Lei Huang

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5098366/publications.pdf

Version: 2024-02-01

77 papers	4,545 citations	172457 29 h-index	114465 63 g-index
77 all docs	77 docs citations	77 times ranked	1441 citing authors

#	Article	IF	Citations
1	Phase shifting algorithms for fringe projection profilometry: A review. Optics and Lasers in Engineering, 2018, 109, 23-59.	3.8	728
2	Temporal phase unwrapping algorithms for fringe projection profilometry: A comparative review. Optics and Lasers in Engineering, 2016, 85, 84-103.	3.8	666
3	Phase error analysis and compensation for nonsinusoidal waveforms in phase-shifting digital fringe projection profilometry. Optics Letters, 2009, 34, 416.	3.3	307
4	Transport of intensity equation: a tutorial. Optics and Lasers in Engineering, 2020, 135, 106187.	3.8	272
5	Comparison of Fourier transform, windowed Fourier transform, and wavelet transform methods for phase extraction from a single fringe pattern in fringe projection profilometry. Optics and Lasers in Engineering, 2010, 48, 141-148.	3.8	262
6	Quality-guided phase unwrapping technique: comparison of quality maps and guiding strategies. Applied Optics, 2011, 50, 6214.	2.1	239
7	Micro Fourier Transform Profilometry (Î¼FTP): 3D shape measurement at 10,000 frames per second. Optics and Lasers in Engineering, 2018, 102, 70-91.	3.8	186
8	Review of phase measuring deflectometry. Optics and Lasers in Engineering, 2018, 107, 247-257.	3.8	152
9	Least-squares calibration method for fringe projection profilometry considering camera lens distortion. Applied Optics, 2010, 49, 1539.	2.1	120
10	Dynamic three-dimensional sensing for specular surface with monoscopic fringe reflectometry. Optics Express, 2011, 19, 12809.	3.4	111
11	High-speed 3D shape measurement using the optimized composite fringe patterns and stereo-assisted structured light system. Optics Express, 2019, 27, 2411.	3.4	92
12	Comparison of two-dimensional integration methods for shape reconstruction from gradient data. Optics and Lasers in Engineering, 2015, 64, 1-11.	3.8	83
13	Temporal phase unwrapping using deep learning. Scientific Reports, 2019, 9, 20175.	3.3	81
14	Camera calibration with active phase target: improvement on feature detection and optimization. Optics Letters, 2013, 38, 1446.	3.3	78
15	Modal phase measuring deflectometry. Optics Express, 2016, 24, 24649.	3.4	71
16	Improvement of least-squares integration method with iterative compensations in fringe reflectometry. Applied Optics, 2012, 51, 7459.	1.8	60
17	High-accuracy aspheric x-ray mirror metrology using Software Configurable Optical Test System/deflectometry. Optical Engineering, 2015, 54, 084103.	1.0	50
18	Adaptive interferometric null testing for unknown freeform optics metrology. Optics Letters, 2016, 41, 5539.	3.3	50

#	Article	IF	Citations
19	High-speed real-time 3D shape measurement based on adaptive depth constraint. Optics Express, 2018, 26, 22440.	3.4	49
20	High-speed three-dimensional shape measurement using geometry-constraint-based number-theoretical phase unwrapping. Optics and Lasers in Engineering, 2019, 115, 21-31.	3.8	48
21	Phase invalidity identification framework with the temporal phase unwrapping method. Measurement Science and Technology, 2011, 22, 035304.	2.6	46
22	Flexible camera calibration using not-measured imperfect target. Applied Optics, 2013, 52, 6278.	1.8	44
23	Fast full-field out-of-plane deformation measurement using fringe reflectometry. Optics and Lasers in Engineering, 2012, 50, 529-533.	3.8	43
24	Zonal wavefront reconstruction in quadrilateral geometry for phase measuring deflectometry. Applied Optics, 2017, 56, 5139.	2.1	43
25	Phase discrepancy analysis and compensation for fast Fourier transform based solution of the transport of intensity equation. Optics Express, 2014, 22, 17172.	3.4	39
26	Spline based least squares integration for two-dimensional shape or wavefront reconstruction. Optics and Lasers in Engineering, 2017, 91, 221-226.	3.8	39
27	Single-shot 3D shape measurement using an end-to-end stereo matching network for speckle projection profilometry. Optics Express, 2021, 29, 13388.	3.4	39
28	Study on an effective one-dimensional ion-beam figuring method. Optics Express, 2019, 27, 15368.	3.4	37
29	Phase retrieval with the transport-of-intensity equation in an arbitrarily shaped aperture by iterative discrete cosine transforms. Optics Letters, 2015, 40, 1976.	3.3	36
30	Calibration method for panoramic 3D shape measurement with plane mirrors. Optics Express, 2019, 27, 36538.	3.4	28
31	Stitching interferometry for synchrotron mirror metrology at National Synchrotron Light Source II (NSLS-II). Optics and Lasers in Engineering, 2020, 124, 105795.	3.8	26
32	Shape reconstruction from gradient data in an arbitrarily-shaped aperture by iterative discrete cosine transforms in Southwell configuration. Optics and Lasers in Engineering, 2015, 67, 176-181.	3.8	24
33	Two-dimensional stitching interferometry for self-calibration of high-order additive systematic errors. Optics Express, 2019, 27, 26940.	3.4	24
34	Adaptive shape control of wavefront-preserving X-ray mirrors with active cooling and heating. Optics Express, 2020, 28, 19242.	3.4	24
35	Framework for gradient integration by combining radial basis functions method and least-squares method. Applied Optics, 2013, 52, 6016.	1.8	20
36	One-dimensional stitching interferometry assisted by a triple-beam interferometer. Optics Express, 2017, 25, 9393.	3.4	20

#	Article	IF	Citations
37	RIFTA: A Robust Iterative Fourier Transform-based dwell time Algorithm for ultra-precision ion beam figuring of synchrotron mirrors. Scientific Reports, 2020, 10, 8135.	3.3	20
38	Phase retrieval from reflective fringe patterns of double-sided transparent objects. Measurement Science and Technology, 2012, 23, 085201.	2.6	19
39	Surface profile and stress field evaluation using digital gradient sensing method. Measurement Science and Technology, 2016, 27, 095203.	2.6	19
40	Close-loop performance of a high precision deflectometry controlled deformable mirror (DCDM) unit for wavefront correction in adaptive optics system. Optics Communications, 2017, 393, 83-88.	2.1	19
41	One-dimensional angular-measurement-based stitching interferometry. Optics Express, 2018, 26, 9882.	3.4	19
42	RISE: robust iterative surface extension for sub-nanometer X-ray mirror fabrication. Optics Express, 2021, 29, 15114.	3.4	19
43	Universal dwell time optimization for deterministic optics fabrication. Optics Express, 2021, 29, 38737.	3.4	18
44	A one-dimensional ion beam figuring system for x-ray mirror fabrication. Review of Scientific Instruments, 2015, 86, 105120.	1.3	17
45	One-dimensional ion-beam figuring for grazing-incidence reflective optics. Journal of Synchrotron Radiation, 2016, 23, 182-186.	2.4	16
46	Model mismatch analysis and compensation for modal phase measuring deflectometry. Optics Express, 2017, 25, 881.	3.4	15
47	New figuring model based on surface slope profileÂfor grazing-incidence reflective optics. Journal of Synchrotron Radiation, 2016, 23, 1087-1090.	2.4	14
48	Two-dimensional stitching interferometry based on tilt measurement. Optics Express, 2018, 26, 23278.	3.4	13
49	Development of a positionâ€“velocityâ€“time-modulated two-dimensional ion beam figuring system for synchrotron x-ray mirror fabrication. Applied Optics, 2020, 59, 3306.	1.8	13
50	Multi-pitch self-calibration measurement using a nano-accuracy surface profiler for X-ray mirror metrology. Optics Express, 2020, 28, 23060.	3.4	10
51	Method for acquiring the characteristic parameter of the dual-spiral moirÃ© fringes. Optics Letters, 2008, 33, 872.	3.3	9
52	EUV and Hard X-ray Hartmann Wavefront Sensing for Optical Metrology, Alignment and Phase Imaging. Sensors, 2021, 21, 874.	3.8	9
53	Composite deep learning framework for absolute 3D shape measurement based on single fringe phase retrieval and speckle correlation. JPhys Photonics, 2020, 2, 045009.	4.6	9
54	Dual-tool multiplexing model of parallel computer controlled optical surfacing. Optics Letters, 2020, 45, 6426.	3.3	8

#	Article	IF	Citations
55	Multi-tool optimization for computer controlled optical surfacing. Optics Express, 2022, 30, 16957.	3.4	7
56	Controlling X-ray deformable mirrors during inspection. Journal of Synchrotron Radiation, 2016, 23, 1348-1356.	2.4	6
57	Three-dimensional shape measurement with modal phase measuring deflectometry. , 2017, , .		5
58	Laser thermal distortion all-time metrology system for solid-state laser based on phase measuring deflectometry. Optics Communications, 2018, 423, 134-139.	2.1	5
59	Repeatability analysis of one-dimensional angular-measurement-based stitching interferometry. Optics Express, 2018, 26, 20192.	3.4	4
60	Specular 3D shape measurement with a compact fringe reflection system. , 2013, , .		2
61	Dynamic 3D Measurement for Specular Reflecting Surface with Monoscopic Fringe Reflection Deflectometry. , 2011, , .		2
62	Measurement Uncertainty of Highly Asymmetrically Curved Elliptical Mirrors Using Multi-Pitch Slope Stitching Technique. Frontiers in Physics, 2022, 10, .	2.1	2
63	Compact instantaneous phase-shifting Sagnac interferometer for nanoscale tilt measurement. Optics and Laser Technology, 2022, 153, 108168.	4.6	2
64	Study on three-dimensional shape measurement of partially diffuse and specular reflective surfaces with fringe projection technique and fringe reflection technique. , 2011, , .		1
65	Phase retrieval in arbitrarily shaped aperture with the transport-of-intensity equation. Proceedings of SPIE, 2015, , .	0.8	1
66	Experimental research on characteristics of error surface shape and reset of spatial attitude variations in phase measuring deflectometry system. Optics Communications, 2020, 469, 125811.	2.1	1
67	Alignment of KB mirrors with at-wavelength metrology tool simulated using SRW. , 2017, , .		1
68	Micro Fourier Transform Profilometry (Î¼FTP): 3D imaging at 10,000 fps. , 2018, , .		1
69	Study on the performances of dwell time algorithms in ion beam figuring. , 2019, , .		1
70	Special Issue â€œEUV and X-ray Wavefront Sensingâ€• Sensors, 2022, 22, 3940.	3.8	1
71	Compact fringe projection profilometer. Proceedings of SPIE, 2009, , .	0.8	0
72	Least-squares phase-height mapping for fringe projection profilometry considering camera lens distortion. Proceedings of SPIE, 2009, , .	0.8	0

#	Article	IF	Citations
73	New scheme to control x-ray deformable mirrors. , 2016, , .		0
74	One-dimensional ion-beam figuring solution from Brookhaven National Laboratory. , 2019, , .		0
75	Collaborative development of diffraction-limited beamline optical systems at US DOE light sources. , 2019, , .		0
76	Surface Shape Distortion Online Measurement Method for Compact Laser Cavities Based on Phase Measuring Deflectometry. Photonics, 2022, 9, 151.	2.0	0
77	Hard X-Ray Hartmann Wavefront Sensor for Beamline Optimization. Synchrotron Radiation News, 0, , 1-5.	0.8	0