

# Odile Liboiron-Ladouceur

## List of Publications by Year in descending order

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132  
papers

1,582  
citations

304743

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345221

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all docs

132  
docs citations

132  
times ranked

1114  
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical and Experimental Analysis of a 44 Reconfigurable MZI-Based Linear Optical Processor. Journal of Lightwave Technology, 2024, , 1-1.	4.6	0
2	A Novel Inductorless Design Technique for Linear Equalization in Optical Receivers. Journal of Low Power Electronics and Applications, 2022, 12, 19.	2.0	0
3	Optimal Optical Receivers in Nanoscale CMOS: A Tutorial. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 2604-2609.	3.0	2
4	Dimensional Variation Tolerant Inverse Designed Broadband Mode Converter. , 2022, , .		1
5	Experimental demonstration of robust nanophotonic devices optimized by topological inverse design with energy constraint. Photonics Research, 2022, 10, 1787.	7.0	11
6	Efficient mode exchanger-based silicon photonic switch enabled by inverse design. Optics Express, 2022, 30, 20543.	3.4	5
7	Fabrication error tolerant broadband mode converters and their working principles. Optics Express, 2022, 30, 25817.	3.4	5
8	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
9	Spectral-dependent electronic-photonic modeling of high-speed VCSEL-MMF links for optimized launch conditions. Optics Express, 2021, 29, 2738.	3.4	8
10	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
11	Photonic Integration - from Switching to Computing. , 2021, , .		0
12	Ultra-broadband and Low-loss 16 Å— 16 SiPh Switch. , 2021, , .		0
13	Scalable and Low Crosstalk Silicon Mode Exchanger for Mode Division Multiplexing System Enabled by Inverse Design. IEEE Photonics Journal, 2021, 13, 1-13.	2.0	9
14	Topological inverse design of nanophotonic devices with energy constraint. Optics Express, 2021, 29, 12681.	3.4	23
15	An Analysis of RF On-Chip Antennas in Si-Based Integrated Microwave Photonics. IEEE Photonics Journal, 2021, 13, 1-18.	2.0	5
16	Scalable Two-Mode 3-Port and 4-Port Mode Insensitive Silicon Photonic Switches. IEEE Photonics Technology Letters, 2021, 33, 557-560.	2.5	10
17	Photonic Integrated Reconfigurable Linear Processors as Neural Network Accelerators. Applied Sciences (Switzerland), 2021, 11, 6232.	2.5	20
18	Dual-mode broadband compact 2 Å— 2 optical power splitter using sub-wavelength metamaterial structures. Optics Express, 2021, 29, 23864.	3.4	18

#	ARTICLE	IF	CITATIONS
19	Mitigation of Mode Partition Noise in VCSEL-MMF Links by Optimizing Launch Conditions. IEEE Photonics Technology Letters, 2021, 33, 1313-1316.	2.5	1
20	High Radix SOA-Based Lossless Optical Switch Prototyping for 25 GBaud PAM4 Transmission in Modern Intra-datacenter Applications. , 2021, , .		1
21	Computationally efficient and fabrication error tolerant inverse-designed mode converters. , 2021, , .		0
22	Tilted-Beam-Enabled Optical Equalization for PAM-4 Transmission in VCSEL-MMF Links. , 2021, , .		0
23	Physics-guided Inverse Design for SiPh Mode Manipulation. , 2021, , .		1
24	Towards Monolithically Integrated SiGe Optical Receiver with an All-Silicon Photodetector. , 2021, , .		0
25	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
26	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
27	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
28	A High-Speed Moving Average Integrator in Silicon Photonics for TIA-Less Receivers. IEEE Photonics Technology Letters, 2020, 32, 1033-1036.	2.5	1
29	Scalable SiPh-InP Hybrid Switch Based on Low-Loss Building Blocks for Lossless Operation. IEEE Photonics Technology Letters, 2020, 32, 1401-1404.	2.5	9
30	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
31	A broadband MZI-based thermal-optic mode insensitive switch in Silicon-on-Insulator. , 2020, , .		0
32	Towards Phase-Error- and Loss-Tolerant Programmable MZI-Based Optical Processors for Optical Neural Networks. , 2020, , .		2
33	Lossless Operation of an 8 × 8 SiPh/InP Hybrid Optical Switch. IEEE Photonics Technology Letters, 2020, 32, 667-670.	2.5	8
34	Demonstration of Inter-Chip RF Data Transmission Using On-Chip Antennas in Silicon Photonics. IEEE Photonics Technology Letters, 2020, 32, 659-662.	2.5	7
35	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
36	Thermally-Reconfigurable Silicon Photonic Devices and Circuits. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-20.	2.9	36

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37	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
38	Theoretical and Experimental Analysis of a 4 × 4 Reconfigurable MZI-Based Linear Optical Processor. Journal of Lightwave Technology, 2020, 38, 1258-1267.	4.6	41
39	The diamond mesh, a phase-error- and loss-tolerant field-programmable MZI-based optical processor for optical neural networks. Optics Express, 2020, 28, 23495.	3.4	39
40	Mode insensitive switch for on-chip interconnect mode division multiplexing systems. Optics Letters, 2020, 45, 811.	3.3	25
41	8 × 8 SOA-based optical switch with zero fiber-to-fiber insertion loss. Optics Letters, 2020, 45, 4650.	3.3	12
42	Towards Integrated RF Photodetector-Antenna Emitters in Silicon Photonics. , 2020, , .		0
43	Characterization and ENOB Analysis of a Reconfigurable Linear Optical Processor. , 2020, , .		1
44	Reconfigurable and Scalable Multimode Silicon Photonics Switch for Energy-Efficient Mode-Division-Multiplexing Systems. Journal of Lightwave Technology, 2019, 37, 3851-3860.	4.6	31
45	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
46	Photonic/Electronic Integrated Circuit Co-designed for Efficient Optical Data Communications. , 2019, , .		1
47	A Verilog-A Based Vcsel Model For Next Generation High-Speed Interconnects. , 2019, , .		0
48	A Single Layer Neural Network Implemented by a 4 × 4 MZI-Based Optical Processor. IEEE Photonics Journal, 2019, 11, 1-12.	2.0	46
49	3 × 10 Gb/s silicon three-mode switch with 120° hybrid based unbalanced Mach-Zehnder interferometer. Optics Express, 2019, 27, 14199.	3.4	18
50	Modal crosstalk in Silicon photonic multimode interconnects. Optics Express, 2019, 27, 27712.	3.4	5
51	Efficient Optical Interconnects through Photonic-Electronic Co-design Approaches. , 2019, , .		0
52	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
53	Spot-Size Converters with Shaped Oxide Cladding. , 2018, , .		2
54	Scalable 2 × 2 Multimode Switch for Mode-Multiplexed Silicon Photonics Interconnects. , 2018, , .		6

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55	Integrated RF Passive Low-Pass Filters in Silicon Photonics. IEEE Photonics Technology Letters, 2018, 30, 2052-2055.	2.5	9
56	A Reconfigurable Multimode Demultiplexer/Switch for Mode-Multiplexed Silicon Photonics Interconnects. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-10.	2.9	40
57	Dynamic switching of a packaged photonic integrated network-on-chip using an FPGA controller. Optics Letters, 2018, 43, 5471.	3.3	2
58	770-Gb/s PDM-32QAM Coherent Transmission Using InP Dual Polarization IQ Modulator. IEEE Photonics Technology Letters, 2017, 29, 442-445.	2.5	15
59	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
60	Low-noise optical receiver front-end using narrow-bandwidth TIA and cascaded linear equalizer. , 2017, , .		6
61	Impact of Chromatic Dispersion Compensation in Single Carrier Two-Dimensional Stokes Vector Direct Detection System. IEEE Photonics Journal, 2017, 9, 1-10.	2.0	9
62	High-speed grating-assisted all-silicon photodetectors for 850 nm applications. Optics Express, 2017, 25, 5107.	3.4	31
63	Self-homodyne system for next generation intra-datacenter optical interconnects. Optics Express, 2017, 25, 27834.	3.4	35
64	Mode selecting switch using multimode interference for on-chip optical interconnects. Optics Letters, 2017, 42, 4131.	3.3	28
65	High-speed two-mode switch for mode-division multiplexing optical networks. Optica, 2017, 4, 1098.	9.3	98
66	A Broadband Rearrangable Non-blocking MZI-based Thermo-optic O-band Switch in Silicon-on-Insulator. , 2017, , .		7
67	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
68	Responsivity optimization of a high-speed germanium-on-silicon photodetector. Optics Express, 2016, 24, 27738.	3.4	44
69	Efficiency improvement of an O-band SOI-MZI thermo-optic matrix switch. , 2016, , .		6
70	Low-Loss Passive Si <sub>3</sub> N <sub>4</sub> Serial-to-WDM Interface for Energy-Efficient Optical Interconnects. Journal of Lightwave Technology, 2016, 34, 5444-5452.	4.6	3
71	A 35 Gb/s silicon photodetector for 850 nm wavelength applications. , 2016, , .		4
72	An analytical study of process variations in silicon photonic integrated circuits. , 2016, , .		2

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73	Comparative study of optoelectronics receiver front-end implementation in InP, SiGe, and CMOS. , 2016, , .		0
74	A self-coherent system for short reach applications. , 2016, , .		1
75	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
76	A technology-based comparative study for the optoelectronic integration of optical front-ends. , 2016, , .		0
77	A compact 25 Gb/s Mach-Zehnder assisted ring modulator. , 2016, , .		0
78	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
79	Chip-Scale Silicon Photonic Interconnects: A Formal Study on Fabrication Non-Uniformity. Journal of Lightwave Technology, 2016, 34, 3682-3695.	4.6	36
80	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
81	Design and Modelling of a Low-Latency Centralized Controller for Optical Integrated Networks. IEEE Communications Letters, 2016, 20, 462-465.	4.1	13
82	Photonic Integrated Circuits: a Study on Process Variations. , 2016, , .		7
83	Integrated optical deserialiser time sampling based SiGe photoreceiver. Optics Express, 2015, 23, 31736.	3.4	9
84	A Thermally Tunable 1 Å– 4 Channel Wavelength Demultiplexer Designed on a Low-Loss Si <sub>3</sub> N <sub>4</sub> Waveguide Platform. Photonics, 2015, 2, 1065-1080.	2.0	81
85	A 20 Gb/s SiGe photoreceiver based on optical time sampling. , 2015, , .		2
86	Source-synchronous optical link using mode-division multiplexing. , 2015, , .		3
87	A high extinction ratio broadband 1310nm MZI switch. , 2015, , .		0
88	Ultradense Silicon Photonic Interface for Optical Interconnection. IEEE Photonics Technology Letters, 2015, 27, 725-728.	2.5	5
89	Monolithic $\times 2$ $\times 2$ MMI-Based 25-Gb/s SOI DPSK Demodulator Integrated With SiGe Photodetector. IEEE Photonics Technology Letters, 2015, 27, 565-568.	2.5	2
90	Low-loss Si <sub>3</sub> N <sub>4</sub> wavelength-stripped multiplexer. , 2015, , .		0

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91	Breakthroughs in Photonics 2014: Optical Interconnection Networks. IEEE Photonics Journal, 2015, 7, 1-4.	2.0	3
92	Simultaneous high-capacity optical and microwave data transmission over metal waveguides. Optics Express, 2015, 23, 14135.	3.4	4
93	Demonstration of Mode-Division Multiplexing for On-Chip Source-Synchronous Communications. , 2015, , .		2
94	Photonic integrated circuits for microwave photonics applications. , 2014, , .		1
95	A Silicon Photonic Integrated Packaged Coherent Receiver Front-End For Soft-Decision Decoding. Journal of Lightwave Technology, 2014, 32, 4753-4758.	4.6	2
96	A low-voltage PAM-4 SOI ring-based modulator. , 2014, , .		6
97	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
98	Gain Effect on Scalable Energy-Proportional SOA-Based Optical Space Switches. IEEE Photonics Technology Letters, 2014, 26, 1683-1686.	2.5	5
99	Inductorless, powerl-proportional, optical receiver front-end in TSMC 90 nm. , 2013, , .		3
100	A Study of Error Correction Codes for PAM Signals in Data Center Applications. IEEE Photonics Technology Letters, 2013, 25, 2274-2277.	2.5	25
101	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
102	A variable-bandwidth, power-scalable optical receiver front-end in 65 nm. , 2013, , .		10
103	A 16 GHz silicon-based monolithic balanced photodetector with on-chip capacitors for 25 Gbaud front-end receivers. Optics Express, 2013, 21, 32680.	3.4	31
104	Multichannel Transmission Through a Gold Strip Plasmonic Waveguide Embedded in Cytop. IEEE Photonics Journal, 2013, 5, 2201811-2201811.	2.0	11
105	Energy-efficient space-time optical interconnection architectures for data centers. , 2013, , .		0
106	Heterogeneous Optical Space Switches for Scalable and Energy-Efficient Data Centers. Journal of Lightwave Technology, 2013, 31, 1713-1719.	4.6	13
107	Power and noise configurable phase-locked loop using multi-oscillator feedback alignment. , 2013, , .		1
108	Dispersion-Tuned Harmonically Mode-Locked Fiber Laser. IEEE Photonics Technology Letters, 2013, 25, 1916-1919.	2.5	2

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109	45 Gb/s low complexity optical front-end for soft-decision LDPC decoders. Optics Express, 2012, 20, 18336.	3.4	9
110	Heterogeneous space switches for power-efficient optical interconnection networks. , 2012, , .		3
111	Physical layer scalability of energy-efficient heterogeneous optical space switches. , 2012, , .		0
112	Design of a 50-Gb/s SOI-Based DPSK Demodulator for Dense Photonic Integration. IEEE Photonics Technology Letters, 2012, 24, 1749-1752.	2.5	8
113	Thermally stable 50 Gb/s SOI DPSK demodulator. , 2011, , .		1
114	A Scalable Space-Time Multi-plane Optical Interconnection Network Using Energy-Efficient Enabling Technologies [Invited]. Journal of Optical Communications and Networking, 2011, 3, A1.	4.8	92
115	Energy-Efficient Design of a Scalable Optical Multiplane Interconnection Architecture. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 377-383.	2.9	65
116	Implementation of optical burst switching in data centers. , 2011, , .		6
117	Energy-efficient switching in optical interconnection networks. , 2011, , .		7
118	Design approaches for energy-efficient optical interconnects in computing platforms. , 2010, , .		0
119	Investigation of long-range surface plasmon polariton propagation in a multi-layer structure. , 2010, , .		1
120	Polarization dependent frequency shift induced BER penalty in DPSK demodulators. , 2009, , .		0
121	Low-power, transparent optical network interface for high bandwidth off-chip interconnects. Optics Express, 2009, 17, 6550.	3.4	78
122	The Data Vortex Optical Packet Switched Interconnection Network. Journal of Lightwave Technology, 2008, 26, 1777-1789.	4.6	102
123	Deployment Challenges at 40 Gbit/s and beyond in Optical Transport Networks. , 2008, , .		1
124	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
125	A novel hybrid WDM/TDM GPON topology with central bandwidth allocation and QoS support. , 2008, , .		2
126	Transparent, Low Power Optical WDM Interface for Off-Chip Interconnects. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1



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127	Hierarchical clustering of the data vortex optical interconnection network. Journal of Optical Networking, 2007, 6, 1179.	2.5	4
128	An All-Optical PCI-Express Network Interface for Optical Packet Switched Networks. , 2007, , .		3
129	Optimization of a Switching Node for Optical Multistage Interconnection Networks. IEEE Photonics Technology Letters, 2007, 19, 1658-1660.	2.5	8
130	Polarization-Dependent Gain in SOA-Based Optical Multistage Interconnection Networks. Journal of Lightwave Technology, 2006, 24, 3959-3967.	4.6	21
131	Bistable Switching Node for Optical Packet Switched Networks. , 2006, , .		2
132	Optical Packet Routing in Distributed Grid Computing Architectures. , 2006, , .		0