

Franco Docchio

List of Publications by Year in descending order

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109
papers

2,244
citations

304743

22
h-index

243625

44
g-index

110
all docs

110
docs citations

110
times ranked

1998
citing authors

#	ARTICLE	IF	CITATIONS
1	State-of-The-Art and Applications of 3D Imaging Sensors in Industry, Cultural Heritage, Medicine, and Criminal Investigation. <i>Sensors</i> , 2009, 9, 568-601.	3.8	443
2	Age-related changes in the morphology, absorption and fluorescence of melanosomes and lipofuscin granules of the retinal pigment epithelium. <i>Vision Research</i> , 1990, 30, 1291-1303.	1.4	214
3	Study of the temporal and spatial dynamics of plasmas induced in liquids by nanosecond Nd:YAG laser pulses 1: Analysis of the plasma starting times. <i>Applied Optics</i> , 1988, 27, 3661.	2.1	136
4	Relationship between media-to-lumen ratio of subcutaneous small arteries and wall-to-lumen ratio of retinal arterioles evaluated noninvasively by scanning laser Doppler flowmetry. <i>Journal of Hypertension</i> , 2012, 30, 1169-1175.	0.5	85
5	Three-dimensional optical measurements and reverse engineering for automotive applications. <i>Robotics and Computer-Integrated Manufacturing</i> , 2004, 20, 359-367.	9.9	74
6	Lifetimes of Plasmas Induced in Liquids and Ocular Media by Single Nd:YAG Laser Pulses of Different Duration. <i>Europhysics Letters</i> , 1988, 6, 407-412.	2.0	70
7	AGE-RELATED CHANGES IN THE FLUORESCENCE OF MELANIN and LIPOFUSCIN GRANULES OF THE RETINAL PIGMENT EPITHELIUM: A TIME-RESOLVED FLUORESCENCE SPECTROSCOPY STUDY. <i>Photochemistry and Photobiology</i> , 1991, 54, 247-253.	2.5	65
8	A novel, adaptive system for 3-D optical profilometry using a liquid crystal light projector. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1994, 43, 558-566.	4.7	55
9	Optical coherence tomography angiography and arterial hypertension: A role in identifying subclinical microvascular damage?. <i>European Journal of Ophthalmology</i> , 2021, 31, 158-165.	1.3	50
10	Deep learning-based hand gesture recognition for collaborative robots. <i>IEEE Instrumentation and Measurement Magazine</i> , 2019, 22, 44-51.	1.6	46
11	Study of the temporal and spatial dynamics of plasmas induced in liquids by nanosecond Nd:YAG laser pulses 2: Plasma luminescence and shielding. <i>Applied Optics</i> , 1988, 27, 3669.	2.1	43
12	Autofluorescence methods in ophthalmology. <i>Journal of Biomedical Optics</i> , 2004, 9, 9.	2.6	41
13	A system for time-resolved laser fluorescence spectroscopy with multiple picosecond gating. <i>Review of Scientific Instruments</i> , 1988, 59, 2254-2259.	1.3	38
14	A simple and reliable system for measuring the refractive index of liquids using a position-sensitive detector. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1995, 44, 68-70.	4.7	36
15	New Methods to Study the Microcirculation. <i>American Journal of Hypertension</i> , 2018, 31, 265-273.	2.0	35
16	A Novel Algorithm for EMG Signal Processing and Muscle Timing Measurement. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2015, 64, 2995-3004.	4.7	33
17	3-D Optical Measurements in the Field of Cultural Heritage: The Case of the Vittoria Alata of Brescia. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2005, 54, 359-368.	4.7	31
18	Comparison between invasive and noninvasive techniques of evaluation of microvascular structural alterations. <i>Journal of Hypertension</i> , 2018, 36, 1154-1163.	0.5	31

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19	OPL-3D: A novel, portable optical digitizer for fast acquisition of free-form surfaces. Review of Scientific Instruments, 2003, 74, 2593-2603.	1.3	28
20	In-field performance of an optical digitizer for the reverse engineering of free-form surfaces. International Journal of Advanced Manufacturing Technology, 2005, 26, 1353-1361.	3.0	27
21	Ocular fluorometry: Principles, fluorophores, instrumentation, and clinical applications. Lasers in Surgery and Medicine, 1989, 9, 515-532.	2.1	26
22	A high-frequency sinusoidal phase-modulation interferometer using an electro-optic modulator: Development and evaluation. Review of Scientific Instruments, 1991, 62, 2579-2583.	1.3	25
23	Performance Analysis of the PMD Camboard Picoflexx Time-of-Flight Camera for Markerless Motion Capture Applications. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 4456-4471.	4.7	23
24	Low-coherence interferometry using a self-mixing super-luminescent diode. IEEE Photonics Technology Letters, 1998, 10, 123-125.	2.5	20
25	Fast 3D profilometer based upon the projection of a single fringe pattern and absolute calibration. Measurement Science and Technology, 2006, 17, 1757-1766.	2.6	20
26	Roboscan: a combined 2D and 3D vision system for improved speed and flexibility in pick-and-place operation. International Journal of Advanced Manufacturing Technology, 2013, 69, 1873-1886.	3.0	20
27	Optoranger: A 3D pattern matching method for bin picking applications. Optics and Lasers in Engineering, 2014, 54, 222-231.	3.8	20
28	Time-resolved fluorescence spectroscopy of the retinal pigment epithelium: age-related studies. IEEE Journal of Quantum Electronics, 1990, 26, 2218-2225.	1.9	19
29	Unsupervised corrections of unknown chromatic dominants using a Brownian-path-based Retinex algorithm. Journal of Electronic Imaging, 2003, 12, 431.	0.9	19
30	Pump cavities for compact pulsed Nd:YAG lasers: a comparative study. Applied Optics, 1985, 24, 3752.	2.1	17
31	A study on the possible involvement of nonlinear mechanism of light absorption by HpD with Nd: YAG laser. Lasers in Surgery and Medicine, 1986, 6, 323-327.	2.1	17
32	A Depth From Defocus Measurement System Using a Liquid Lens Objective for Extended Depth Range. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 441-450.	4.7	16
33	Deep Learning Based Machine Vision: First Steps Towards a Hand Gesture Recognition Set Up for Collaborative Robots. , 2018, , .		16
34	Investigating Additive Manufactured Lattice Structures: A Multi-Instrument Approach. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 2459-2467.	4.7	16
35	In situ evaluation of the functional state of chromatin by means of Quinacrine Mustard staining and time-resolved fluorescence microscopy. The Histochemical Journal, 1984, 16, 223-233.	0.6	15
36	A system for the inspection and quality control of glass slabs. Review of Scientific Instruments, 2002, 73, 3386-3391.	1.3	15

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37	The time-dependent behaviour of Hematoporphyrin-Derivative in saline: A study of spectral modifications. <i>Chemico-Biological Interactions</i> , 1984, 49, 1-11.	4.0	14
38	Nd: YAG laser photodisruption: an experimental investigation on shielding and multiple plasma formation. <i>Graefe's Archive for Clinical and Experimental Ophthalmology</i> , 1988, 226, 362-366.	1.9	14
39	Thyratron-switched N ₂ atmospheric-pressure oscillator, low-pressure amplifier laser system. <i>Review of Scientific Instruments</i> , 1984, 55, 477-481.	1.3	13
40	Comprehensive study of damage to intraocular lenses by single and multiple nanosecond neodymium: YAG laser pulses. <i>Journal of Cataract and Refractive Surgery</i> , 1990, 16, 603-610.	1.5	13
41	Characteristics of Optical Breakdown in Ultrapure Water Induced by Nanosecond Nd: YAG Laser Pulses. <i>Europhysics Letters</i> , 1991, 15, 69-73.	2.0	13
42	Simple, low-cost, portable corneal fluorometer for detection of the level of diabetic retinopathy. <i>Applied Optics</i> , 1998, 37, 4303.	2.1	13
43	Virtual and physical prototyping by means of a 3D optical digitizer: Application to facial prosthetic reconstruction. <i>Virtual and Physical Prototyping</i> , 2009, 4, 217-226.	10.4	13
44	Time-resolved fluorescence spectroscopy of hematoporphyrin-derivative in human lymphocytes. <i>Chemico-Biological Interactions</i> , 1984, 50, 135-141.	4.0	12
45	Spectroscopic studies of hematoporphyrin-derivative in culture medium. <i>Chemico-Biological Interactions</i> , 1984, 50, 153-157.	4.0	12
46	A 580 nm emission in haematoporphyrin-derivative solution and in treated cells. <i>Lasers in Medical Science</i> , 1986, 1, 33-39.	2.1	12
47	Intraocular lens damage from Nd:YAG laser pulses focused in the vitreous Part I: Q-switched lasers. <i>Journal of Cataract and Refractive Surgery</i> , 1988, 14, 526-529.	1.5	11
48	Adaptive whole-field optical profilometry: a study of the systematic errors. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1995, 44, 36-41.	4.7	11
49	The rod image: a new method for the calculation of pump efficiency in reflecting close-coupled cavities. <i>Applied Optics</i> , 1985, 24, 3746.	2.1	10
50	A tunable, double-wavelength heterodyne detection interferometer with frequency-locked diode-pumped Nd:YAG sources for absolute measurements. <i>Review of Scientific Instruments</i> , 1995, 66, 4073-4080.	1.3	10
51	A novel optical apparatus for the study of rolling contact wear/fatigue based on a high-speed camera and multiple-source laser illumination. <i>Review of Scientific Instruments</i> , 2016, 87, 083701.	1.3	10
52	Observation of Transient Response of Nb Superconducting Thin Film to a Single-Heavy-Ion Impact. <i>Europhysics Letters</i> , 1988, 6, 425-430.	2.0	9
53	Comparative analysis of low-pass filters for the demodulation of projected gratings in 3-D adaptive profilometry. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1994, 43, 50-55.	4.7	9
54	Corneal autofluorescence in diabetic and normal eyes. <i>International Ophthalmology</i> , 1995, 18, 211-214.	1.4	9

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55	A combined distance and surface profile measurement system for industrial applications: a European project. <i>Measurement Science and Technology</i> , 1994, 5, 807-815.	2.6	8
56	Design and development of a 3D system for the measurement of tube eccentricity. <i>Measurement Science and Technology</i> , 2011, 22, 075302.	2.6	8
57	Subnanosecond fluorescence waveforms measurements with a dual time-scale microprocessor-controlled averager. <i>Review of Scientific Instruments</i> , 1981, 52, 1671-1675.	1.3	7
58	An oscillator-amplifier distributed feedback dye laser system, pumped by a single TEA N2 laser. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1985, 37, 35-39.	1.5	7
59	Spatial and temporal dynamics of light attenuation and transmission by plasmas induced in liquids by nanosecond Nd:YAG laser pulses. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1991, 13, 87-98.	0.4	7
60	Combination of 2D and 3D vision systems into robotic cells for improved flexibility and performance. , 2011, , .		7
61	Assessment of retinal arteriolar morphology by noninvasive methods. <i>Journal of Hypertension</i> , 2016, 34, 1044-1046.	0.5	7
62	Study of laser damage to injection-molded diffractive intraocular lenses. <i>Journal of Cataract and Refractive Surgery</i> , 1991, 17, 639-641.	1.5	6
63	Novel optical sensor for the measurement of surface texture. <i>Review of Scientific Instruments</i> , 2001, 72, 2207-2213.	1.3	6
64	An optical self-calibrating technique for the dynamic characterization of PZT's. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1991, 40, 851-854.	4.7	5
65	Light-induced transmission changes in liquid crystal displays for adaptive pattern projection. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1992, 41, 629-632.	4.7	5
66	Low-noise front-end electronics for solid-state fluorometers. <i>Review of Scientific Instruments</i> , 1999, 70, 3759-3764.	1.3	5
67	In-Line Monitoring of Laser Welding Using a Smart Vision System. , 2018, , .		5
68	Hand Gesture Recognition for Collaborative Workstations: A Smart Command System Prototype. <i>Lecture Notes in Computer Science</i> , 2019, , 332-342.	1.3	5
69	Dual time scale measurements of the multiexponential fluorescence decay of quinacrine mustard. <i>Optics Communications</i> , 1981, 37, 20-22.	2.1	4
70	Online dimensional analysis of surfaces using optical filtering and elaboration techniques in the Fourier plane. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1989, 38, 811-814.	4.7	4
71	<title>Development and characterization of a liquid-crystal projection unit for adaptive structured illumination</title>. , 1992, 1614, 78.		4
72	Fiber-linked interferometric displacement sensor: analysis of residual sensitivity to fiber stress. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1996, 45, 201-208.	4.7	4

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73	Corneal autofluorescence in presence of diabetic retinopathy. , 1998, 3246, 22.		4
74	3D system for the measurement of tube eccentricity: an improved, rugged, easy to calibrate layout. Measurement Science and Technology, 2013, 24, 035901.	2.6	4
75	3D Optical Body Scanning: Application to Forensic Medicine and to Maxillofacial Reconstruction. , 2010, , .		4
76	Simple digital technique for efficient frequency locking of diode-pumped Nd:YAG lasers. Electronics Letters, 1994, 30, 47-49.	1.0	3
77	Low-noise differentiator preamplifier for photogenerated signals. Review of Scientific Instruments, 1999, 70, 2169-2170.	1.3	3
78	Determination of the concentrations of interferences in blood serum by use of a novel solid-state colorimeter. Measurement Science and Technology, 2000, 11, 185-192.	2.6	3
79	A 400-kHz High-Accuracy Laser Telemeter for Distributed Measurements of 3-D Profiles. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 1054-1060.	4.7	3
80	A microprocessor-controlled apparatus for the measurement of pulsed spectra. Optical and Quantum Electronics, 1980, 12, 193-197.	3.3	2
81	Inspection, 3D modelling, and rapid prototyping of cultural heritage by means of a 3D optical digitiser. , 2005, , .		2
82	University-Industry Synergies in Photonics and Optoelectronics: the Case of Brescia. , 2007, , .		2
83	Application of three-dimensional optical acquisition to the documentation and the analysis of crime scenes and legal medicine inspection. , 2007, , .		2
84	A fast autofocus setup using a liquid lens objective for in-focus imaging in the macro range. AIP Conference Proceedings, 2016, , .	0.4	2
85	Automatic selection of focal lengths in a Depth From Defocus measurement system based on liquid lenses. Optics and Lasers in Engineering, 2017, 96, 68-74.	3.8	2
86	Automatic measurement of fluctuations of optical sources by means of a microprocessor-controlled apparatus. Journal of Physics E: Scientific Instruments, 1982, 15, 240-242.	0.7	1
87	Subnanosecond waveform analysis in the presence of fading by means of a random sampling technique. Review of Scientific Instruments, 1984, 55, 365-370.	1.3	1
88	A high-efficiency, compact Nd-YAG laser for eye microsurgery. Lasers in Medical Science, 1986, 1, 19-24.	2.1	1
89	Time-resolved fluorescence spectroscopy with programmable gating. Journal of Photochemistry and Photobiology B: Biology, 1989, 3, 129.	3.8	1
90	Optical interferometer using a high-birefringence optical fiber. IEEE Transactions on Instrumentation and Measurement, 1993, 42, 231-233.	4.7	1

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91	Vitreous laser absorption following fluorescein angiography in diabetic patients. Graefe's Archive for Clinical and Experimental Ophthalmology, 1996, 234, 488-492.	1.9	1
92	<title>Autofluorescence of ocular tissues: an update of measurement techniques for research and diagnosis</title>. , 1997, , .		1
93	Design and performance of a new fluorometer for corneal autofluorescence measurement. , 1998, 3246, 28.		1
94	Advanced laser telemetry for vehicle monitoring and other industrial applications. , 2009, , .		1
95	Nd:YAG Laser Ophthalmic Microsurgery. , 1991, , 85-140.		1
96	Laser-biophysics. Applied Physics B: Lasers and Optics, 1982, 28, 240-245.	2.2	0
97	Fluorometric Studies Of Hematoporphyrin-Derivative In Cells And Solution. Proceedings of SPIE, 1985, , .	0.8	0
98	Laser fluorescent microirradiation: Two examples of application to biology. a. Study of the functional state of chromatin; b. Study of hematoporphyrin derivative (HpD) in cells. Journal of Soviet Laser Research, 1985, 6, 368-376.	0.2	0
99	The Effect of Back-Reflection on the Performances of N2-Lasers. Japanese Journal of Applied Physics, 1985, 24, 1320-1323.	1.5	0
100	A system for dimensional analysis of mechanical objects by means of optical filtering. Sensors and Actuators, 1989, 20, 233-237.	1.7	0
101	<title>Flexible measuring machine based on a double interferometer</title>. , 1993, 2066, 139.		0
102	Improving the effectiveness of a tumor detection system by the use of image enhancement procedures. Bioimaging, 1995, 3, 94-101.	1.3	0
103	<title>Laser light absorption in the vitreous body after fluorescein angiography in diabetic patients</title>. , 1996, , .		0
104	<title>Self-mixing low-coherence interferometry</title>. , 1998, 3199, 268.		0
105	<title>Self-mixing superluminescent diode optical tomography</title>. , 1999, 3749, 790.		0
106	<title>Autofluorescence of ocular tissues: a promising diagnostic technique in ophthalmology</title>. , 1999, , .		0
107	Experimental characterization of an autofocus algorithm based on liquid lens objective for in-focus imaging in the macro range. , 2017, , .		0
108	Reply. Journal of Hypertension, 2018, 36, 2278-2279.	0.5	0

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109	LED ILLUMINATION: ILLUMINOTECHNICAL, OPTICAL, METROLOGICAL AND SAFETY ISSUES. , 2013, , 292-308.		0