Pasquale Memmolo

List of Publications by Year
in descending order

153 papers	3,946 citations	109321 35 h-index	128289 60 g-index
157 all docs	157 docs citations	157 times ranked	2187 citing authors

#	Article	IF	Citations
1	Tomographic flow cytometry by digital holography. Light: Science and Applications, 2017, 6, e16241-e16241.	16.6	310
2	Recent advances in holographic 3D particle tracking. Advances in Optics and Photonics, 2015, 7, 713.	25.5	258
3	Strategies for reducing speckle noise in digital holography. Light: Science and Applications, 2018, 7, 48.	16.6	182
4	Automatic focusing in digital holography and its application to stretched holograms. Optics Letters, 2011, 36, 1945.	3.3	179
5	Digital holography as a method for 3D imaging and estimating the biovolume of motile cells. Lab on A Chip, 2013, 13, 4512.	6.0	152
6	Quasi noise-free digital holography. Light: Science and Applications, 2016, 5, e16142-e16142.	16.6	124
7	Synthesis and display of dynamic holographic 3D scenes with real-world objects. Optics Express, 2010, 18, 8806.	3.4	118
8	Refocusing criterion via sparsity measurements in digital holography. Optics Letters, 2014, 39, 4719.	3.3	116
9	3D morphometry of red blood cells by digital holography. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2014, 85, 1030-1036.	1.5	103
10	Digital Holography, a metrological tool for quantitative analysis: Trends and future applications. Optics and Lasers in Engineering, 2018, 104, 32-47.	3.8	101
11	Microscopy imaging and quantitative phase contrast mapping in turbid microfluidic channels by digital holography. Lab on A Chip, 2012, 12, 3073.	6.0	89
12	Microplastic Identification via Holographic Imaging and Machine Learning. Advanced Intelligent Systems, 2020, 2, 1900153.	6.1	88
13	Random resampling masks: a non-Bayesian one-shot strategy for noise reduction in digital holography. Optics Letters, 2013, 38, 619.	3.3	87
14	Full-angle tomographic phase microscopy of flowing quasi-spherical cells. Lab on A Chip, 2018, 18, 126-131.	6.0	83
15	Encoding multiple holograms for speckle-noise reduction in optical display. Optics Express, 2014, 22, 25768.	3.4	78
16	Identification of bovine sperm head for morphometry analysis in quantitative phase-contrast holographic microscopy. Optics Express, 2011, 19, 23215.	3.4	74
17	On the holographic 3D tracking of in vitro cells characterized by a highly-morphological change. Optics Express, 2012, 20, 28485.	3.4	72
18	Twin-beams digital holography for 3D tracking and quantitative phase-contrast microscopy in microfluidics. Optics Express, 2011, 19, 25833.	3.4	69

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19	Perspectives on liquid biopsy for labelâ€free detection of â€œcirculating tumor cellsâ€•through intelligent labâ€onâ€chips. View, 2020, 1, 20200034.	5.3	69
20	Diagnostic Tools for Lab-on-Chip Applications Based on Coherent Imaging Microscopy. Proceedings of the IEEE, 2015, 103, 192-204.	21.3	68
21	Particle tracking by full-field complex wavefront subtraction in digital holography microscopy. Lab on A Chip, 2014, 14, 1129-1134.	6.0	66
22	Imaging adherent cells in the microfluidic channel hidden by flowing RBCs as occluding objects by a holographic method. Lab on A Chip, 2014, 14, 2499.	6.0	65
23	Holographic imaging of unlabelled sperm cells for semen analysis: a review. Journal of Biophotonics, 2015, 8, 779-789.	2.3	56
24	Dual-plane coupled phase retrieval for non-prior holographic imaging. PhotoniX, 2022, 3, .	13.5	55
25	Controlling depth of focus in 3D image reconstructions by flexible and adaptive deformation of digital holograms. Optics Letters, 2009, 34, 2787.	3.3	53
26	SPADEDH: a sparsity-based denoising method of digital holograms without knowing the noise statistics. Optics Express, 2012, 20, 17250.	3.4	53
27	Numerical multiplexing and demultiplexing of digital holographic information for remote reconstruction in amplitude and phase. Optics Letters, 2008, 33, 2629.	3.3	49
28	Label-Free Optical Marker for Red-Blood-Cell Phenotyping of Inherited Anemias. Analytical Chemistry, 2018, 90, 7495-7501.	6.5	49
29	Investigation of angular multiplexing and de-multiplexing of digital holograms recorded in microscope configuration. Optics Express, 2009, 17, 8709.	3.4	45
30	All-optical microfluidic chips for reconfigurable dielectrophoretic trapping through SLM light induced patterning. Lab on A Chip, 2012, 12, 4449.	6.0	44
31	Optical signature of erythrocytes by light scattering in microfluidic flows. Lab on A Chip, 2015, 15, 3278-3285.	6.0	43
32	Simultaneous Optical Manipulation, 3-D Tracking, and Imaging of Micro-Objects by Digital Holography in Microfluidics. IEEE Photonics Journal, 2012, 4, 451-454.	2.0	41
33	On-speckle suppression in IR digital holography. Optics Letters, 2016, 41, 5226.	3.3	39
34	Speeding up reconstruction of 3D tomograms in holographic flow cytometry via deep learning. Lab on A Chip, 2022, 22, 793-804.	6.0	39
35	Quantitative phase maps denoising of long holographic sequences by using SPADEDH algorithm. Applied Optics, 2013, 52, 1453.	1.8	38
36	Three-Dimensional Quantitative Intracellular Visualization of Graphene Oxide Nanoparticles by Tomographic Flow Cytometry. Nano Letters, 2021, 21, 5958-5966.	9.1	34

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37	Comparative study of multi-look processing for phase map de-noising in digital Fresnel holographic interferometry. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, A59.	1.5	34
38	Identification of Microplastics Based on the Fractal Properties of Their Holographic Fingerprint. ACS Photonics, 2021, 8, 2148-2157.	6.6	31
39	Rolling angle recovery of flowing cells in holographic tomography exploiting the phase similarity. Applied Optics, 2021, 60, A277.	1.8	30
40	Improving holographic reconstruction by automatic Butterworth filtering for microelectromechanical systems characterization. Applied Optics, 2015, 54, 3428.	2.1	29
41	Biolens behavior of RBCs under opticallyâ€induced mechanical stress. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2017, 91, 527-533.	1.5	27
42	Combining ESPI with laser scanning for 3D characterization of racing tyres sections. Optics and Lasers in Engineering, 2018, 104, 71-77.	3.8	26
43	Label-Free Assessment of the Drug Resistance of Epithelial Ovarian Cancer Cells in a Microfluidic Holographic Flow Cytometer Boosted through Machine Learning. ACS Omega, 2021, 6, 31046-31057.	3.5	26
44	Holographic tracking of living cells by three-dimensional reconstructed complex wavefronts alignment. Optics Letters, 2014, 39, 2759.	3.3	25
45	Investigation on dynamics of red blood cells through their behavior as biophotonic lenses. Journal of Biomedical Optics, 2016, 21, 1.	2.6	25
46	Digital holography as 3D tracking tool for assessing acoustophoretic particle manipulation. Optics Express, 2017, 25, 17746.	3.4	25
47	In vitro cytotoxicity evaluation of cadmium by labelâ€free holographic microscopy. Journal of Biophotonics, 2018, 11, e201800099.	2.3	23
48	Learning Diatoms Classification from a Dry Test Slide by Holographic Microscopy. Sensors, 2020, 20, 6353.	3.8	22
49	Multi-wavelengths digital holography: reconstruction, synthesis and display of holograms using adaptive transformation. Optics Letters, 2012, 37, 1445.	3.3	21
50	Multilevel bidimensional empirical mode decomposition: a new speckle reduction method in digital holography. Optical Engineering, 2014, 53, 112314.	1.0	21
51	Labelâ€free analysis of mononuclear human blood cells in microfluidic flow by coherent imaging tools. Journal of Biophotonics, 2017, 10, 683-689.	2.3	21
52	Dehydration of plant cells shoves nuclei rotation allowing for 3D phase-contrast tomography. Light: Science and Applications, 2021, 10, 187.	16.6	21
53	Investigation on specific solutions of Gerchbergâ€“Saxton algorithm. Optics and Lasers in Engineering, 2014, 52, 206-211.	3.8	20
54	Biophysical investigation of living monocytes in flow by collaborative coherent imaging techniques. Biomedical Optics Express, 2018, 9, 5194.	2.9	20

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55	Neuroblastoma Cells Classification Through Learning Approaches by Direct Analysis of Digital Holograms. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-9.	2.9	19
56	Differential diagnosis of hereditary anemias from a fraction of blood drop by digital holography and hierarchical machine learning. Biosensors and Bioelectronics, 2022, 201, 113945.	10.1	19
57	Miscalibration-Tolerant Fourier Ptychography. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-17.	2.9	18
58	Compensation of aberrations in holographic microscopes: main strategies and applications. Applied Physics B: Lasers and Optics, 2022, 128, .	2.2	18
59	Deep Learning-Based, Misalignment Resilient, Real-Time Fourier Ptychographic Microscopy Reconstruction of Biological Tissue Slides. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-10.	2.9	16
60	Compression of digital holograms via adaptive-sparse representation. Optics Letters, 2010, 35, 3883.	3.3	15
61	Hydrodynamic Red Blood Cells Deformation by Quantitative Phase Microscopy and Zernike Polynomials. Frontiers in Physics, 2019, 7, .	2.1	15
62	Retrieving acoustic energy densities and local pressure amplitudes in microfluidics by holographic time-lapse imaging. Lab on A Chip, 2018, 18, 1921-1927.	6.0	14
63	Assembling and rotating erythrocyte aggregates by acoustofluidic pressure enabling full phase-contrast tomography. Lab on A Chip, 2019, 19, 3123-3132.	6.0	14
64	Digital holography as metrology tool at micro-nanoscale for soft matter. Light Advanced Manufacturing, 2022, 3, 151.	5.1	13
65	Adaptive and automatic diffraction order filtering by singular value decomposition in off-axis digital holographic microscopy. Applied Optics, 2019, 58, G155.	1.8	12
66	Automatic Frames Extraction and Visualization From Noisy Fringe Sequences for Data Recovering in a Portable Digital Speckle Pattern Interferometer for NDI. Journal of Display Technology, 2015, 11, 417-422.	1.2	11
67	Coding Color Three-Dimensional Scenes and Joining Different Objects by Adaptive Transformations in Digital Holography. Journal of Display Technology, 2015, 11, 854-860.	1.2	11
68	Nanomechanics of a fibroblast suspended using point-like anchors reveal cytoskeleton formation. RSC Advances, 2016, 6, 24245-24249.	3.6	11
69	Automatic Digital Hologram Denoising by Spatiotemporal Analysis of Pixel-Wise Statistics. Journal of Display Technology, 2013, 9, 904-909.	1.2	10
70	Seeing through Turbid Fluids: A New Perspective in Microfluidics. Optics and Photonics News, 2012, 23, 33.	0.5	8
71	Optobiology: live cells in optics and photonics. JPhys Photonics, 2021, 3, 012003.	4.6	8
72	Biological Lenses as a Photomask for Writing Laser Spots into Ferroelectric Crystals. ACS Applied Bio Materials, 2019, 2, 4675-4680.	4.6	7

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73	The Talbot effect in self-assembled red blood cells investigated by digital holography. JPhys Photonics, 2020, 2, 035005.	4.6	7
74	Holographic display of synthetic 3D dynamic scene. 3D Research, 2010, 1, 31.	1.8	6
75	Up-link multi-user MIMO capacity in low-power regime. , 2010, , .		6
76	Investigation on Axicon Transformation in Digital Holography for Extending the Depth of Focus in Bio-Microfluidics Applications. Journal of Display Technology, 2015, 11, 861-866.	1.2	6
77	Kinematic analysis and visualization of Tetraselmis microalgae 3D motility by digital holography. Applied Optics, 2022, 61, B331.	1.8	6
78	Detection and visualization improvement of spermatozoa cells by digital holography. , 2011, , .		4
79	Identification and classification of biological micro-organisms by holographic learning. , 2019, , .		4
80	Non-Bayesian noise reduction in digital holography by random resampling masks. Proceedings of SPIE, 2013, , .	0.8	3
81	New high compression method for digital hologram recorded in microscope configuration. Proceedings of SPIE, 2011, , .	0.8	2
82	Combining digital holographic microscopy and optical tweezers: a new route in microfluidic. , 2012, , .		2
83	Investigation on 3D morphological changes of in vitro cells through digital holographic microscopy. Proceedings of SPIE, 2013, , .	0.8	2
84	3D imaging in microfluidics: new holographic methods and devices. , 2019, , .		2
85	A one-shot denoising method in Digital Holography based on numerical multi-look and 3D block matching filtering. , 2016, , .		2
86	How holographic imaging can improve machine learning. , 2019, , .		2
87	Holographic tracking and imaging of free-swimming Tetraselmis by off-axis holographic microscopy.. , 2021, , .		2
88	Multiplexing and demultiplexing of digital holograms recorded in microscopic configuration. Proceedings of SPIE, 2009, , .	0.8	1
89	Managing the depth of focus in 3D imaging through controlled distortion of digital holograms. , 2010, , .		1
90	An algorithm for the estimation of the in-focus distance for speckle holograms. , 2011, , .		1

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91	An alternative reconstructing method in color holography based on digital holograms stretching. Proceedings of SPIE, 2012, , .	0.8	1
92	An autofocusing algorithm for digital holograms. , 2012, , .		1
93	Combining Digital Holographic Microscopy with Microfluidics. , 2013, , 193-210.		1
94	Investigation on cytoskeleton dynamics for non-adherent cells under point-like stimuli. , 2015, , .		1
95	Cells characterization in microfluidic flows by small angle light scattering and 3D holographic technique. Proceedings of SPIE, 2015, , .	0.8	1
96	Sparsity promoting automatic focusing in digital holography. , 2015, , .		1
97	A new method for noise suppression in Digital Holography. , 2016, , .		1
98	Morphological analysis framework of living cells by digital holography. , 2014, , .		1
99	Full 3D morphology of diatoms flowing in a microfluidic channel by digital holographic microscopy. , 2015, , .		1
100	Merging optical and numerical methods for denoising in digital holography. , 2019, , .		1
101	On the Use of Numeric Integration for Uncertainty Evaluation in Indirect Measurements. , 2007, , .		0
102	Adaptive deformation of digital holograms for full control of depth-of-focus in 3D imaging. , 2009, , .		0
103	Deformation of digital holograms for full control of focus and for extending the depth of field. Journal of Physics: Conference Series, 2010, 206, 012028.	0.4	0
104	Manipulating Digital Holograms to Modify Phase of Reconstructed Wavefronts. , 2010, , .		0
105	3D tracking and phase-contrast imaging by twin-beams digital holographic microscope in microfluidics. , 2012, , .		0
106	Holographic capability for imaging through scattering colloidal flowing fluids. , 2012, , .		0
107	Computer-generated hologram tailored for dielectrophoretic PDMS patterning. Proceedings of SPIE, 2012, , .	0.8	0
108	A new iterative Fourier transform algorithm for optimal design in holographic optical tweezers. , 2012, , .		0

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109	Quantitative phase contrast microscopy in turbid microfluidic channels by digital holography. Proceedings of SPIE, 2012, , .	0.8	0
110	Lab on a chip imaging and quantitative phase contrast in turbid microfluidic channel. , 2012, , .		0
111	A new algorithm for digital holograms denoising based on compressed sensing. , 2012, , .		0
112	New method of 3D tracking of in vitro cells by digital holographic microscopy. , 2013, , .		0
113	Synthesis and 3D display of multi-wavelengths digital holograms through adaptive transformation. , 2013, , .		0
114	Sparsity-based denoising method of wrapped-phase reconstructions in digital holography. , 2013, , .		0
115	New method of holographic three-dimensional tracking of living cells exploiting their morphological properties. , 2013, , .		0
116	Investigation on cytoskeleton dynamics for no-adherent cells subjected to point-like stimuli by digital holographic microscopy and holographic optical trapping. Proceedings of SPIE, 2014, , .	0.8	0
117	Holographic microscopy in different turbid layer conditions. , 2014, , .		0
118	Three-dimensional holographic tracking approach based on full-field complex wavefront matching. , 2014, , .		0
119	Label-Free 3D Imaging for Lab-on-Chip Biomedical Applications. , 2014, , .		0
120	Red blood cell as optofluidic tunable lens. , 2015, , .		0
121	Wavefronts matching: a novel paradigm for three-dimensional holographic particle tracking. Proceedings of SPIE, 2015, , .	0.8	0
122	Full 3D morphology of diatoms flowing in a microfluidic channel by digital holographic microscopy. Proceedings of SPIE, 2015, , .	0.8	0
123	Holographic 3D particles tracking methods for bio-microfluidic applications. , 2015, , .		0
124	Color holograms synthesis framework for three-dimensional scene reconstruction. , 2015, , .		0
125	Tomographic phase microscopy of rolling cells in microfluidic flow. , 2016, , .		0
126	Computational tomographic phase microscopy. , 2017, , .		0

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127	Investigation on microfluidic particles manipulation by holographic 3D tracking strategies. , 2017, , .		0
128	A method for total noise removal in digital holography based on enhanced grouping and sparsity enhancement filtering. , 2017, , .		0
129	RBCs as microlenses: wavefront analysis and applications. , 2017, , .		0
130	Microfluidic engineering for continuous in-flow cyto-tomography. EPJ Web of Conferences, 2019, 215, 10003.	0.3	0
131	Writing in Photorefractive Crystals by Bio-Lenses. , 2019, , .		0
132	Tomographic flow cytometry as the key-enabling technology for label-free liquid biopsy. , 2021, , .		0
133	Label-free microfluidic platform for blood analysis based on phase-contrast imaging. , 2021, , .		0
134	CARWIN42: EVOLUTION OF ARTIFICIAL INTELLIGENCE CONTROLLER AND AEROMECHANICAL SETUP IN SIMULATED RACE CARS. , 2009, , .		0
135	Holographic Three-Dimensional Tracking of Micro-objects Exploiting Their Morphological Properties. , 2014, , 555-558.		0
136	3D Full Morphometric Assessment by Holographic Imaging at Lab-on-Chip Scale for Biomedical Applications. , 2014, , .		0
137	On the role of sparsity in digital holography. , 2015, , .		0
138	Methods for holographic 3D tracking and rotating angle recovery in tomographic flow cytometry. , 2019, , .		0
139	Holographic imaging and acoustofluidics: an advantageous combination. , 2019, , .		0
140	Bio-Lithography by RBC-lenses: DH Wavefront evaluation of imprinted structures in Lithium Niobate. , 2019, , .		0
141	Anaemias diagnosis by label-free quantitative phase imaging. , 2019, , .		0
142	Label-free imaging of cancer cells by in-flow tomography. , 2019, , .		0
143	Label-free holographic microscopy for in vitro cadmium cytotoxicity testing. , 2019, , .		0
144	Quasi noise-free reconstruction of long-wavelength digital holograms. , 2019, , .		0

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145	Holographic imaging for tracking and phase retrieval in acoustophoresis platforms. , 2019, , .		0
146	Phase contrast imaging in acoustophoresis platforms for biological applications. , 2019, , .		0
147	Holographic processing pipeline for tomographic flow cytometry. , 2019, , .		0
148	Advanced label-free cellular identification in flow by collaborative coherent imaging techniques. , 2019, , .		0
149	Holographic imaging of erythrocytes in acoustofluidic platforms. , 2019, , .		0
150	Diagnostic decision support tool for anemias based on label-free holographic imaging. , 2019, , .		0
151	Holographic imaging for 3D cells morphology in microfluidic flow. , 2019, , .		0
152	A fractal analysis of the holographic diffraction patterns for detecting microplastics among diatoms. , 2021, , .		0
153	Raw holograms based machine learning for cancer cells classification in microfluidics. , 2021, , .		0