> , 2022, 10, 1787.	7.0	11
38	A variable-bandwidth, power-scalable optical receiver front-end in 65 nm. , 2013, , .		10
39	Scalable Two-Mode 3-Port and 4-Port Mode Insensitive Silicon Photonic Switches. <i>IEEE Photonics Technology Letters</i> , 2021, 33, 557-560.	2.5	10
40	45 Gb/s low complexity optical front-end for soft-decision LDPC decoders. <i>Optics Express</i> , 2012, 20, 18336.	3.4	9
41	Integrated optical deserialiser time sampling based SiGe photoreceiver. <i>Optics Express</i> , 2015, 23, 31736.	3.4	9
42	Impact of Chromatic Dispersion Compensation in Single Carrier Two-Dimensional Stokes Vector Direct Detection System. <i>IEEE Photonics Journal</i> , 2017, 9, 1-10.	2.0	9
43	Integrated RF Passive Low-Pass Filters in Silicon Photonics. <i>IEEE Photonics Technology Letters</i> , 2018, 30, 2052-2055.	2.5	9
44	Scalable SiPh-InP Hybrid Switch Based on Low-Loss Building Blocks for Lossless Operation. <i>IEEE Photonics Technology Letters</i> , 2020, 32, 1401-1404.	2.5	9
45	Scalable and Low Crosstalk Silicon Mode Exchanger for Mode Division Multiplexing System Enabled by Inverse Design. <i>IEEE Photonics Journal</i> , 2021, 13, 1-13.	2.0	9
46	Optimization of a Switching Node for Optical Multistage Interconnection Networks. <i>IEEE Photonics Technology Letters</i> , 2007, 19, 1658-1660.	2.5	8
47	Design of a 50-Gb/s SOI-Based DPSK Demodulator for Dense Photonic Integration. <i>IEEE Photonics Technology Letters</i> , 2012, 24, 1749-1752.	2.5	8
48	Lossless Operation of an 8 Å— 8 SiPh/InP Hybrid Optical Switch. <i>IEEE Photonics Technology Letters</i> , 2020, 32, 667-670.	2.5	8
49	Spectral-dependent electronic-photonic modeling of high-speed VCSEL-MMF links for optimized launch conditions. <i>Optics Express</i> , 2021, 29, 2738.	3.4	8
50	Energy-efficient switching in optical interconnection networks. , 2011, , .		7
51	Demonstration of Inter-Chip RF Data Transmission Using On-Chip Antennas in Silicon Photonics. <i>IEEE Photonics Technology Letters</i> , 2020, 32, 659-662.	2.5	7
52	Photonic Integrated Circuits: a Study on Process Variations. , 2016, , .		7
53	A Broadband Rearrangable Non-blocking MZI-based Thermo-optic O-band Switch in Silicon-on-Insulator. , 2017, , .		7
54	Implementation of optical burst switching in data centers. , 2011, , .		6

#	ARTICLE	IF	CITATIONS
55	A low-voltage PAM-4 SOI ring-based modulator. , 2014, , .		6
56	Efficiency improvement of an O-band SOI-MZI thermo-optic matrix switch. , 2016, , .		6
57	Low-noise optical receiver front-end using narrow-bandwidth TIA and cascaded linear equalizer. , 2017, , .		6
58	Scalable 2 ^N –2 Multimode Switch for Mode-Multiplexed Silicon Photonics Interconnects. , 2018, , .		6
59	Gain Effect on Scalable Energy-Proportional SOA-Based Optical Space Switches. IEEE Photonics Technology Letters, 2014, 26, 1683-1686.	2.5	5
60	Ultradense Silicon Photonic Interface for Optical Interconnection. IEEE Photonics Technology Letters, 2015, 27, 725-728.	2.5	5
61	A Compact High-Efficient Equivalent Circuit Model of Multi-Quantum-Well Vertical-Cavity Surface-Emitting Lasers for High-Speed Interconnects. Applied Sciences (Switzerland), 2020, 10, 3865.	2.5	5
62	An Analysis of RF On-Chip Antennas in Si-Based Integrated Microwave Photonics. IEEE Photonics Journal, 2021, 13, 1-18.	2.0	5
63	Modal crosstalk in Silicon photonic multimode interconnects. Optics Express, 2019, 27, 27712.	3.4	5
64	Efficient mode exchanger-based silicon photonic switch enabled by inverse design. Optics Express, 2022, 30, 20543.	3.4	5
65	Fabrication error tolerant broadband mode converters and their working principles. Optics Express, 2022, 30, 25817.	3.4	5
66	Hierarchical clustering of the data vortex optical interconnection network. Journal of Optical Networking, 2007, 6, 1179.	2.5	4
67	Simultaneous high-capacity optical and microwave data transmission over metal waveguides. Optics Express, 2015, 23, 14135.	3.4	4
68	A 35 Gb/s silicon photodetector for 850 nm wavelength applications. , 2016, , .		4
69	A 12.5 Gb/s 1.93 pJ/Bit Optical Receiver Exploiting Silicon Photonic Delay Lines for Clock Phases Generation Replacement. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 1864-1868.	3.0	4
70	An All-Optical PCI-Express Network Interface for Optical Packet Switched Networks. , 2007, , .		3
71	Heterogeneous space switches for power-efficient optical interconnection networks. , 2012, , .		3
72	Inductorless, powerl-proportional, optical receiver front-end in TSMC 90 nm. , 2013, , .		3

#	ARTICLE	IF	CITATIONS
73	Low-Cost Dispersion-Tuned Active Harmonic Mode-Locked Laser With a 3-cm Coherence Length. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 399-405.	2.9	3
74	Source-synchronous optical link using mode-division multiplexing. , 2015, , .		3
75	Breakthroughs in Photonics 2014: Optical Interconnection Networks. IEEE Photonics Journal, 2015, 7, 1-4.	2.0	3
76	Low-Loss Passive Si ₃ N ₄ Serial-to-WDM Interface for Energy-Efficient Optical Interconnects. Journal of Lightwave Technology, 2016, 34, 5444-5452.	4.6	3
77	Reconfiguration in Source-Synchronous Receivers for Short-Reach Parallel Optical Links. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 1548-1560.	3.1	3
78	Bistable Switching Node for Optical Packet Switched Networks. , 2006, , .		2
79	A novel hybrid WDM/TDM GPON topology with central bandwidth allocation and QoS support. , 2008, , .		2
80	Dispersion-Tuned Harmonically Mode-Locked Fiber Laser. IEEE Photonics Technology Letters, 2013, 25, 1916-1919.	2.5	2
81	A Silicon Photonic Integrated Packaged Coherent Receiver Front-End For Soft-Decision Decoding. Journal of Lightwave Technology, 2014, 32, 4753-4758.	4.6	2
82	A 20 Gb/s SiGe photoreceiver based on optical time sampling. , 2015, , .		2
83	Monolithic $\times 2$ MMI-Based 25-Gb/s SOI DPSK Demodulator Integrated With SiGe Photodetector. IEEE Photonics Technology Letters, 2015, 27, 565-568.	2.5	2
84	An analytical study of process variations in silicon photonic integrated circuits. , 2016, , .		2
85	Spot-Size Converters with Shaped Oxide Cladding. , 2018, , .		2
86	Towards Phase-Error- and Loss-Tolerant Programmable MZI-Based Optical Processors for Optical Neural Networks. , 2020, , .		2
87	A 17 Gbps 156 fJ/bit Two-Channel Optical Receiver With Optical-Input Split and Delay in 65 nm CMOS. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2288-2296.	5.4	2
88	A 22-Gb/s Time-Interleaved Low-Power Optical Receiver With a Two-Bit Integrating Front End. IEEE Journal of Solid-State Circuits, 2021, 56, 310-323.	5.4	2
89	Dynamic switching of a packaged photonic integrated network-on-chip using an FPGA controller. Optics Letters, 2018, 43, 5471.	3.3	2
90	Demonstration of Mode-Division Multiplexing for On-Chip Source-Synchronous Communications. , 2015, , .		2

#	ARTICLE	IF	CITATIONS
91	Optimal Optical Receivers in Nanoscale CMOS: A Tutorial. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 2604-2609.	3.0	2
92	Transparent, Low Power Optical WDM Interface for Off-Chip Interconnects. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
93	Deployment Challenges at 40 Gbit/s and beyond in Optical Transport Networks. , 2008, , .		1
94	XPM penalty mitigation for a 42.7-Gb/s DQPSK channel co-propagating with 10.7-Gb/s OOK channels using SSMF and dispersion map. , 2008, , .		1
95	Investigation of long-range surface plasmon polariton propagation in a multi-layer structure. , 2010, , .		1
96	Thermally stable 50 Gb/s SOI DPSK demodulator. , 2011, , .		1
97	Power and noise configurable phase-locked loop using multi-oscillator feedback alignment. , 2013, , .		1
98	Photonic integrated circuits for microwave photonics applications. , 2014, , .		1
99	A self-coherent system for short reach applications. , 2016, , .		1
100	Photonic/Electronic Integrated Circuit Co-designed for Efficient Optical Data Communications. , 2019, , .		1
101	High-Throughput Low-Latency Encoder and Decoder for a Class of Generalized Reed-Solomon Codes for Short-Reach Optical Communications. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 670-674.	3.0	1
102	Characterization and development of an electrical conductivity flow cell for the axial continuous phase fraction profiling of bulk multiphase flow. Measurement Science and Technology, 2020, 31, 035110.	2.6	1
103	A High-Speed Moving Average Integrator in Silicon Photonics for TIA-Less Receivers. IEEE Photonics Technology Letters, 2020, 32, 1033-1036.	2.5	1
104	A Survey of Optical and Electronic Delay Lines with a Case Study on Using Optical Delay Lines in 65 nm CMOS Optical Receivers. , 2020, , .		1
105	Mitigation of Mode Partition Noise in VCSEL-MMF Links by Optimizing Launch Conditions. IEEE Photonics Technology Letters, 2021, 33, 1313-1316.	2.5	1
106	High Radix SOA-Based Lossless Optical Switch Prototyping for 25 GBaud PAM4 Transmission in Modern Intra-datacenter Applications. , 2021, , .		1
107	Characterization and ENOB Analysis of a Reconfigurable Linear Optical Processor. , 2020, , .		1
108	Physics-guided Inverse Design for SiPh Mode Manipulation. , 2021, , .		1

#	ARTICLE	IF	CITATIONS
109	Dimensional Variation Tolerant Inverse Designed Broadband Mode Converter. , 2022, , .		1
110	Optical Packet Routing in Distributed Grid Computing Architectures. , 2006, , .		0
111	Polarization dependent frequency shift induced BER penalty in DPSK demodulators. , 2009, , .		0
112	Design approaches for energy-efficient optical interconnects in computing platforms. , 2010, , .		0
113	Physical layer scalability of energy-efficient heterogeneous optical space switches. , 2012, , .		0
114	Energy-efficient space-time optical interconnection architectures for data centers. , 2013, , .		0
115	A high extinction ratio broadband 1310nm MZI switch. , 2015, , .		0
116	Low-loss Si ³ N ⁴ wavelength-stripped multiplexer. , 2015, , .		0
117	Comparative study of optoelectronics receiver front-end implementation in InP, SiGe, and CMOS. , 2016, , .		0
118	A technology-based comparative study for the optoelectronic integration of optical front-ends. , 2016, , .		0
119	A compact 25 Gb/s Mach-Zehnder assisted ring modulator. , 2016, , .		0
120	Electrical performance analysis of a CPW capable of transmitting microwave and optical signals. International Journal of Microwave and Wireless Technologies, 2017, 9, 1679-1686.	1.9	0
121	A Verilog-A Based Vcsel Model For Next Generation High-Speed Interconnects. , 2019, , .		0
122	A broadband MZI-based thermal-optic mode insensitive switch in Silicon-on-Insulator. , 2020, , .		0
123	Theoretical and Experimental Analysis of a 44 Reconfigurable MZI-Based Linear Optical Processor. Journal of Lightwave Technology, 2024, , 1-1.	4.6	0
124	Analytical Expressions for Power Coupling Coefficients Into Graded-Index Fibers With Generalized Beam Launch Conditions. Journal of Lightwave Technology, 2021, 39, 7259-7273.	4.6	0
125	Photonic Integration - from Switching to Computing. , 2021, , .		0
126	Ultra-broadband and Low-loss 16 Å— 16 SiPh Switch. , 2021, , .		0

#	ARTICLE	IF	CITATIONS
127	Efficient Optical Interconnects through Photonic-Electronic Co-design Approaches. , 2019, , .		0
128	Towards Integrated RF Photodetector-Antenna Emitters in Silicon Photonics. , 2020, , .		0
129	Computationally efficient and fabrication error tolerant inverse-designed mode converters. , 2021, , .		0
130	Tilted-Beam-Enabled Optical Equalization for PAM-4 Transmission in VCSEL-MMF Links. , 2021, , .		0
131	Towards Monolithically Integrated SiGe Optical Receiver with an All-Silicon Photodetector. , 2021, , .		0
132	A Novel Inductorless Design Technique for Linear Equalization in Optical Receivers. Journal of Low Power Electronics and Applications, 2022, 12, 19.	2.0	0