

Dario Ambrosini

List of Publications by Year in descending order

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136
papers

2,597
citations

218677

26
h-index

243625

44
g-index

141
all docs

141
docs citations

141
times ranked

1848
citing authors

#	ARTICLE	IF	CITATIONS
1	Data-driven model predictive control using random forests for building energy optimization and climate control. <i>Applied Energy</i> , 2018, 226, 1252-1272.	10.1	220
2	Propagation of axially symmetric flattened Gaussian beams. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1996, 13, 1385.	1.5	153
3	Quantification of heat energy losses through the building envelope: A state-of-the-art analysis with critical and comprehensive review on infrared thermography. <i>Building and Environment</i> , 2018, 146, 190-205.	6.9	112
4	Evaluating Mitigation Effects of Urban Heat Islands in a Historical Small Center with the ENVI-Met® Climate Model. <i>Sustainability</i> , 2014, 6, 7013-7029.	3.2	101
5	Twisted Gaussian Schell-model Beams: A Superposition Model. <i>Journal of Modern Optics</i> , 1994, 41, 1391-1399.	1.3	96
6	Preventive thermographic diagnosis of historical buildings for consolidation. <i>Journal of Cultural Heritage</i> , 2013, 14, 116-121.	3.3	80
7	U-value assessment by infrared thermography: A comparison of different calculation methods in a Guarded Hot Box. <i>Energy and Buildings</i> , 2016, 122, 211-221.	6.7	78
8	Integrated reflectography and thermography for wooden paintings diagnostics. <i>Journal of Cultural Heritage</i> , 2010, 11, 196-204.	3.3	58
9	Diagnostics of panel paintings using holographic interferometry and pulsed thermography. <i>Quantitative InfraRed Thermography Journal</i> , 2010, 7, 85-114.	4.2	56
10	Displacement measurement using the Talbot effect with a Ronchi grating. <i>Journal of Optics</i> , 2002, 4, S376-S380.	1.5	55
11	Overview of diffusion measurements by optical techniques. <i>Optics and Lasers in Engineering</i> , 2008, 46, 852-864.	3.8	53
12	A qualitative method for combining thermal imprints to emerging weak points of ancient wall structures by passive infrared thermography – A case study. <i>Journal of Cultural Heritage</i> , 2014, 15, 199-202.	3.3	51
13	Contouring of artwork surface by fringe projection and FFT analysis. <i>Optics and Lasers in Engineering</i> , 2000, 33, 141-156.	3.8	47
14	Active thermography testing and data analysis for the state of conservation of panel paintings. <i>International Journal of Thermal Sciences</i> , 2018, 126, 143-151.	4.9	39
15	A first approach to universal daylight and occupancy control system for any lamps: Simulated case in an academic classroom. <i>Energy and Buildings</i> , 2017, 152, 24-39.	6.7	38
16	Ceramics and defects. <i>Journal of Thermal Analysis and Calorimetry</i> , 2016, 123, 43-62.	3.6	36
17	A comparison between thermographic and flow-meter methods for the evaluation of thermal transmittance of different wall constructions. <i>Journal of Physics: Conference Series</i> , 2015, 655, 012007.	0.4	35
18	Subsurface defect characterization in artworks by quantitative pulsed phase thermography and holographic interferometry. <i>Quantitative InfraRed Thermography Journal</i> , 2008, 5, 131-149.	4.2	34

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19	Thermal quasi-reflectography: a new imaging tool in art conservation. <i>Optics Express</i> , 2012, 20, 14746.	3.4	33
20	NDT inspection of plastered mosaics by means of transient thermography and holographic interferometry. <i>NDT and E International</i> , 2012, 47, 150-156.	3.7	33
21	Multi-year consumption analysis and innovative energy perspectives: The case study of Leonardo da Vinci International Airport of Rome. <i>Energy Conversion and Management</i> , 2016, 128, 261-272.	9.2	33
22	Room and window geometry influence for daylight harvesting maximization " Effects on energy savings in an academic classroom. <i>Energy Procedia</i> , 2018, 148, 1090-1097.	1.8	33
23	Holographic Interferometry (HI), Infrared Vision and X-Ray Fluorescence (XRF) spectroscopy for the assessment of painted wooden statues: a new integrated approach. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 115, 1041-1056.	2.3	30
24	Is a self-sufficient building energy efficient? Lesson learned from a case study in Mediterranean climate. <i>Applied Energy</i> , 2018, 218, 131-145.	10.1	29
25	Infrared exploration of the architectural heritage: from passive infrared thermography to hybrid infrared thermography (HIRT) approach. <i>Materiales De Construccion</i> , 2016, 66, e094.	0.7	29
26	Diffraction optical element-based profilometer for surface inspection. <i>Optical Engineering</i> , 2001, 40, 44.	1.0	27
27	Integrated approach between pulsed thermography, near-infrared reflectography and sandwich holography for wooden panel paintings advanced monitoring. <i>Russian Journal of Nondestructive Testing</i> , 2011, 47, 284-293.	0.9	27
28	Sensitivity of heating performance of an energy self-sufficient building to climate zone, climate change and HVAC system solutions. <i>Sustainable Cities and Society</i> , 2020, 61, 102300.	10.4	26
29	Integrated Measuring and Control System for Thermal Analysis of Buildings Components in Hot Box Experiments. <i>Energies</i> , 2019, 12, 2053.	3.1	25
30	Quantitative thermography for the estimation of the U-value: state of the art and a case study. <i>Journal of Physics: Conference Series</i> , 2014, 547, 012016.	0.4	24
31	Santa Maria di Collemaggio Church (L'Aquila, Italy): Historical Reconstruction by Non-Destructive Testing Techniques. <i>International Journal of Architectural Heritage</i> , 2015, 9, 367-390.	3.1	24
32	An NDT electro-optic system for mosaics investigations. <i>Journal of Cultural Heritage</i> , 2003, 4, 369-376.	3.3	23
33	Discovering the Defects in Paintings Using Non-destructive Testing (NDT) Techniques and Passing Through Measurements of Deformation. <i>Journal of Nondestructive Evaluation</i> , 2014, 33, 358-383.	2.4	23
34	Comparative measurements of natural convection heat transfer in channels by holographic interferometry and schlieren. <i>European Journal of Physics</i> , 2006, 27, 159-172.	0.6	22
35	The energy efficiency challenge for a historical building undergone to seismic and energy refurbishment. <i>Energy Procedia</i> , 2017, 133, 231-242.	1.8	22
36	Eco-Friendly Laminates: From the Indentation to Non-Destructive Evaluation by Optical and Infrared Monitoring Techniques. <i>Strain</i> , 2013, 49, 175-189.	2.4	21

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37	Combined experimental and computational approach for defect detection in precious walls built in indoor environments. <i>International Journal of Thermal Sciences</i> , 2018, 129, 29-46.	4.9	21
38	Evaluation of diffusion in liquids by digital speckle pattern interferometry: computer simulation and experiments. <i>European Journal of Physics</i> , 1996, 17, 51-59.	0.6	20
39	Bouncing light beams and the Hamiltonian analogy. <i>European Journal of Physics</i> , 1997, 18, 284-289.	0.6	20
40	Electro-optic correlation for in situ diagnostics in mural frescoes. <i>Journal of Optics</i> , 1997, 6, 557-563.	0.5	18
41	High-precision digital automated measurement of degree of coherence in the Thompson and Wolf experiment. <i>Journal of Optics</i> , 1998, 7, 933-939.	0.5	18
42	How to Retrieve Information Inherent to Old Restorations Made on Frescoes of Particular Artistic Value Using Infrared Vision?. <i>International Journal of Thermophysics</i> , 2015, 36, 3051-3070.	2.1	18
43	A proposal of a new material for greenhouses on the basis of numerical, optical, thermal and mechanical approaches. <i>Construction and Building Materials</i> , 2017, 155, 332-347.	7.2	18
44	A Cost-Effective System for Aerial 3D Thermography of Buildings. <i>Journal of Imaging</i> , 2020, 6, 76.	3.0	18
45	Three-dimensional optical profilometry for artwork inspection. <i>Journal of Optics</i> , 2000, 2, 353-361.	1.5	17
46	The thermophysical behaviour of cork supports doped with an innovative thermal insulation and protective coating: A numerical analysis based on in situ experimental data. <i>Energy and Buildings</i> , 2018, 159, 508-528.	6.7	17
47	Multipurpose, dual-mode imaging in the 3-5 μm range (MWIR) for artwork diagnostics: A systematic approach. <i>Optics and Lasers in Engineering</i> , 2018, 104, 266-273.	3.8	17
48	Vibration monitoring by fiber optic fringe projection and Fourier transform analysis. <i>Optics Communications</i> , 1997, 139, 17-23.	2.1	16
49	Study of free-convective onset on a horizontal wire using speckle pattern interferometry. <i>International Journal of Heat and Mass Transfer</i> , 2003, 46, 4145-4155.	4.8	16
50	Non-Destructive Testing Techniques to Help the Restoration of Frescoes. <i>Arabian Journal for Science and Engineering</i> , 2014, 39, 3461-3480.	1.1	16
51	A Simple Method of Determining Diffusion Coefficient by Digital Laser Speckle Correlation. <i>Journal De Physique III</i> , 1996, 6, 1117-1125.	0.3	15
52	Roughness measurement by electronic speckle correlation and mechanical profilometry. <i>Measurement: Journal of the International Measurement Confederation</i> , 1997, 20, 243-249.	5.0	15
53	A comparative investigation for the nondestructive testing of honeycomb structures by holographic interferometry and infrared thermography. <i>Journal of Physics: Conference Series</i> , 2010, 214, 012071.	0.4	15
54	Influence of insulation defects on the thermal performance of walls. An experimental and numerical investigation. <i>Journal of Building Engineering</i> , 2019, 21, 355-365.	3.4	15

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55	Building energy performance analysis at urban scale: A supporting tool for energy strategies and urban building energy rating identification. <i>Sustainable Cities and Society</i> , 2021, 74, 103220.	10.4	15
56	Image decorrelation for in situ diagnostics of wooden artifacts. <i>Applied Optics</i> , 1997, 36, 8358.	2.1	14
57	Optical methods in heat transfer and fluid flow. <i>Optics and Lasers in Engineering</i> , 2006, 44, 155-158.	3.8	14
58	On Field Infrared Thermography Sensing for PV System Efficiency Assessment: Results and Comparison with Electrical Models. <i>Sensors</i> , 2020, 20, 1055.	3.8	14
59	Talbot effect application: measurement of distance with a Fourier-transform method. <i>Measurement Science and Technology</i> , 2000, 11, 77-82.	2.6	13
60	The propagator for a particle in a well. <i>European Journal of Physics</i> , 2001, 22, 53-66.	0.6	13
61	Liquid diffusion coefficients by digital moiré. <i>Optical Engineering</i> , 2004, 43, 798.	1.0	13
62	Holographic and speckle methods for the analysis of panel paintings. Developments since the early 1970s. <i>Studies in Conservation</i> , 2004, 49, 38-48.	1.1	13
63	Field correlations within a homogeneous and isotropic source. <i>Optics Communications</i> , 1994, 107, 331-334.	2.1	12
64	Destructive interference from three partially coherent point sources. <i>Optics Communications</i> , 2005, 254, 30-39.	2.1	12
65	Flow visualization and beyond. <i>Optics and Lasers in Engineering</i> , 2012, 50, 1-7.	3.8	12
66	Validation of quantitative IR thermography for estimating the U-value by a hot box apparatus. <i>Journal of Physics: Conference Series</i> , 2015, 655, 012006.	0.4	12
67	Fibre optic projected fringes for monitoring marble surface status. <i>Journal of Cultural Heritage</i> , 2000, 1, S337-S343.	3.3	11
68	Low-Cost Optoelectronic System for Three-Dimensional Artwork Texture Measurement. <i>IEEE Transactions on Image Processing</i> , 2004, 13, 390-396.	9.8	11
69	Wide-band IR imaging in the NIR-MIR-FIR regions for in situ analysis of frescoes. <i>Proceedings of SPIE</i> , 2011, , .	0.8	11
70	Modeling and Optimization of the Thermal Performance of a Wood-Cement Block in a Low-Energy House Construction. <i>Energies</i> , 2016, 9, 677.	3.1	11
71	Energetic performance analysis of a commercial water-based photovoltaic thermal system (PV/T) under summer conditions. <i>Journal of Physics: Conference Series</i> , 2017, 923, 012040.	0.4	11
72	On the use of phase change materials applied on cork-coconut-cork panels. <i>Journal of Thermal Analysis and Calorimetry</i> , 2019, 138, 4061-4090.	3.6	11

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73	Speckle decorrelation study of liquid diffusion. Optics and Lasers in Engineering, 2002, 37, 341-353.	3.8	10
74	Multi-scale approach for analyzing convective heat transfer flow in background-oriented Schlieren technique. Optics and Lasers in Engineering, 2018, 110, 415-419.	3.8	10
75	Fast and robust method for flow analysis using GPU assisted diffractive optical element based background oriented schlieren (BOS). Optics and Lasers in Engineering, 2020, 126, 105908.	3.8	10
76	Diffractive optical element based sensor for roughness measurement. Sensors and Actuators A: Physical, 2002, 100, 180-186.	4.1	9
77	Quantitative Infrared Thermography (IRT) and Holographic Interferometry (HI): Nondestructive Testing (NDT) for Defects Detection in the Silicate Ceramics Industry. Advances in Science and Technology, 2010, 68, 102-107.	0.2	9
78	Fourier transform evaluation of digital interferograms for diffusivity measurement. Journal of Optics, 1994, 3, 249-254.	0.5	8
79	Sandwich holography for determining the convective heat transfer coefficient. Journal of Optics, 2000, 2, 39-42.	1.5	8
80	Comparative study for the nondestructive testing of advanced ceramic materials by infrared thermography and holographic interferometry. , 2010, , .		8
81	White-light speckle photography technique applied for free convection heat transfer problems. Flow Measurement and Instrumentation, 2010, 21, 98-104.	2.0	8
82	Temperature Measurement in Laminar Free Convection Using Electro-Optic Holography. Journal De Physique III, 1997, 7, 1893-1898.	0.3	8
83	Smartphone diagnostics for cultural heritage. , 2019, , .		8
84	Measurement of vibration amplitude by an optical fiber-based moiré interferometer. Optics and Lasers in Engineering, 1998, 30, 213-223.	3.8	7
85	Role of data processing in measuring temperature gradients with DOE Schardin's schlieren #2. Optics and Lasers in Engineering, 2012, 50, 1069-1074.	3.8	7
86	Mid-infrared reflectography for the analysis of pictorial surface layers in artworks. , 2013, , .		7
87	Buoyancy-induced flows monitoring by digital speckle photography and Fourier transform analysis. Optics Communications, 1999, 169, 51-57.	2.1	6
88	Digital moiré by a diffractive optical element for deformation analysis of ancient paintings. Journal of Optics, 2003, 5, S146-S151.	1.5	6
89	NDT methods in artwork corrosion monitoring. , 2007, , .		6
90	Heat transfer measurement by a diffractive optical element fringe projection. Optical Engineering, 2007, 46, 093606.	1.0	6

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91	Dual mode imaging in mid infrared with thermal signal reconstruction for innovative diagnostics of the "Monocromo" by Leonardo da Vinci. Scientific Reports, 2021, 11, 22482.	3.3	6
92	On the influence of environmental boundary conditions on surface thermal resistance of walls: Experimental evaluation through a Guarded Hot Box. Case Studies in Thermal Engineering, 2022, 34, 101915.	5.7	6
93	Comparative study on the efficiency of some optical methods for artwork diagnostics. , 2001, , .		5
94	Surface contouring by diffractive optical element-based fringe projection. Measurement Science and Technology, 2001, 12, N6-N8.	2.6	5
95	INVESTIGATION OF NATURAL CONVECTION IN VERTICAL CHANNELS BY SCHLIEREN AND HOLOGRAPHIC INTERFEROMETRY. Journal of Flow Visualization and Image Processing, 2004, 11, 323-334.	0.5	5
96	Studying heat transfer with TV-holography. European Journal of Physics, 1994, 15, 315-318.	0.6	4
97	An elementary approach to spinors. European Journal of Physics, 1997, 18, 256-262.	0.6	4
98	Successful pinhole photography. American Journal of Physics, 1997, 65, 256-257.	0.7	4
99	Sandwich holography for simultaneous temperature visualization and heat-transfer coefficient measurement. Optical Engineering, 2001, 40, 1274.	1.0	4
100	White-light digital speckle photography in free convection. Optics Communications, 2002, 201, 39-44.	2.1	4
101	<title>Virtual gallery of ancient coins through conoscopic holography</title>. , 2003, , .		4
102	Defects detection and non-destructive testing (NDT) techniques in paintings: a unified approach through measurements of deformation. Proceedings of SPIE, 2013, , .	0.8	4
103	Role of the masonry in paintings during a seismic event analyzed by infrared vision. Proceedings of SPIE, 2015, , .	0.8	4
104	Special Issue on "Novel Ideas for Infrared Thermography and Its Application to Integrated Approaches"™. Applied Sciences (Switzerland), 2020, 10, 56.	2.5	4
105	Imaging data integration for painting diagnostics. , 2009, , .		3
106	Thermal Quasi-Reflectography (TQR): current research and potential applications. Proceedings of SPIE, 2013, , .	0.8	3
107	The hybrid thermography approach applied to architectural structures. Proceedings of SPIE, 2017, , .	0.8	2
108	The Potential of Optical Profilometry in the Study of Cultural Stone Weathering. Journal of Imaging, 2019, 5, 60.	3.0	2

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109	Sensor monitoring system for PV plant with active load. , 2019, , .		2
110	The use of optical and infrared techniques for the restoration of the frescoes damaged by earthquake: a case studyâ€”the fresco of Giacomo Farelli in the Church of Santa Maria della Croce di Roio (Lâ€™Aquila, Italy). WIT Transactions on the Built Environment, 2011, , .	0.0	2
111	33rd UIT (Italian Union of Thermo-fluid dynamics) Heat Transfer Conference. Journal of Physics: Conference Series, 2015, 655, 011001.	0.4	1
112	A versatile system for in-situ speckle and thermography-based diagnostics of artifacts. IOP Conference Series: Materials Science and Engineering, 2018, 364, 012063.	0.6	1
113	Effect of noise on measurements of diffusivity in transparent liquid mixtures by digital speckle photography. EPJ Applied Physics, 2018, 82, 30501.	0.7	1
114	Effects of energy efficiency measures on building performance: an analysis in seven European cities. IOP Conference Series: Materials Science and Engineering, 2019, 609, 072076.	0.6	1
115	Influence of the convective coefficient on the determination of thermal transmittance through outdoor infrared thermography. Journal of Physics: Conference Series, 2020, 1599, 012016.	0.4	1
116	Learning lighting models for optimal control of lighting system via experimental and numerical approach. Science and Technology for the Built Environment, 2021, 27, 1018-1030.	1.7	1
117	Thermal imaging in the 3-5 micron range for precise localization of defects: application on frescoes at the Sforza Castle. , 2021, , .		1
118	A simple method for artworks monitoring by simultaneous speckle interferometry (ESPI) and speckle photography. , 2021, , .		1
119	Unusual Optical Techniques in Diffusivity Measurements. , 2006, , .		1
120	Spice Model of Photovoltaic Panel for Electronic System Design. Lecture Notes in Electrical Engineering, 2020, , 425-431.	0.4	1
121	ESPI for mosaics diagnostics. , 2002, , .		0
122	<title>Vibration analysis of layered structures by optoelectronics methods</title>. , 2002, , .		0
123	Diffraction optical element based sensor to measure small diffusion coefficients. , 2003, , .		0
124	Unwrapping weighted algorithm in fringe projection 3D profilometry. , 2003, , .		0
125	Vibration analysis of layered structures by digital local correlation of laser speckle. , 2003, 5144, 669.		0
126	Variable resolution profilometer for artwork surface topography. , 2003, , .		0

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127	Sandwich holography for studying convective fields: performance analysis. Optical Engineering, 2010, 49, 033605.	1.0	0
128	Speckle-Based Deflection Techniques in Diffusivity Measurements. Defect and Diffusion Forum, 0, 312-315, 912-917.	0.4	0
129	Diffusion Measurements Using DOE Schardin's Schlieren #2 Technique. , 2014, , .		0
130	IR thermography as a preliminary tool in acoustical inspection of ancient historical structures. , 2017, , .		0
131	Thermal Characterization of Different Insulating Materials via Experimental Analysis in a Guarded Hot Box. Tecnica Italiana, 2021, 65, 230-235.	0.2	0
132	Energy optimization analysis of archetype public buildings " Results from SHERPA European Project. E3S Web of Conferences, 2021, 312, 02007.	0.5	0
133	Influence of environmental boundary conditions on convective heat transfer coefficients of wall internal surface. E3S Web of Conferences, 2021, 312, 02012.	0.5	0
134	Artwork Profilometry Using a Diffractive Element for Fringe Projection. , 2000, , 581-588.		0
135	Sandwich holography for simultaneous temperature visualization and convective heat transport measurement beneath a heated horizontal plate. , 2002, , .		0
136	How Do Temperature Differences and Stable Thermal Conditions Affect the Heat Flux Meter (HFM) Measurements of Walls? Laboratory Experimental Analysis. Energies, 2022, 15, 4746.	3.1	0