

Bahram Jalali

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151
papers

5,480
citations

36
h-index

72
g-index

204
ext. papers

6,977
ext. citations

5.3
avg, IF

6.09
L-index

#	Paper	IF	Citations
151	Silicon Photonics. <i>Journal of Lightwave Technology</i> , 2006 , 24, 4600-4615	4	933
150	Demonstration of a silicon Raman laser. <i>Optics Express</i> , 2004 , 12, 5269-73	3.3	548
149	High-throughput single-microparticle imaging flow analyzer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 11630-5	11.5	258
148	Deep Learning in Label-free Cell Classification. <i>Scientific Reports</i> , 2016 , 6, 21471	4.9	249
147	Time stretch and its applications. <i>Nature Photonics</i> , 2017 , 11, 341-351	33.9	182
146	All optical switching and continuum generation in silicon waveguides. <i>Optics Express</i> , 2004 , 12, 4094-1023	3.3	181
145	Observation of Raman emission in silicon waveguides at 1.54 microm. <i>Optics Express</i> , 2002 , 10, 1305-13	3.3	132
144	The third-order nonlinear optical coefficients of Si, Ge, and Si _{1-x} Ge _x in the midwave and longwave infrared. <i>Journal of Applied Physics</i> , 2011 , 110, 011301	2.5	125
143	Theory of amplified dispersive Fourier transformation. <i>Physical Review A</i> , 2009 , 80,	2.6	120
142	Self-phase-modulation induced spectral broadening in silicon waveguides. <i>Optics Express</i> , 2004 , 12, 829-34	3.3	111
141	Performance of serial time-encoded amplified microscope. <i>Optics Express</i> , 2010 , 18, 10016-28	3.3	99
140	Demonstration of a Mid-infrared silicon Raman amplifier. <i>Optics Express</i> , 2007 , 15, 14355-62	3.3	97
139	Digitally synthesized beat frequency multiplexing for sub-millisecond fluorescence microscopy. <i>Nature Photonics</i> , 2013 , 7, 806-810	33.9	95
138	Femtosecond real-time single-shot digitizer. <i>Applied Physics Letters</i> , 2007 , 91, 161105	3.4	92
137	Demonstration of directly modulated silicon Raman laser. <i>Optics Express</i> , 2005 , 13, 796-800	3.3	75
136	Prospects for Silicon Mid-IR Raman Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2006 , 12, 1618-1627	3.8	69
135	Label-free high-throughput cell screening in flow. <i>Biomedical Optics Express</i> , 2013 , 4, 1618-25	3.5	61

134	Amplified dispersive Fourier-transform imaging for ultrafast displacement sensing and barcode reading. <i>Applied Physics Letters</i> , 2008 , 93, 131109	3.4	61
133	TimeBandwidth engineering. <i>Optica</i> , 2014 , 1, 23	8.6	56
132	Time-stretch LiDAR as a spectrally scanned time-of-flight ranging camera. <i>Nature Photonics</i> , 2020 , 14, 14-18	33.9	56
131	High-speed nanometer-resolved imaging vibrometer and velocimeter. <i>Applied Physics Letters</i> , 2011 , 98, 101107	3.4	55
130	Energy harvesting in silicon wavelength converters. <i>Optics Express</i> , 2006 , 14, 12327-33	3.3	48
129	Photonic time-stretch digitizer and its extension to real-time spectroscopy and imaging. <i>Laser and Photonics Reviews</i> , 2013 , 7, 207-263	8.3	47
128	Giant tunable optical dispersion using chromo-modal excitation of a multimode waveguide. <i>Optics Express</i> , 2011 , 19, 23809-17	3.3	45
127	Time-warp correction and calibration in photonic time-stretch analog-to-digital converter. <i>Optics Letters</i> , 2008 , 33, 2674-6	3	44
126	Multilayer 3-D photonics in silicon. <i>Optics Express</i> , 2007 , 15, 12686-91	3.3	44
125	Real-time spectroscopy with subgigahertz resolution using amplified dispersive Fourier transformation. <i>Applied Physics Letters</i> , 2008 , 92, 111102	3.4	43
124	Digital broadband linearization of optical links. <i>Optics Letters</i> , 2013 , 38, 446-8	3	40
123	Periodically poled silicon. <i>Applied Physics Letters</i> , 2009 , 94, 091116	3.4	40
122	Nonlinear absorption in silicon and the prospects of mid-infrared silicon Raman lasers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, R38-R40	1.6	40
121	High-throughput optical coherence tomography at 800 nm. <i>Optics Express</i> , 2012 , 20, 19612-7	3.3	38
120	Can silicon change photonics?. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008 , 205, 213-224	3.7	37
119	Demonstration of 11dB fiber-to-fiber gain in a silicon Raman amplifier. <i>IEICE Electronics Express</i> , 2004 , 1, 429-434	0.5	36
118	Add-drop filters utilizing vertically coupled microdisk resonators in silicon. <i>Applied Physics Letters</i> , 2005 , 86, 091102	3.4	36
117	Optical data compression in time stretch imaging. <i>PLoS ONE</i> , 2015 , 10, e0125106	3.7	35

116	Distortion Cancellation in Time-Stretch Analog-to-Digital Converter. <i>Journal of Lightwave Technology</i> , 2007 , 25, 3716-3721	4	35
115	Deep Cytometry: Deep learning with Real-time Inference in Cell Sorting and Flow Cytometry. <i>Scientific Reports</i> , 2019 , 9, 11088	4.9	34
114	Limiting nature of continuum generation in silicon. <i>Applied Physics Letters</i> , 2008 , 93, 091114	3.4	33
113	All-dielectric photonic-assisted radio front-end technology. <i>Nature Photonics</i> , 2007 , 1, 535-538	33.9	32
112	Raman amplification and lasing in SiGe waveguides. <i>Optics Express</i> , 2005 , 13, 2459-66	3.3	31
111	Anamorphic transformation and its application to time-bandwidth compression. <i>Applied Optics</i> , 2013 , 52, 6735-43	1.7	30
110	Simultaneous mechanical-scan-free confocal microscopy and laser microsurgery. <i>Optics Letters</i> , 2009 , 34, 2099-101	3	29
109	Real-time optical reflectometry enabled by amplified dispersive Fourier transformation. <i>Applied Physics Letters</i> , 2008 , 93, 031106	3.4	27
108	Two-Photon Photovoltaic Effect in Silicon. <i>IEEE Journal of Quantum Electronics</i> , 2007 , 43, 1211-1217	2	27
107	Tailoring Wideband Signals With a Photonic Hardware Accelerator. <i>Proceedings of the IEEE</i> , 2015 , 103, 1071-1086	14.3	26
106	Photonic Bandwidth Compression Front End for Digital Oscilloscopes. <i>Journal of Lightwave Technology</i> , 2009 , 27, 5073-5077	4	26
105	Nomarski serial time-encoded amplified microscopy for high-speed contrast-enhanced imaging of transparent media. <i>Biomedical Optics Express</i> , 2011 , 2, 3387-92	3.5	25
104	Digital broadband linearization technique and its application to photonic time-stretch analog-to-digital converter. <i>Optics Letters</i> , 2011 , 36, 1077-9	3	25
103	The Anamorphic Stretch Transform: Putting the Squeeze on Big Data. <i>Optics and Photonics News</i> , 2014 , 25, 24	1.9	24
102	Ultrafast dark-field surface inspection with hybrid-dispersion laser scanning. <i>Applied Physics Letters</i> , 2014 , 104, 251106	3.4	24
101	Tera-sample per second real-time waveform digitizer. <i>Applied Physics Letters</i> , 2005 , 87, 241116	3.4	23
100	Vertically-coupled micro-resonators realized using three-dimensional sculpting in silicon. <i>Applied Physics Letters</i> , 2004 , 85, 1018-1020	3.4	23
99	Experimental demonstration of optical real-time data compression. <i>Applied Physics Letters</i> , 2014 , 104, 111101	3.4	22

98	Time stretch enhanced recording oscilloscope. <i>Applied Physics Letters</i> , 2009 , 94, 041105	3.4	22
97	Spectral periodicity in soliton explosions on a broadband mode-locked Yb fiber laser using time-stretch spectroscopy. <i>Optics Letters</i> , 2018 , 43, 1862-1865	3	21
96	Discrete Anamorphic Transform for Image Compression. <i>IEEE Signal Processing Letters</i> , 2014 , 21, 829-833.	2	21
95	Noise Figure of Silicon Raman Amplifiers. <i>Journal of Lightwave Technology</i> , 2008 , 26, 847-852	4	21
94	Coherent time-stretch transformation for real-time capture of wideband signals. <i>Optics Express</i> , 2013 , 21, 21618-27	3.3	18
93	Optically amplified detection for biomedical sensing and imaging. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2013 , 30, 2124-32	1.8	18
92	Gain Enhancement in Cladding-Pumped Silicon Raman Amplifiers. <i>IEEE Journal of Quantum Electronics</i> , 2008 , 44, 692-704	2	18
91	Spectro-temporal encoded multiphoton microscopy and fluorescence lifetime imaging at kilohertz frame-rates. <i>Nature Communications</i> , 2020 , 11, 2062	17.4	17
90	Optical time-domain analog pattern correlator for high-speed real-time image recognition. <i>Optics Letters</i> , 2011 , 36, 220-2	3	17
89	Analog optical computing primitives in silicon photonics. <i>Optics Letters</i> , 2016 , 41, 1273-6	3	15
88	Design of Warped Stretch Transform. <i>Scientific Reports</i> , 2015 , 5, 17148	4.9	15
87	Compact, transmissive two-dimensional spatial disperser design with application in simultaneous endoscopic imaging and laser microsurgery. <i>Applied Optics</i> , 2014 , 53, 376-82	1.7	15
86	Continuum generation and carving on a silicon chip. <i>Applied Physics Letters</i> , 2007 , 91, 061111	3.4	14
85	Coherent Time-Stretch Transform for Near-Field Spectroscopy. <i>IEEE Photonics Journal</i> , 2014 , 6, 1-7	1.8	12
84	Demonstration of Raman gain at 800 nm in single-mode fiber and its potential application to biological sensing and imaging. <i>Applied Physics Letters</i> , 2009 , 95, 251101	3.4	12
83	All-dielectric photonic-assisted wireless receiver. <i>Optics Express</i> , 2008 , 16, 1742-7	3.3	12
82	Electrical control of parametric processes in silicon waveguides. <i>Optics Express</i> , 2008 , 16, 9838-43	3.3	12
81	150 GS/s real-time oscilloscope using a photonic front end 2008 ,		12

80	Feature Enhancement in Visually Impaired Images. <i>IEEE Access</i> , 2018 , 6, 1407-1415	3.5	11
79	Influence of Pump-to-Signal RIN Transfer on Noise Figure in Silicon Raman Amplifiers. <i>IEEE Photonics Technology Letters</i> , 2008 , 20, 2021-2023	2.2	10
78	Broadband Raman amplification in silicon. <i>Applied Physics Letters</i> , 2008 , 93, 191105	3.4	10
77	Light Generation, Amplification, and Wavelength Conversion via Stimulated Raman Scattering in Silicon Microstructures. <i>Topics in Applied Physics</i> , 2004 , 199-238	0.5	10
76	Fourier-domain mode-locked laser combined with a master-oscillator power amplifier architecture. <i>Optics Letters</i> , 2019 , 44, 1952-1955	3	9
75	Subterranean silicon photonics: Demonstration of buried waveguide-coupled microresonators. <i>Applied Physics Letters</i> , 2005 , 87, 081114	3.4	8
74	Spectral dynamics on saturable absorber in mode-locking with time stretch spectroscopy. <i>Scientific Reports</i> , 2020 , 10, 14460	4.9	8
73	Single-shot network analyzer for extremely fast measurements. <i>Applied Optics</i> , 2016 , 55, 8406-8412	0.2	8
72	Artificial Intelligence in Label-free Microscopy 2017 ,		7
71	Real-time wavelength and bandwidth-independent optical integrator based on modal dispersion. <i>Optics Express</i> , 2012 , 20, 14109-16	3.3	7
70	Time-gated filter for sideband suppression. <i>Optics Letters</i> , 2009 , 34, 869-71	3	7
69	Phase stretch transform for super-resolution localization microscopy. <i>Biomedical Optics Express</i> , 2016 , 7, 4198-4209	3.5	7
68	Digitally synthesized beat frequency-multiplexed fluorescence lifetime spectroscopy. <i>Biomedical Optics Express</i> , 2014 , 5, 4428-36	3.5	6
67	Spectrally encoded angular light scattering. <i>Optics Express</i> , 2013 , 21, 28960-7	3.3	6
66	Raman beam cleanup in silicon in the mid-infrared. <i>Optics Express</i> , 2010 , 18, 12411-4	3.3	6
65	Noise figure of amplified dispersive Fourier transformation. <i>Physical Review A</i> , 2010 , 82,	2.6	6
64	Three-dimensional integration of metal-oxide-semiconductor transistor with subterranean photonics in silicon. <i>Applied Physics Letters</i> , 2006 , 88, 121108	3.4	6
63	Tera-sample-per-second single-shot device analyzer. <i>Optics Express</i> , 2019 , 27, 23321-23335	3.3	6

62	Impact of Optical Nonlinearity on Performance of Photonic Time-Stretch Analog-to-Digital Converter. <i>Journal of Lightwave Technology</i> , 2011 , 29, 2025-2030	4	5
61	Scaling laws of nonlinear silicon nanophotonics 2005 ,		5
60	Warped time lens in temporal imaging for optical real-time data compression. <i>Science Bulletin</i> , 2014 , 59, 2649-2654		4
59	. <i>IEEE Photonics Technology Letters</i> , 2011 , 23, 947-949	2.2	4
58	Breaking Speed and Sensitivity Limits. <i>Optik & Photonik</i> , 2010 , 5, 32-36		4
57	Raman induced wavelength conversion in scaled Silicon waveguides. <i>IEICE Electronics Express</i> , 2004 , 1, 298-304	0.5	4
56	Observation of simultaneous Stokes and anti-Stokes emission in a silicon Raman laser. <i>IEICE Electronics Express</i> , 2004 , 1, 435-441	0.5	4
55	Radiofrequency encoded angular-resolved light scattering. <i>Applied Physics Letters</i> , 2015 , 106, 123701	3.4	3
54	Stress-induced phase matching in Silicon waveguides 2006 ,		3
53	Two-Dimensional Spatio-Temporal Signal Processing for Dispersion Compensation in Time-Stretched ADC. <i>Journal of Lightwave Technology</i> , 2007 , 25, 1580-1587	4	3
52	Context-Aware Image Compression. <i>PLoS ONE</i> , 2016 , 11, e0158201	3.7	3
51	Invited Article: Optical dynamic range compression. <i>APL Photonics</i> , 2018 , 3, 110806	5.2	3
50	Time-stretch accelerated processor for real-time, in-service, signal analysis 2014 ,		2
49	Time-stretch oscilloscope with dual-channel differential detection front end for monitoring of 100 Gb/s return-to-zero differential quadrature phase-shift keying data. <i>Optics Letters</i> , 2011 , 36, 3804-6	3	2
48	Raman scattering from acoustic modes in Si/Ge superlattice waveguides. <i>Superlattices and Microstructures</i> , 2006 , 39, 501-516	2.8	2
47	Demonstration of CW Raman gain with zero electrical power dissipation in p-i-n silicon waveguides 2006 ,		2
46	Multilayer 3-D Photonics in Silicon 2007 ,		2
45	Nonlinear optics in silicon waveguides: stimulated Raman scattering and two-photon absorption 2003 , 4987, 140		2

44	A self-imaging silicon waveguide Raman amplifier 2007 ,		2
43	Dispersive Fourier transformation in the 800 nm spectral range 2012 ,		2
42	Time-stretch Network Analyzer for Single-shot Characterization of Electronic Devices 2019 ,		2
41	Neural network enabled time stretch spectral regression. <i>Optics Express</i> , 2021 , 29, 20786-20794	3.3	2
40	Engineering Strain in Silicon Using SIMOX 3-D Sculpting. <i>IEEE Photonics Journal</i> , 2016 , 8, 1-9	1.8	2
39	Noise and Information Capacity in Silicon Nanophotonics. <i>IEEE Photonics Journal</i> , 2015 , 7, 1-20	1.8	1
38	Signal De-convolution with analog logarithmic computing primitives in silicon photonics 2016 ,		1
37	Ultrafast automated image cytometry for cancer detection. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 129-32	0.9	1
36	Matrix Analysis of Warped Stretch Imaging. <i>Scientific Reports</i> , 2017 , 7, 11150	4.9	1
35	High-throughput biological cell classification featuring real-time optical data compression 2015 ,		1
34	Sparsity and self-adaptivity in anamorphic stretch transform 2015 ,		1
33	Self-adaptive stretch in anamorphic image compression 2014 ,		1
32	100-Gb/s RZ-DQPSK Signal Monitoring Using Time-Stretch Enhanced Recording Oscilloscope 2011 ,		1
31	Eye diagram measurements and equalization with Real-time Burst Sampling 2010 ,		1
30	Digital Equalization of Ultrafast Data Using Real-time Burst Sampling 2010 ,		1
29	Floating body CMOS phototransistor memory. <i>IEICE Electronics Express</i> , 2010 , 7, 1790-1795	0.5	1
28	All-Dielectric Photonic-Assisted Wireless Receiver. <i>Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS</i> , 2007 ,		1
27	Broadband Raman amplification in silicon. <i>Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS</i> , 2007 ,		1

26	Silicon Raman laser, amplifier, and wavelength converter (Keynote Paper) 2005 ,		1
25	Optical continuum generation on a silicon chip 2005 ,		1
24	Phase Diversity Electro-optic Sampling: A new approach to single-shot terahertz waveform recording.. <i>Light: Science and Applications</i> , 2022 , 11, 14	16.7	1
23	Nonlinear Schrodinger Kernel for hardware acceleration of machine learning. <i>Journal of Lightwave Technology</i> , 2022 , 1-1	4	1
22	Mid-infrared silicon Raman amplifier 2008 ,		1
21	Dispersion Engineering Employing Curved Space Mapping and Chromo-Modal Excitation 2015 ,		1
20	Engineering Strain in Silicon Using SIMOX 3D Sculpting 2016 ,		1
19	Design of Warped Stretch Transform 2017 , 101-119		1
18	Time-Stretch Analog-to-Digital Conversion Using Phase Modulation and Broadband Balanced Coherent Detection for Improving Resolution 2011 ,		1
17	Chromo-modal dispersion for optical communication and time-stretch spectroscopy. <i>Optics Letters</i> , 2021 , 46, 500-503	3	1
16	Physics-Based Feature Engineering. <i>Springer Series in Optical Sciences</i> , 2019 , 255-275	0.5	0
15	Multi-mode Mid-IR Silicon Raman Amplifiers. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 958, 1		0
14	A Non-Electronic Wireless Receiver with Immunity to Damage by Electromagnetic Pulses. <i>Optical Science and Engineering</i> , 2009 , 421-446		
13	Silicon Lasers147-189		
12	Enhanced OFDM communication using optical dynamic range compression. <i>Optics Communications</i> , 2022 , 508, 127773	2	
11	Ultrafast Dark-Field Surface Inspection by Hybrid Dispersion Laser Scanning. <i>Kyokai Joho Imeiji Zasshi/Journal of the Institute of Image Information and Television Engineers</i> , 2015 , 69, 574-579		0
10	Chapter 11 Information Capacity of Silicon Nanophotonics 2016 , 317-354		
9	History of Brain Mapping and Neurophotonics 2016 , 1-18		

- 8 Nanometer-Resolved Imaging Vibrometer **2017**, 15-20
- 7 Time Stretch Quantitative Phase Imaging **2017**, 43-63
- 6 Label-Free High-Throughput Phenotypic Screening **2017**, 33-41
- 5 Time Stretch **2017**, 7-11
- 4 Three-Dimensional Ultrafast Laser Scanner **2017**, 21-29
- 3 Optical Data Compression in Time Stretch Imaging **2017**, 89-99
- 2 Stress and Piezoelectric Tuning of Silicon's Optical Properties **2011**, 77-106
- 1 Nanoscale Strain Mapping in SIMOX 3-D Sculpted Silicon Waveguides Using Tip-Enhanced Raman Spectroscopy. *IEEE Photonics Journal*, **2016**, 8, 1-12 1.8