Kevin K Tsia

List of Publications by Year
in descending order

147 papers	2,871 citations	159358 30 h-index	197535 49 g-index
158 all docs	158 docs citations	158 times ranked	2388 citing authors

#	Article	IF	Citations
1	Low-Latency <i>In Situ</i> Image Analytics With FPGA-Based Quantized Convolutional Neural Network. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 2853-2866.	7.2	12
2	Ultrafast two-photon fluorescence imaging of cerebral blood circulation in the mouse brain in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	19
3	High-throughput Multimodal FACED Imaging Flow Cytometry. , 2021, , .		0
4	Toward Deep Biophysical Cytometry: Prospects and Challenges. Trends in Biotechnology, 2021, 39, 1249-1262.	4.9	39
5	Optical volumetric brain imaging: speed, depth, and resolution enhancement. Journal Physics D: Applied Physics, 2021, 54, 323002.	1.3	14
6	Background-Free Volumetric Two-Photon Microscopy by Side-Lobes-Cancelled Bessel Beam. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-7.	1.9	7
7	Multimodal FACED imaging for large-scale single-cell morphological profiling. APL Photonics, 2021, 6, .	3.0	12
8	High-speed laser-scanning biological microscopy using FACED. Nature Protocols, 2021, 16, 4227-4264.	5.5	9
9	Generalized and scalable trajectory inference in single-cell omics data with VIA. Nature Communications, 2021, 12, 5528.	5.8	36
10	Red Blood Cell Storage Monitoring by High-throughput Single-bell Image-based Biophysical Profiling. , 2021, , .		0
11	Speed scaling in multiphoton fluorescence microscopy. Nature Photonics, 2021, 15, 800-812.	15.6	31
12	Multimodal FACED imaging flow cytometry for correlative single-cell morphological analysis. , 2021, , .		0
13	Large-scale optical pulling of cancer cells with counter-propagating beams in the near-infrared-II window. , 2021, , .		0
14	Deep-learning-assisted biophysical imaging cytometry at massive throughput delineates cell population heterogeneity. Lab on A Chip, 2020, 20, 3696-3708.	3.1	41
15	Photonic Nanojet Mediated Backaction of Dielectric Microparticles. ACS Photonics, 2020, 7, 1483-1490.	3.2	23
16	Encrypted wide-field two-photon microscopy with single-pixel detection and compressed sensing. Applied Physics Express, 2020, 13, 032007.	1.1	2
17	High-contrast, fast chemical imaging by coherent Raman scattering using a self-synchronized two-colour fibre laser. Light: Science and Applications, 2020, 9, 25.	7.7	50
18	Kilohertz two-photon fluorescence microscopy imaging of neural activity in vivo. Nature Methods, 2020, 17, 287-290.	9.0	155

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19	Parallelized volumetric fluorescence microscopy with a reconfigurable coded incoherent light-sheet array. Light: Science and Applications, 2020, 9, 8.	7.7	39
20	PARC: ultrafast and accurate clustering of phenotypic data of millions of single cells. Bioinformatics, 2020, 36, 2778-2786.	1.8	75
21	Computational optical imaging goes viral. APL Photonics, 2020, 5, 030401.	3.0	0
22	Resolution enhancement in an extended depth of field for volumetric two-photon microscopy. Optics Letters, 2020, 45, 3054.	1.7	8
23	Optical coherence tomography with balanced signal strength across the depth for pearl inspection. OSA Continuum, 2020, 3, 1739.	1.8	2
24	Scattering resilient single pixel imaging with a gain-switched thulium-doped fiber laser. , 2020, , .		0
25	Single-cell Fourier-transform light scattering analysis by high- throughput label-free imaging flow cytometry. , 2020, , .		0
26	Hysteresis in backaction force mediated by photonic nanojet. , 2020, , .		0
27	Robust Quantitative Phase Imaging Cytometry with Transfer Learning. , 2020, , .		0
28	Label-Free Phytoplankton Analysis by High-Throughput Quantitative Phase Imaging Cytometry and Machine Learning. , 2019, , .		0
29	A Real-Time Coprime Line Scan Super-Resolution System for Ultra-Fast Microscopy. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 781-792.	2.7	2
30	Quantitative Phase Imaging Flow Cytometry for Ultraâ€Largeâ€Scale Singleâ€Cell Biophysical Phenotyping. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2019, 95, 510-520.	1.1	60
31	Multiâ€ATOM: Ultrahighâ€throughput singleâ€cell quantitative phase imaging with subcellular resolution. Journal of Biophotonics, 2019, 12, e201800479.	1.1	34
32	High-Contrast Coherent Raman Scattering Imaging using a Self-Synchronized Dual-Color Fiber Laser. , 2019, , .		0
33	Large-Scale Multi-Class Image-Based Cell Classification With Deep Learning. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 2091-2098.	3.9	66
34	Volumetric two-photon microscopy with a non-diffracting Airy beam. Optics Letters, 2019, 44, 391.	1.7	28
35	Depth-resolved volumetric two-photon microscopy based on dual Airy beam scanning. Optics Letters, 2019, 44, 5238.	1.7	17
36	Comment on â€œGhost cytometryâ€. Science, 2019, 364, .	6.0	6

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37	A highâ€throughput allâ€optical laserâ€scanning imaging flow cytometer with biomolecular specificity and subcellular resolution. Journal of Biophotonics, 2018, 11, e201700178.	1.1	14
38	Wavelength-swept source at 2.0 Âµm through second harmonic generation. , 2018, , .		0
39	Video-rate centimeter-range optical coherence tomography based on dual optical frequency combs by electro-optic modulators. Optics Express, 2018, 26, 24928.	1.7	12
40	102-nm, 445-MHz inertial-free swept source by mode-locked fiber laser and time stretch technique for optical coherence tomography. Optics Express, 2018, 26, 4370.	1.7	46
41	Short pulse generation from a passively mode-locked fiber optical parametric oscillator with optical time-stretch. Optics Express, 2018, 26, 9565.	1.7	5
42	Flexible pulse-stretching for a swept source at 20â€‰â€‰Î¼m using free-space angular-chirp-enhanced delay. Optics Letters, 2018, 43, 102.	1.7	5
43	Ultrafast optical imaging at 20â€‰â€‰Î¼m through second-harmonic-generation-based time-stretch at 10â€‰â€‰Î¼m. Optics Letters, 2018, 43, 3822.	1.7	11
44	Label-free cell-cycle analysis by high-throughput quantitative phase time-stretch imaging flow cytometry. , 2018, , .		3
45	Ultrafast laser-scanning time-stretch imaging at visible wavelengths. Light: Science and Applications, 2017, 6, e16196-e16196.	7.7	125
46	Ultrafast, laser-scanning time-stretch microscopy with visible light. , 2017, , .		0
47	All-passive pixel super-resolution of time-stretch imaging. Scientific Reports, 2017, 7, 44608.	1.6	11
48	Microfluidic Imaging Flow Cytometry by Asymmetric-detection Time-stretch Optical Microscopy (ATOM). Journal of Visualized Experiments, 2017, , .	0.2	3
49	Multi-MHz laser-scanning single-cell fluorescence microscopy by spatiotemporally encoded virtual source array. Biomedical Optics Express, 2017, 8, 4160.	1.5	14
50	Time-stretch microscopy on a DVD for high-throughput imaging cell-based assay. Biomedical Optics Express, 2017, 8, 640.	1.5	9
51	Compact fs ytterbium fiber laser at 1010 nm for biomedical applications. Biomedical Optics Express, 2017, 8, 4921.	1.5	28
52	Real-time observation of round-trip resolved spectral dynamics in a stabilized fs fiber laser. Optics Express, 2017, 25, 8751.	1.7	14
53	Unveiling multi-scale laser dynamics through time-stretch and time-lens spectroscopies. Optics Express, 2017, 25, 29098.	1.7	49
54	High-speed wavelength-swept source at 20â€‰Î¼m and its application in imaging through a scattering medium. Optics Letters, 2017, 42, 1540.	1.7	25

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55	High-throughput single-cell second harmonic generation imaging in ultrafast microfluidic flow. , 2017, , .		0
56	Ultrafast time-stretch imaging at 932 nm through a new highly-dispersive fiber. Biomedical Optics Express, 2016, 7, 5208.	1.5	9
57	Self-healing highly-chirped fiber laser at 10 Î¼m. Optics Express, 2016, 24, 27577.	1.7	10
58	High-throughput time-stretch imaging flow cytometry for multi-class classification of phytoplankton. Optics Express, 2016, 24, 28170.	1.7	45
59	Quantitative asymmetric-detection time-stretch optical microscopy (Q-ATOM) for ultrafast quantitative phase imaging flow cytometry (Conference Presentation). , 2016, , .		0
60	Long-range projections coordinate distributed brain-wide neural activity with a specific spatiotemporal profile. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E8306-E8315.	3.3	55
61	High-throughput cellular imaging with high-speed asymmetric-detection time-stretch optical microscopy under FPGA platform. , 2016, , .		2
62	High-throughput time-stretch imaging cellular assay based on a high-speed spinning platform. , 2016, , .		0
63	Real-time object detection and classification for high-speed asymmetric-detection time-stretch optical microscopy on FPGA. , 2016, , .		1
64	Optofluidic time-stretch imaging â€" an emerging tool for high-throughput imaging flow cytometry. Lab on A Chip, 2016, 16, 1743-1756.	3.1	83
65	Subsampled scanning holographic imaging (SuSHI) for fast, non-adaptive recording of three-dimensional objects. Optica, 2016, 3, 911.	4.8	38
66	Pixel super-resolution of time-stretch imaging by an equivalent-time sampling concept. , 2016, , .		0
67	Ultrafast quantitative time-stretch imaging flow cytometry of phytoplankton. Proceedings of SPIE, 2016, , .	0.8	0
68	Ultrafast Microfluidic Cellular Imaging by Optical Time-Stretch. Methods in Molecular Biology, 2016, 1389, 23-45.	0.4	5
69	Ultrafast measurements of optical spectral coherence by single-shot time-stretch interferometry. Scientific Reports, 2016, 6, 27937.	1.6	20
70	Ultrawide C- and L-band mode-locked erbium-doped fiber ring laser and its application in ultrafast microscopy. , 2016, , .		1
71	High-throughput microparticle screening by 1-Î¼m time-stretch optofluidic imaging integrated with a field-programmable gate array platform. , 2016, , .		2
72	Active, large-scale tuning of optical dispersion by free-space angular-chirp-enhanced delay (FACED). , 2016, , .		1

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73	A study on spectral dynamics of Raman-assisted mode-locking fiber cavities with time-stretch technique. , 2016, , .		0
74	Synchronized dual-repetition-rate two-color fiber lasers for coherent Raman imaging. , 2016, , .		0
75	Optical time-stretch microscopy at visible wavelengths. , 2016, , .		1
76	Ultra-wideband fiber optical parametric amplifier for spectrally-encoded microscopy (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6		0
77	Arbitrary two-dimensional spectrally encoded pattern generationâ€"a new strategy for high-speed patterned illumination imaging. Optica, 2015, 2, 1037.	4.8	22
78	High-throughput intrinsic single-cell phenotyping by quantitative asymmetric-detection time-stretch optical microscopy (Q-ATOM). , 2015, , .		0
79	Advancing optical time stretch for high-throughput imaging diagnostics on the single-cell and tissue scales. , 2015, , .		0
80	28 MHz swept source at 10 Î¼m for ultrafast quantitative phase imaging. Biomedical Optics Express, 2015, 6, 3855.	1.5	24
81	Accelerated cell imaging and classification on FPGAs for quantitative-phase asymmetric-detection time-stretch optical microscopy. , 2015, , .		5
82	Optical time-stretch imaging flow cytometry of phytoplankton. , 2015, , .		1
83	Pulsing Manipulation in a 1.55-<inline-formula> <tex-math notation="LaTeX">$mu ext{m}$ </tex-math></inline-formula> Mode-Locked Fiber Laser by a 1-<inline-formula> <tex-math notation="LaTeX">$mu ext{m}$ </tex-math></inline-formula> Optical Pattern. IEEE Photonics Technology Letters, 2015, 27, 1949-1952.	1.3	6
84	High-performance multi-megahertz optical coherence tomography based on amplified optical time-stretch. Biomedical Optics Express, 2015, 6, 1340.	1.5	52
85	110â€‰â€‰nm versatile fiber optical parametric amplifier at 10â€‰â€‰Î¼m. Optics Letters, 2015, 40, 4090.	1.7	5
86	60-MHz wavelength-encoded tomography (WET). , 2015, , .		0
87	Addressing a cavity with patterns at ultra-wideband detune. , 2015, , .		0
88	Revisit laser scanning fluorescence microscopy performance under fluorescence-lifetime-limited regime. Proceedings of SPIE, 2014, , .	0.8	0
89	Broadband hyperspectral coherent anti-Stokes Raman scattering microscopy for stain-free histological imaging with principal component analysis. , 2014, , .		2
90	Optical time-stretch microscopy using Bessel spectral shower illumination. , 2014, , .		0

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91	Breathing laser as an inertia-free swept source for high-quality ultrafast optical bioimaging. Optics Letters, 2014, 39, 6593.	1.7	58
92	All-fiber optical parametric amplifier for life-science application. , 2014, , .		1
93	Asymmetric-detection time-stretch optical microscopy (ATOM) for high-contrast and high-speed microfluidic cellular imaging. , 2014, , .		1
94	Performance of megahertz amplified optical time-stretch optical coherence tomography (AOT-OCT). Optics Express, 2014, 22, 22498.	1.7	22
95	Speed-dependent resolution analysis of ultrafast laser-scanning fluorescence microscopy. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 755.	0.9	5
96	Time-stretch microscopy based on time-wavelength sequence reconstruction from wideband incoherent source. Applied Physics Letters, 2014, 105, .	1.5	18
97	Broadband fiber-optical parametric amplification for ultrafast time-stretch imaging at 10â€‰â€‰Î¼m. Optics Letters, 2014, 39, 5989.	1.7	31
98	Interferometric time-stretch microscopy for ultrafast quantitative cellular and tissue imaging at 1Â<i>Î¼</i>m. Journal of Biomedical Optics, 2014, 19, 076001.	1.4	65
99	Enhanced supercontinuum generation in the normal dispersion pumping regime by seeded dispersive wave emission and stimulated Raman scattering. Optics Communications, 2014, 325, 28-34.	1.0	7
100	Effect of the CW-Seed's Linewidth on the Seeded Generation of Supercontinuum. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 605-611.	1.9	7
101	Signal reduction in fluorescence imaging using radio frequency-multiplexed excitation by compressed sensing. Proceedings of SPIE, 2014, , .	0.8	1
102	Asymmetric-detection time-stretch optical microscopy (ATOM) for ultrafast high-contrast cellular imaging in flow. Scientific Reports, 2014, 4, 3656.	1.6	83
103	Parametric spectro-temporal analyzer (PASTA) for ultrafast spectroscopy and its microscopic application. , 2014, , .		0
104	Effect of the CW-seed's linewidth on the seeded generation of supercontinuum. , 2013, , .		1
105	Optical time-stretch confocal microscopy at 1â€‰â€‰Î¼m. Optics Letters, 2012, 37, 3330.	1.7	126
106	Exploiting few mode-fibers for optical time-stretch confocal microscopy in the short near-infrared window. Optics Express, 2012, 20, 24115.	1.7	25
107	Demonstration of minute continuous-wave triggered supercontinuum generation at 1 Î¼m for high-speed biophotonic applications. Proceedings of SPIE, 2012, , .	0.8	0
108	Cost-effective approaches for high-resolution bioimaging by time-stretched confocal microscopy at 1μm. Proceedings of SPIE, 2012, , .	0.8	1

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109	Stabilized Wide-Band Wavelength Conversion Enabled by CW-Triggered Supercontinuum. IEEE Photonics Technology Letters, 2012, 24, 1886-1889.	1.3	11
110	Optical time-stretch microscopy using few-mode fibers. , 2012, , .		0
111	Dispersive Fourier transform using few-mode fibers for real-time and high-speed spectroscopy. Proceedings of SPIE, 2012, , .	0.8	1
112	Pixel super-resolution in serial time-encoded amplified microscopy (STEAM). , 2012, , .		1
113	Cellular imaging by time-stretch confocal microscopy in the 1Î¼m window. , 2012, , .		0
114	Characteristics of supercontinuum generation under the influence of a weak continuous-wave trigger. , 2011, , .		0
115	Investigating the influence of a weak continuous-wave-trigger on picosecond supercontinuum generation. Optics Express, 2011, 19, 13757.	1.7	53
116	Serial time-encoded amplified microscopy (STEAM) based on a stabilized picosecond supercontinuum source. Optics Express, 2011, 19, 15810.	1.7	49
117	Manipulating supercontinuum generation by minute continuous wave. Optics Letters, 2011, 36, 160.	1.7	72
118	Enhanced supercontinuum generation by minute continuous wave seed. , 2011, , .		0
119	Fiber-Optical Parametric Amplifier With High-Speed Swept Pump. IEEE Photonics Technology Letters, 2011, 23, 1022-1024.	1.3	17
120	Fast Swept-Source Generation Based on Fiber Optical Parametric Amplifier. , 2011, , .		0
121	Control of Optical Rogue Waves in Supercontinuum Generation with a Minute Continuous Wave. , 2011, , .		1
122	A minute-continuous-wave-stabilized picosecond supercontinuum source for ultrafast serial time-encoded amplified microscopy (STEAM). , 2011, , .		0
123	Nonlinear silicon photonics. Proceedings of SPIE, 2010, , .	0.8	1
124	Serial Time Encoded Amplified Microscopy (STEAM) for high-throughput detection of rare cells. , 2010, , .		1
125	Periodically poled silicon. , 2010, , .		1
126	Performance of serial time-encoded amplified microscope. Optics Express, 2010, 18, 10016.	1.7	132

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127	Performance of serial time-encoded amplified microscopy. , 2010, , .		1
128	Serial Time Encoded Amplified Microscopy. , 2009, , .		1
129	Periodically poled silicon. Applied Physics Letters, 2009, 94, .	1.5	50
130	Theory of amplified dispersive Fourier transformation. Physical Review A, 2009, 80, .	1.0	179
131	Periodically-Poled Silicon. , 2009, , .		1
132	Addendum: â€œPeriodically poled siliconâ€•[Appl. Phys. Lett. 94, 091116 (2009)]. Applied Physics Letters, 2009, 94, 159902.	1.5	3
133	Simultaneous mechanical-scan-free confocal microscopy and laser microsurgery. Optics Letters, 2009, 34, 2099.	1.7	40
134	Stress-induced χ⁽²⁾ in silicon — Comparison between theoretical and experimental values. , 2009, , .		7
135	2D Spectrally Encoded Confocal Microscopy and its Application for Simultaneous Imaging and Laser Surgery with a Single Fiber Probe. , 2009, , .		0
136	Electrical control of parametric processes in silicon waveguides. Optics Express, 2008, 16, 9838.	1.7	15
137	Amplified dispersive Fourier-transform imaging for ultrafast displacement sensing and barcode reading. Applied Physics Letters, 2008, 93, 131109.	1.5	78
138	Dynamic tuning of birefringence in silicon waveguides. , 2008, , .		0
139	Nonlinear Photovoltaic Effect. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
140	Two-Photon Photovoltaic Effect in Silicon. IEEE Journal of Quantum Electronics, 2007, 43, 1211-1217.	1.0	33
141	Energy Harvesting in Silicon Photonics. , 2007, , .		0
142	Surface modes in two-dimensional photonic crystal slabs with a flat dielectric margin. Optics Express, 2006, 14, 7368.	1.7	21
143	Energy harvesting in silicon wavelength converters. Optics Express, 2006, 14, 12327.	1.7	64
144	Energy Harvesting in Silicon Photonic Devices. , 2006, , .		1

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145	Two-photon photovoltaic effect in silicon wavelength converters. , 2006, , .		1
146	Dispersion-guided resonances in two-dimensional photonic-crystal-embedded microcavities. Optics Express, 2004, 12, 5711.	1.7	20
147	Photonic-crystal-embedded microcavities. , 2004, , .		3