Shaowei Jiang

List of Publications by Year
in descending order

43 papers	1,211 citations	394421 19 h-index	377865 34 g-index
44 all docs	44 docs citations	44 times ranked	661 citing authors

#	Article	IF	Citations
1	Concept, implementations and applications of Fourier ptychography. Nature Reviews Physics, 2021, 3, 207-223.	26.6	180
2	Rapid and robust two-dimensional phase unwrapping via deep learning. Optics Express, 2019, 27, 23173.	3.4	100
3	Solving Fourier ptychographic imaging problems via neural network modeling and TensorFlow. Biomedical Optics Express, 2018, 9, 3306.	2.9	90
4	Wide-field, high-resolution lensless on-chip microscopy via near-field blind ptychographic modulation. Lab on A Chip, 2020, 20, 1058-1065.	6.0	80
5	Autofocusing technologies for whole slide imaging and automated microscopy. Journal of Biophotonics, 2020, 13, e202000227.	2.3	60
6	Transform- and multi-domain deep learning for single-frame rapid autofocusing in whole slide imaging. Biomedical Optics Express, 2018, 9, 1601.	2.9	51
7	Near-field Fourier ptychography: super-resolution phase retrieval via speckle illumination. Optics Express, 2019, 27, 7498.	3.4	51
8	OpenWSI: a low-cost, high-throughput whole slide imaging system via single-frame autofocusing and open-source hardware. Optics Letters, 2020, 45, 260.	3.3	45
9	Super-resolution microscopy via ptychographic structured modulation of a diffuser. Optics Letters, 2019, 44, 3645.	3.3	42
10	Field-portable quantitative lensless microscopy based on translated speckle illumination and sub-sampled ptychographic phase retrieval. Optics Letters, 2019, 44, 1976.	3.3	40
11	Resolution-Enhanced Parallel Coded Ptychography for High-Throughput Optical Imaging. ACS Photonics, 2021, 8, 3261-3271.	6.6	36
12	Multilayer fluorescence imaging on a single-pixel detector. Biomedical Optics Express, 2016, 7, 2425.	2.9	33
13	Full-field Fourier ptychography (FFP): Spatially varying pupil modeling and its application for rapid field-dependent aberration metrology. APL Photonics, 2019, 4, .	5.7	32
14	13-fold resolution gain through turbid layer via translated unknown speckle illumination. Biomedical Optics Express, 2018, 9, 260.	2.9	30
15	Invited Article: Mask-modulated lensless imaging with multi-angle illuminations. APL Photonics, 2018, 3, 060803.	5.7	30
16	Super-resolved multispectral lensless microscopy via angle-tilted, wavelength-multiplexed ptychographic modulation. Optics Letters, 2020, 45, 3486.	3.3	28
17	Virtual brightfield and fluorescence staining for Fourier ptychography via unsupervised deep learning. Optics Letters, 2020, 45, 5405.	3.3	22
18	Ptychographic modulation engine: a low-cost DIY microscope add-on for coherent super-resolution imaging. Journal Physics D: Applied Physics, 2020, 53, 014005.	2.8	21

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19	Dual lightâ€emitting diodeâ€based multichannel microscopy for wholeâ€slide multiplane, multispectral and phase imaging. Journal of Biophotonics, 2018, 11, e201700075.	2.3	20
20	Recovering higher dimensional image data using multiplexed structured illumination. Optics Express, 2015, 23, 30393.	3.4	19
21	Blood-Coated Sensor for High-Throughput Ptychographic Cytometry on a Blu-ray Disc. ACS Sensors, 2022, 7, 1058-1067.	7.8	19
22	High-throughput digital pathology via a handheld, multiplexed, and AI-powered ptychographic whole slide scanner. Lab on A Chip, 2022, 22, 2657-2670.	6.0	18
23	Ptychographic sensor for large-scale lensless microbial monitoring with high spatiotemporal resolution. Biosensors and Bioelectronics, 2022, 196, 113699.	10.1	17
24	Quantitative multi-height phase retrieval via a coded image sensor. Biomedical Optics Express, 2021, 12, 7173.	2.9	15
25	Terapixel hyperspectral whole-slide imaging via slit-array detection and projection. Journal of Biomedical Optics, 2018, 23, 1.	2.6	14
26	Synthetic aperture ptychography: coded sensor translation for joint spatial-Fourier bandwidth expansion. Photonics Research, 2022, 10, 1624.	7.0	13
27	Rapid and robust whole slide imaging based on LED-array illumination and color-multiplexed single-shot autofocusing. Quantitative Imaging in Medicine and Surgery, 2019, 9, 823-831.	2.0	12
28	Quantitative phase imaging via a cGAN network with dual intensity images captured under centrosymmetric illumination. Optics Letters, 2019, 44, 2879.	3.3	12
29	Optofluidic ptychography on a chip. Lab on A Chip, 2021, 21, 4549-4556.	6.0	12
30	Deep learning-enabled whole slide imaging (DeepWSI): oil-immersion quality using dry objectives, longer depth of field, higher system throughput, and better functionality. Optics Express, 2021, 29, 39669.	3.4	12
31	High-throughput lensless whole slide imaging via continuous height-varying modulation of a tilted sensor. Optics Letters, 2021, 46, 5212.	3.3	11
32	Mask-modulated lensless imaging via translated structured illumination. Optics Express, 2021, 29, 12491.	3.4	10
33	Neural network model assisted Fourier ptychography with Zernike aberration recovery and total variation constraint. Journal of Biomedical Optics, 2021, 26, .	2.6	9
34	Brightfield, fluorescence, and phase-contrast whole slide imaging via dual-LED autofocusing. Biomedical Optics Express, 2021, 12, 4651.	2.9	6
35	Ptychography-based high-throughput lensless on-chip microscopy via incremental proximal algorithms. Optics Express, 2021, 29, 37892.	3.4	6
36	Accelerated Phase Shifting for Structured Illumination Microscopy Based on Deep Learning. IEEE Transactions on Computational Imaging, 2021, 7, 700-712.	4.4	5

#	Article	IF	Citations
37	Low-cost whole slide imaging system with single-shot autofocusing based on color-multiplexed illumination and deep learning. Biomedical Optics Express, 2021, 12, 5644.	2.9	4
38	Deep distributed optimization for blind diffuser-modulation ptychography. Optics Letters, 2022, 47, 3015.	3.3	3
39	High-Throughput Functional Characterization of Visceral Afferents by Optical Recordings From Thoracolumbar and Lumbosacral Dorsal Root Ganglia. Frontiers in Neuroscience, 2021, 15, 657361.	2.8	2
40	Bypassing the resolution limit of diffractive zone plate optics via rotational Fourier ptychography. Optics Communications, 2021, 493, 127031.	2.1	1
41	Effective color transfer enables rapid computational microscopy for digital pathology. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	5.1	0
42	Axially shifted pattern illumination for macroscale turbidity suppression and virtual volumetric confocal imaging without axial scanning. Optics Letters, 2019, 44, 811.	3.3	0
43	High-throughput and field-portable ptychographic lensless microscopy based on translated pattern modulation. , 2020, , .		0