S J Ben Yoo

List of Publications by Year in Descending Order

75 papers	2,224 citations	20 h-index	46 g-index
96 ext. papers	2,923 ext. citations	4 avg, IF	5.38 L-index

#	Paper	IF	Citations
75	On Cooperative Fault Management in Multi-Domain Optical Networks Using Hybrid Learning. *IEEE Journal of Selected Topics in Quantum Electronics*, **2022**, 28, 1-9	3.8	2
74	Quantum Wrapper Networking **2021**,		1
73	Prospects and Challenges of Photonic Switching in Data Centers and Computing Systems. *Journal of Lightwave Technology*, **2021**, 1-1	4	5
72	HTA: A Scalable High-Throughput Accelerator for Irregular HPC Workloads. *Lecture Notes in Computer Science*, **2021**, 176-194	0.9	
71	Machine-learning-aided cognitive reconfiguration for flexible-bandwidth HPC and data center networks [Invited]. *Journal of Optical Communications and Networking*, **2021**, 13, C10	4.1	2
70	Silicon Photonic Flex-LIONS for Reconfigurable Multi-GPU Systems. *Journal of Lightwave Technology*, **2021**, 39, 1212-1220	4	1
69	Materials for emergent silicon-integrated optical computing. *Journal of Applied Physics*, **2021**, 130, 070907	2.5	5
68	Cooperative Learning for Disaggregated Delay Modeling in Multidomain Networks. *IEEE Transactions on Network and Service Management*, **2021**, 18, 3633-3646	4.8	1
67	Multi-FSR Silicon Photonic Flex-LIONS Module for Bandwidth-Reconfigurable All-to-All Optical Interconnects. *Journal of Lightwave Technology*, **2020**, 38, 3200-3208	4	9
66	Scalable 3D Silicon Photonic Electronic Integrated Circuits and Their Applications. *IEEE Journal of Selected Topics in Quantum Electronics*, **2020**, 26, 1-10	3.8	6
65	Silicon Photonic Flex-LIONS for Bandwidth-Reconfigurable Optical Interconnects. *IEEE Journal of Selected Topics in Quantum Electronics*, **2020**, 26, 1-10	3.8	10
64	Integrated SiPh Flex-LIONS Module for All-to-All Optical Interconnects with Bandwidth Steering **2020**,		2
63	Flex-LIONS: A Silicon Photonic Bandwidth-Reconfigurable Optical Switch Fabric. *IEICE Transactions on Communications*, **2020**, E103.B, 1190-1198	0.5	1
62	Foundry-Enabled Scalable All-to-All Optical Interconnects Using Silicon Nitride Arrayed Waveguide Router Interposers and Silicon Photonic Transceivers. *IEEE Journal of Selected Topics in Quantum Electronics*, **2019**, 25, 1-9	3.8	14
61	Self-Taught Anomaly Detection With Hybrid Unsupervised/Supervised Machine Learning in Optical Networks. *Journal of Lightwave Technology*, **2019**, 37, 1742-1749	4	42
60	On Incentive-Driven VNF Service Chaining in Inter-Datacenter Elastic Optical Networks: A Hierarchical Game-Theoretic Mechanism. *IEEE Transactions on Network and Service Management*, **2019**, 16, 1-12	4.8	15
59	Enabling Scalable Disintegrated Computing Systems With AWGR-Based 25D Interconnection Networks. *Journal of Optical Communications and Networking*, **2019**, 11, 333	4.1	3

58	DeepRMSA: A Deep Reinforcement Learning Framework for Routing, Modulation and Spectrum Assignment in Elastic Optical Networks. *Journal of Lightwave Technology*, **2019**, 37, 4155-4163	4	62
57	Enabling scalable chiplet-based uniform memory architectures with silicon photonics **2019**,		7
56	Sub-wavelength-pitch silicon-photonic optical phased array for large field-of-regard coherent optical beam steering. *Optics Express*, **2019**, 27, 1929-1940	3.3	55
55	Demonstration of distributed collaborative learning with end-to-end QoT estimation in multi-domain elastic optical networks. *Optics Express*, **2019**, 27, 35700-35709	3.3	10
54	Multi-Agent Deep Reinforcement Learning in Cognitive Inter-Domain Networking with Multi-Broker Orchestration **2019**,		7
53	Flex-LIONS: A Scalable Silicon Photonic Bandwidth-Reconfigurable Optical Switch Fabric **2019**,		6
52	Solid-State MWIR Beam Steering Using Optical Phased Array on Germanium-Silicon Photonic Platform. *IEEE Photonics Journal*, **2019**, 11, 1-9	1.8	5
51	Hierarchical Learning for Cognitive End-to-End Service Provisioning in Multi-Domain Autonomous Optical Networks. *Journal of Lightwave Technology*, **2019**, 37, 218-225	4	15
50	High-Density Wafer-Scale 3-D Silicon-Photonic Integrated Circuits. *IEEE Journal of Selected Topics in Quantum Electronics*, **2018**, 24, 1-10	3.8	16
49	Knowledge-Based Autonomous Service Provisioning in Multi-Domain Elastic Optical Networks. *IEEE Communications Magazine*, **2018**, 56, 152-158	9.1	40
48	The First Testbed Demonstration of Cognitive End-to-End Optical Service Provisioning with Hierarchical Learning across Multiple Autonomous Systems **2018**,		14
47	Photonics in Data Centers **2018**, 3-21		1
46	Experimental Demonstration of Flex-LIONS for Reconfigurable All-to-All Optical Interconnects **2018**,		4
45	**2018**,		3
44	Low-Loss Wafer-Scale Silicon Photonic Interposer Utilizing Inverse-Taper Coupler **2018**,		1
43	Design and Evaluation of AWGR-Based Photonic NoC Architectures for 2.5D Integrated High Performance Computing Systems **2017**,		11
42	Single-Tone Optical Frequency Shifting and Nonmagnetic Optical Isolation by Electro-Optical Emulation of a Rotating Half-Wave Plate in a Traveling-Wave Lithium Niobate Waveguide. *IEEE Photonics Journal*, **2017**, 9, 1-13	1.8	2
41	Nanophotonic computing: scalable and energy-efficient computing with attojoule nanophotonics **2017**,		1

40	. *IEEE Photonics Journal*, **2017**, 9, 1-5	1.8	21
39	Scalability of microring-based crossbar for all-to-all optical interconnects **2017**,		2
38	Bit-Parallel All-to-All and Flexible AWGR-based Optical Interconnects **2017**,		12
37	Heterogeneous 2D/3D photonic integrated microsystems. *Microsystems and Nanoengineering*, **2016**, 2, 16030	7.7	38
36	Scalable and energy-efficient AWGR-based computing node: Performance under PARSEC benchmark workload **2016**,		2
35	Flat-Topology High-Throughput Compute Node With AWGR-Based Optical-Interconnects. *Journal of Lightwave Technology*, **2016**, 34, 2959-2968	4	34
34	Experimental Demonstration of Flexible Bandwidth Optical Data Center Core Network With All-to-All Interconnectivity. *Journal of Lightwave Technology*, **2015**, 33, 1578-1585	4	20
33	GMPLS Control Plane With Distributed Multipath RMSA for Elastic Optical Networks. *Journal of Lightwave Technology*, **2015**, 33, 1522-1530	4	7
32	Benchmark analysis of AWGR-based optical tiled architectures for multi-socket HPC boards **2015**,		2
31	Multi-mode arrayed waveguide grating demultiplexer with single-mode performance and few-mode-fiber interfaces **2015**,		1
30	A Scalable, Low-Latency, High-Throughput, Optical Interconnect Architecture Based on Arrayed Waveguide Grating Routers. *Journal of Lightwave Technology*, **2015**, 33, 911-920	4	48
29	Software defined elastic optical networking in temporal, spectral, and spatial domains. *Photonic Network Communications*, **2014**, 28, 19-33	1.7	5
28	3D elastic optical networks in temporal, spectral, and spatial domains with fragmentation-aware RSSMA algorithms **2014**,		7
27	1705-km transmission over coupled-core fibre supporting 6 spatial modes **2014**,		35
26	CMOS Compatible Reconfigurable Silicon Photonic Lattice Filters Using Cascaded Unit Cells for RF-Photonic Processing. *IEEE Journal of Selected Topics in Quantum Electronics*, **2014**, 20, 359-368	3.8	17
25	10-Gb/s BM-CDR Circuit With Synchronous Data Output for Optical Networks. *IEEE Photonics Technology Letters*, **2013**, 25, 508-511	2.2	5
24	Scalable Optical Interconnect Architecture Using AWGR-Based TONAK LION Switch With Limited Number of Wavelengths. *Journal of Lightwave Technology*, **2013**, 31, 4087-4097	4	35
23	Theory and Design Optimization of Energy-Efficient Hydrophobic Wafer-bonded III V/Si Hybrid Semiconductor Optical Amplifiers. *Journal of Lightwave Technology*, **2013**, 31, 4057-4066	4	7

22	Nonlinear Optical Signal Processing in Optical Packet Switching Systems. *IEEE Journal of Selected Topics in Quantum Electronics*, **2012**, 18, 978-987	3.8	23
21	Elastic optical networking: a new dawn for the optical layer?. *IEEE Communications Magazine*, **2012**, 50, s12-s20	9.1	898
20	All-Optical Physical Layer NACK in AWGR-Based Optical Interconnects. *IEEE Photonics Technology Letters*, **2012**, 24, 410-412	2.2	27
19	Demonstration of Spectral Defragmentation in Flexible Bandwidth Optical Networking by FWM. *IEEE Photonics Technology Letters*, **2011**, 23, 1893-1895	2.2	30
18	Four-State Data Encoding for Enhanced Security Against Upstream Eavesdropping in SPECTS O-CDMA. *Journal of Lightwave Technology*, **2011**, 29, 62-68	4	4
17	Energy Efficiency in the Future Internet: The Role of Optical Packet Switching and Optical-Label Switching. *IEEE Journal of Selected Topics in Quantum Electronics*, **2011**, 17, 406-418	3.8	69
16	Tb/s Coherent Optical OFDM Systems Enabled by Optical Frequency Combs. *Journal of Lightwave Technology*, **2010**, 28, 2054-2061	4	71
15	Continuously Tunable Optical Buffering at 40 Gb/s for Optical Packet Switching Networks. *Journal of Lightwave Technology*, **2008**, 26, 3776-3783	4	23
14	Characterization of dual-electrode Mach-Zehnder modulator based optical frequency comb generator in two regimes **2008**,		1
13	High-Resolution, Loop-Back AWG for Compact, High-Fidelity Optical Arbitrary Waveform Generation **2008**,		1
12	Microwave velocity and impedance tuning of traveling-wave modulator using ion implantation for monolithic integrated photonic systems. *Microwave and Optical Technology Letters*, **2008**, 50, 2151-2155[1,2]		5
11	Introduction to the Issue on Optical Codes in Optical Communications and Networks. *IEEE Journal of Selected Topics in Quantum Electronics*, **2007**, 13, 1349-1350	3.8	
10	Demonstration of Optical TTL Based Selective-3R in OLS Network Testbed with Label Rewriting and Fiber Transmission **2007**,		1
9	First Field Trial of OLS Network Testbed with All-Optical Contention Resolution of Asynchronous, Variable-Length Optical Packets **2007**,		5
8	Multi-Rate Spectral Phase-Encoded Time-Spreading Optical CDMA System Using OVSF Code Sequences **2007**,		2
7	A 320-Gb/s Capacity (32-User $\times$ 10 Gb/s) SPECTS O-CDMA Network Testbed With Enhanced Spectral Efficiency Through Forward Error Correction. *Journal of Lightwave Technology*, **2007**, 25, 79-86	4	32
6	High-Performance Optical 3R Regeneration for Scalable Fiber Transmission System Applications. *Journal of Lightwave Technology*, **2007**, 25, 504-511	4	22
5	80.8-km BOSSNET SPECTS O-CDMA Field Trial Using Subpicosecond Pulses and a Fully Integrated, Compact AWG-Based Encoder/Decoder. *IEEE Journal of Selected Topics in Quantum Electronics*, **2007**, 13, 1455-1462	3.8	6

4	Demonstration of Spectral Phase O-CDMA Encoding and Decoding in Monolithically Integrated Arrayed-Waveguide-Grating-Based Encoder. *IEEE Photonics Technology Letters*, **2006**, 18, 2602-2604	2.2	12
3	Optical Packet and Burst Switching Technologies for the Future Photonic Internet. *Journal of Lightwave Technology*, **2006**, 24, 4468-4492	4	276
2	MUVIS: Multi-source video streaming service over WLANs. *Journal of Communications and Networks* , **2005**, 7, 144-156	4.1	8
1	Quality-of-Service Based Protection in MPLS Control WDM Mesh Networks. *Photonic Network Communications*, **2002**, 4, 297-320	1.7	14