Jorge Garcia-Sucerquia

List of Publications by Year
in descending order

128 papers	2,421 citations	236833 25 h-index	233338 45 g-index
128 all docs	128 docs citations	128 times ranked	1211 citing authors

#	Article	IF	Citations
1	Digital in-line holographic microscopy. Applied Optics, 2006, 45, 836.	2.1	511
2	Off-axis digital holographic microscopy: practical design parameters for operating at diffraction limit. Applied Optics, 2014, 53, 2058.	0.9	117
3	Immersion digital in-line holographic microscopy. Optics Letters, 2006, 31, 1211.	1.7	112
4	Reduction of speckle noise in digital holography by using digital image processing. Optik, 2005, 116, 44-48.	1.4	105
5	Accurate single-shot quantitative phase imaging of biological specimens with telecentric digital holographic microscopy. Journal of Biomedical Optics, 2014, 19, 046022.	1.4	85
6	FIMic: design for ultimate 3D-integral microscopy of in-vivo biological samples. Biomedical Optics Express, 2018, 9, 335.	1.5	72
7	Color lensless digital holographic microscopy with micrometer resolution. Optics Letters, 2012, 37, 1724.	1.7	62
8	Automatic three-dimensional tracking of particles with high-numerical-aperture digital lensless holographic microscopy. Optics Letters, 2012, 37, 752.	1.7	56
9	Magnified reconstruction of digitally recorded holograms by Fresnelâ€“Bluestein transform. Applied Optics, 2010, 49, 6430.	2.1	51
10	Noise reduction in digital lensless holographic microscopy by engineering the light from a light-emitting diode. Applied Optics, 2013, 52, A232.	0.9	50
11	Automatic full compensation of quantitative phase imaging in off-axis digital holographic microscopy. Applied Optics, 2016, 55, 10299.	2.1	50
12	Shift-variant digital holographic microscopy: inaccuracies in quantitative phase imaging. Optics Letters, 2013, 38, 1352.	1.7	47
13	Automatic method for focusing biological specimens in digital lensless holographic microscopy. Optics Letters, 2014, 39, 2569.	1.7	43
14	Incoherent recovering of the spatial resolution in digital holography. Optics Communications, 2006, 260, 62-67.	1.0	39
15	4-D imaging of fluid flow with digital in-line holographic microscopy. Optik, 2008, 119, 419-423.	1.4	39
16	Single-shot speckle reduction in numerical reconstruction of digitally recorded holograms. Optics Letters, 2015, 40, 1623.	1.7	37
17	Spatial coherence wavelets. Journal of Modern Optics, 2003, 50, 1259-1275.	0.6	35
18	Digital lensless holographic microscopy: numerical simulation and reconstruction with ImageJ. Applied Optics, 2020, 59, 5788.	0.9	34

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19	Enhancing spatial resolution in digital holographic microscopy by biprism structured illumination. Optics Letters, 2014, 39, 2086.	1.7	29
20	Numerical wave propagation in ImageJ. Applied Optics, 2015, 54, 6410.	2.1	28
21	Reduction of speckle noise in holographic images using spatial jittering in numerical reconstructions. Optics Letters, 2017, 42, 1047.	1.7	28
22	Single-shot 3D topography of reflective samples with digital holographic microscopy. Applied Optics, 2018, 57, A12.	0.9	28
23	Physical compensation of phase curvature in digital holographic microscopy by use of programmable liquid lens. Applied Optics, 2015, 54, 5229.	2.1	27
24	Digital off-axis holography without zero-order diffraction via phase manipulation. Optics Communications, 2007, 277, 259-263.	1.0	25
25	Quantitative assessment of lateral resolution improvement in digital holography. Optics Communications, 2008, 281, 3454-3460.	1.0	25
26	Comment on "Reconstruction algorithm for high-numerical-aperture holograms with diffraction-limited resolution". Optics Letters, 2006, 31, 2845.	1.7	23
27	Open-source, cost-effective, portable, 3D-printed digital lensless holographic microscope. Applied Optics, 2021, 60, A205.	0.9	22
28	Electromagnetic spatial coherence wavelets. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 81.	0.8	21
29	Spatial coherence wavelets: Mathematical properties and physical features. Journal of Modern Optics, 2003, 50, 2741-2753.	0.6	20
30	Automatic detection and counting of phase objects in raw holograms of digital holographic microscopy via deep learning. Optics and Lasers in Engineering, 2019, 120, 13-20.	2.0	20
31	Distinguishing between Fraunhofer and Fresnel diffraction by the Young's experiment. Optics Communications, 2001, 200, 15-22.	1.0	18
32	Classes of source pairs in interference and diffraction. Optics Communications, 2003, 226, 45-55.	1.0	17
33	Diffractive digital lensless holographic microscopy with fine spectral tuning. Optics Letters, 2013, 38, 2107.	1.7	17
34	Femtosecond digital lensless holographic microscopy to image biological samples. Optics Letters, 2013, 38, 3205.	1.7	17
35	Spatial coherence wavelets: mathematical properties and physical features. Journal of Modern Optics, 2003, 50, 2741-2753.	0.6	16
36	Aberration compensation for objective phase curvature in phase holographic microscopy: comment. Optics Letters, 2014, 39, 417.	1.7	15

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37	Study of spatial lateral resolution in off-axis digital holographic microscopy. Optics Communications, 2015, 352, 63-69.	1.0	15
38	Speckle noise reduction in digital holography by slightly rotating the object. Optical Engineering, 2016, 55, 121714.	0.5	14
39	Preprocessing in digital lensless holographic microscopy for intensity reconstructions with enhanced contrast. Applied Optics, 2021, 60, A215.	0.9	14
40	Non-approximated Rayleighâ€“Sommerfeld diffraction integral: advantages and disadvantages in the propagation of complex wave fields. Applied Optics, 2019, 58, G11.	0.9	14
41	Radiometry and spatial coherence wavelets. Optics Communications, 2005, 248, 147-165.	1.0	13
42	Radiant, virtual, and dual sources of optical fields in any state of spatial coherence. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 1322.	0.8	13
43	Comparative analysis of the modified enclosed energy metric for self-focusing holograms from digital lensless holographic microscopy. Applied Optics, 2015, 54, 5102.	2.1	13
44	Evaluation of the limits of application for numerical diffraction methods based on basic optics concepts. Optik, 2015, 126, 5963-5970.	1.4	13
45	Quality descriptors of optical beams based on centred reduced moments I: spot analysis. Optics Communications, 2003, 227, 37-48.	1.0	12
46	Three-dimensional surface contouring of macroscopic objects by means of phase-difference images. Applied Optics, 2006, 45, 6381.	2.1	12
47	Numerical dark field illumination applied to experimental digital lensless holographic microscopy for reconstructions with enhanced contrast. Optics Letters, 2018, 43, 4096.	1.7	12
48	Cone-shaped optical fiber tip for cost-effective digital lensless holographic microscopy. Applied Optics, 2020, 59, 2969.	0.9	12
49	Diffraction-based modeling of high-numerical-aperture in-line lensless holograms. Applied Optics, 2011, 50, 1745.	2.1	11
50	Non-approximated numerical modeling of propagation of light in any state of spatial coherence. Optics Express, 2011, 19, 25022.	1.7	11
51	Color digital lensless holographic microscopy: laser versus LED illumination. Applied Optics, 2016, 55, 6649.	2.1	11
52	Advantages of Fresnel biprism-based digital holographic microscopy in quantitative phase imaging. Journal of Biomedical Optics, 2020, 25, 1.	1.4	11
53	Speckle noise reduction in coherent imaging systems via hybrid medianâ€“mean filter. Optical Engineering, 2021, 60, .	0.5	11
54	Phase-shifting by means of an electronically tunable lens: quantitative phase imaging of biological specimens with digital holographic microscopy. Optics Letters, 2016, 41, 1416.	1.7	10

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55	Off-axis digital holography simulation in ImageJ. Optik, 2017, 140, 626-633.	1.4	10
56	Fourier lightfield microscopy: a practical design guide. Applied Optics, 2022, 61, 2558.	0.9	10
57	Young's experiment with electromagnetic spatial coherence wavelets. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2519.	0.8	9
58	Accelerated Numerical Processing of Electronically Recorded Holograms With Reduced Speckle Noise. IEEE Transactions on Image Processing, 2013, 22, 3528-3537.	6.0	9
59	Monitoring micro-mechanical changes in electronic circuit boards with digital holographic interferometry. Optik, 2014, 125, 2113-2116.	1.4	9
60	Fresnelâ€“Fraunhofer diffraction and spatial coherence. Optics Communications, 2002, 205, 239-245.	1.0	8
61	Optical tubular structures produced by diffraction of circular apertures. Optics and Lasers in Engineering, 2004, 42, 61-70.	2.0	8
62	Angular criterion to distinguish between Fraunhofer and Fresnel diffraction. Optik, 2004, 115, 547-552.	1.4	8
63	Quality descriptors of optical beams based on centred reduced moments III: spot moments-based method for laser characterization. Optics Communications, 2005, 248, 509-519.	1.0	8
64	JDiffraction: A GPGPU-accelerated JAVA library for numerical propagation of scalar wave fields. Computer Physics Communications, 2017, 214, 128-139.	3.0	8
65	Cooperative execution of auto-focusing metrics in digital lensless holographic microscopy for internal-structured samples. Applied Optics, 2017, 56, 5877.	0.9	8
66	Step-Index Optical Fibers With 0.88 Numerical Aperture. Journal of Lightwave Technology, 2019, 37, 3734-3739.	2.7	8
67	Phase-shifting digital holographic microscopy with an iterative blind reconstruction algorithm. Applied Optics, 2019, 58, G311.	0.9	8
68	Full retrieving of the complex degree of spatial coherence: theoretical analysis. Optics Communications, 2003, 228, 9-19.	1.0	7
69	Discovering the puzzling behaviour of electrons with the Grimaldiâ€“Young experiment. European Journal of Physics, 2010, 31, 347-356.	0.3	7
70	Analytical study of the numerical aperture of cone-shaped optical fibers: A tool for tailored designs. Heliyon, 2019, 5, e01612.	1.4	7
71	Physical pupil manipulation for speckle reduction in digital holographic microscopy. Heliyon, 2021, 7, e06098.	1.4	7
72	Fast-iterative blind phase-shifting digital holographic microscopy using two images. Applied Optics, 2020, 59, 7469.	0.9	7

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73	Spatial partially coherent imaging. Journal of Modern Optics, 2002, 49, 2093-2104.	0.6	6
74	Quality descriptors of optical beams based on centred reduced moments II: retrieving of the complex degree of spatial coherence through the spot moments. Optics Communications, 2004, 238, 191-200.	1.0	6
75	Lensless microscopy technique for static and dynamic colloidal systems. Journal of Colloid and Interface Science, 2010, 349, 637-640.	5.0	6
76	Efficient numerical calculation of interference and diffraction of optical fields in any state of spatial coherence in the phase-space representation. Applied Optics, 2010, 49, 6063.	2.1	6
77	View images with unprecedented resolution in integral microscopy. OSA Continuum, 2018, 1, 40.	1.8	6
78	Information encryption through dyadic permutations. Optics and Lasers in Engineering, 2001, 36, 537-544.	2.0	5
79	Definition and invariance properties of the complex degree of spatial coherence. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 2459.	0.8	5
80	Sizing calibration in digital lensless holographic microscopy via iterative Talbot self-imaging. Optics and Lasers in Engineering, 2020, 134, 106176.	2.0	5
81	Realistic simulation and real-time reconstruction of digital holographic microscopy experiments in ImageJ. Applied Optics, 2022, 61, B56.	0.9	5
82	Retrieving the complex degree of spatial coherence of electron beams. Optik, 2008, 119, 127-133.	1.4	4
83	Increment of lateral resolution in digital holography by speckle noise removal. Optik, 2010, 121, 2049-2052.	1.4	4
84	Image processing and computing for digital holography with ImageJ. Optica Pura Y Aplicada, 2015, 48, 77-84.	0.0	4
85	Handheld and Cost-Effective Fourier Lightfield Microscope. Sensors, 2022, 22, 1459.	2.1	4
86	Phase-shifting digital holographic microscopy by using a multi-camera setup. Optics Letters, 2017, 42, 4841.	1.7	3
87	Study of the padding effects in numerical reconstruction of digitally recorded holograms. Optik, 2018, 169, 109-117.	1.4	3
88	Fast and robust phase-shift estimation in two-dimensional structured illumination microscopy. PLoS ONE, 2019, 14, e0221254.	1.1	3
89	Optical Fiber Point-Source for Digital Lensless Holographic Microscopy. Journal of Lightwave Technology, 2019, 37, 5660-5666.	2.7	3
90	Pointwise phasor tuning for single-shot speckle noise reduction in phase wave fields. Optics and Lasers in Engineering, 2021, 137, 106365.	2.0	3

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91	Single-shot pseudostochastic speckle noise reduction in numerical complex-valued wavefields. Optical Engineering, 2020, 59, 1.	0.5	3
92	Colloidal Stability Evaluation via Digital In-line Holographic Microscopy. , 2008, , .		3
93	Realistic modeling of digital holographic microscopy. Optical Engineering, 2020, 59, 1.	0.5	3
94	Wavemeter based on moirÃ© effect. Applied Optics, 2004, 43, 6095.	2.1	2
95	Minute details detection through Fresnel diffraction domain. Optics Communications, 2005, 253, 250-256.	1.0	2
96	Discussion on Fresnel's mirrors and Young's double-slit interferometers. Optik, 2007, 118, 402-406.	1.4	2
97	Partially coherent lensless holographic microscopy with micrometre resolution applied to extended objects. 3D Research, 2011, 2, 1.	1.8	2
98	Second-harmonic illumination to enhance multispectral digital lensless holographic microscopy. Optics Letters, 2016, 41, 1062.	1.7	2
99	Experimental study of the effects of the ratio of intensities of the reference and object waves on the performance of off-axis digital holography. Optik, 2017, 132, 274-283.	1.4	2
100	High-speed measurement of mechanical micro-deformations with an extended phase range using dual-wavelength digital holographic interferometry. Applied Optics, 2022, 61, B279.	0.9	2
101	Curvature phase factor in digital holographic microscopy. , 2013, , .		1
102	Accurate quantitative phase imaging through telecentric digital holographic microscopy. , 2014, , .		1
103	Topography of nanometric thin films with three-wavelength digital interferometry. Journal of Micro/Nanolithography, MEMS, and MOEMS, 2015, 14, 041309.	1.0	1
104	Chromatic aberration compensation in numerical reconstruction of digital holograms by Fresnelâ€“Bluestein propagation. Optics Letters, 2017, 42, 5294.	1.7	1
105	Spatial coherence wavelets. , 0, .		1
106	Estudio del efecto de la relaciÃ³n de intensidades relativas entre la onda de referencia y la onda objeto en holografÃa digitalonda de referencia y la onda objeto en holografÃa digital. Revista De La Academia Colombiana De Ciencias Exactas, Fisicas Y Naturales, 2015, 39, 29.	0.0	1
107	Assessing digital micromirror devices for speckle noise control in digital holography. Optica Pura Y Aplicada, 2017, 50, 371-326.	0.0	1
108	Experimental study of frequency response in digital holography. Optik, 2018, 157, 612-620.	1.4	1

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109	Etendue invariance in speckle fields. Optik, 2001, 112, 57-61.	1.4	0
110	Spatial coherence and Young-Michelson interferometry. Optik, 2001, 112, 239-244.	1.4	0
111	Resolution, focus depth in the Fresnel-Fraunhofer domains. , 2006, , .		0
112	The self-imaging effect in lensless holographic microscopy and its application in characterising periodic structures. Journal of Modern Optics, 2011, 58, 882-889.	0.6	0
113	Exact modeling of propagation of partially coherent optical fields. Proceedings of SPIE, 2011, , .	0.8	0
114	White-light light-emitting diode to simplify color digital lensless holographic microscopy. , 2012, , .		0
115	Numerical evaluation of the limit of concentration of colloidal samples for their study with digital lensless holographic microscopy. Applied Optics, 2013, 52, A310.	0.9	0
116	RGB digital lensless holographic microscopy. Proceedings of SPIE, 2013, , .	0.8	0
117	Method for auto-focusing in digital lensless holographic microscopy. , 2014, , .		0
118	Comparison of two broadband illumination sources in digital lensless holographic microscopy to study biological samples. Optik, 2017, 130, 550-556.	1.4	0
119	Two-stage autofocusing methodology for digital lensless holographic microscopy. , 2018, , .		0
120	Full compensation of quantitative phase images of digital holographic microscopy using GPU. , 2018, , .		0
121	Multispectral digital lensless holographic microscopy: from femtosecond laser to white light LED. , 2014, , .		0
122	Principios Ã³pticos bÃ¡sicos aplicados al cÃ¡lculo de los lÃmites de mÃ©todos de difracciÃ³n numÃ©rica. Ingenieria Y Competitividad, 2016, 18, 175.	0.1	0
123	Experimental study of the effects of the spatial filtering on off-axis digital holography operating out and in of the diffraction limit. Optica Pura Y Aplicada, 2017, 50, 93-102.	0.0	0
124	Evaluation of Non-Approximated Numerical Calculation of the Diffraction Integral. , 2019, , .		0
125	Digital holographic microscopy as a screening technology for diabetes. , 2019, , .		0
126	Fast-iterative blind reconstruction algorithms for accurate quantitative phase images in phase-shifting digital holographic microscopy. , 2020, , .		0

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127	Contrast enhancement by numerical preprocessing in digital lensless holographic microscopy. , 2021, , .		0
128	Cost-effective digital lensless holographic microscope. , 2021, , .		0