

# Janusz Mroczka

## List of Publications by Year in descending order

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101  
papers

1,625  
citations

201674

27  
h-index

315739

38  
g-index

101  
all docs

101  
docs citations

101  
times ranked

865  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interpolated-DFT-Based Fast and Accurate Frequency Estimation for the Control of Power. IEEE Transactions on Industrial Electronics, 2014, 61, 7026-7034.	7.9	119
2	A Reduced Prony's Method in Power-Quality Analysis – Parameters Selection. IEEE Transactions on Power Delivery, 2010, 25, 979-986.	4.3	91
3	Comparison of methods to derive morphological parameters of multi-fractal samples of particle aggregates from TEM images. Journal of Aerosol Science, 2012, 47, 12-26.	3.8	86
4	The cognitive process in metrology. Measurement: Journal of the International Measurement Confederation, 2013, 46, 2896-2907.	5.0	77
5	A fast and accurate implementation of tunable algorithms used for generation of fractal-like aggregate models. Physica A: Statistical Mechanics and Its Applications, 2014, 404, 106-117.	2.6	71
6	Gabor Transform, SPWVD, Gabor-Wigner Transform and Wavelet Transform - Tools For Power Quality Monitoring. Metrology and Measurement Systems, 2010, 17, .	1.4	58
7	Nonlinear model for mechanical ventilation of human lungs. Computers in Biology and Medicine, 2006, 36, 41-58.	7.0	52
8	Variable-Frequency Prony Method in the Analysis of Electrical Power Quality. Metrology and Measurement Systems, 2012, 19, 39-48.	1.4	49
9	Simulation research on improved regularized solution of the inverse problem in spectral extinction measurements. Applied Optics, 2012, 51, 1715.	1.8	47
10	LIDFT method with classic data windows and zero padding in multifrequency signal analysis. Measurement: Journal of the International Measurement Confederation, 2010, 43, 1595-1602.	5.0	40
11	Improved regularized solution of the inverse problem in turbidimetric measurements. Applied Optics, 2010, 49, 4591.	2.1	40
12	Temperature-insensitive simultaneous rotation and displacement (bending) sensor based on tilted fiber Bragg grating. Optics Express, 2016, 24, 29922.	3.4	40
13	Optical characterization of bubbly flows with a near-critical-angle scattering technique. Experiments in Fluids, 2009, 47, 721-732.	2.4	38
14	Impact of morphological parameters onto simulated light scattering patterns. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 119, 53-66.	2.3	37
15	Improved technique of retrieving particle size distribution from angular scattering measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 129, 48-59.	2.3	35
16	Fiber orientation and concentration analysis by light scattering: Experimental setup and diagnosis. Review of Scientific Instruments, 1997, 68, 2805-2811.	1.3	33
17	Plane-wave and Gaussian-beam scattering on an infinite cylinder. Optical Engineering, 2000, 39, 763.	1.0	33
18	Algorithms and methods for analysis of the optical structure factor of fractal aggregates. Metrology and Measurement Systems, 2012, 19, 459-470.	1.4	33

#	ARTICLE	IF	CITATIONS
19	DFT algorithm analysis in low-cost power quality measurement systems based on a DSP processor. , 2007, , .		32
20	Effect of the necking phenomenon on the optical properties of soot particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 141, 40-48.	2.3	32
21	Near-critical-angle scattering for the characterization of clouds of bubbles: particular effects. Applied Optics, 2011, 50, 5759.	2.1	31
22	Light-transmittance predictions under multiple-light-scattering conditions I Direct problem: hybrid-method approximation. Applied Optics, 2001, 40, 1514.	2.1	30
23	Influence of A/D Quantization in an Interpolated DFT Based System of Power Control with A Small Delay. Metrology and Measurement Systems, 2014, 21, 423-432.	1.4	30
24	Metrological analysis of the LIDFT method. IEEE Transactions on Instrumentation and Measurement, 2002, 51, 67-71.	4.7	28
25	Frequency-domain identification of the respiratory system model during the interrupter experiment. Measurement: Journal of the International Measurement Confederation, 2009, 42, 390-398.	5.0	28
26	Light-transmittance predictions under multiple-light-scattering conditions II Inverse problem: particle size determination. Applied Optics, 2001, 40, 1525.	2.1	27
27	Critical angle refractometry and sizing of bubble clouds. Optics Letters, 2007, 32, 2070.	3.3	27
28	Inverse analysis of light scattered at a small angle for characterization of a transparent dielectric fiber. Applied Optics, 2014, 53, 7103.	1.8	27
29	Inverse analysis of the rainbow for the case of low-coherent incident light to determine the diameter of a glass fiber. Applied Optics, 2014, 53, 4239.	1.8	27
30	Frequency Estimation in Interpolated Discrete Fourier Transform With Generalized Maximum Sidelobe Decay Windows for the Control of Power. IEEE Transactions on Industrial Informatics, 2021, 17, 1614-1624.	11.3	24
31	Preliminary study on the accuracy of respiratory input impedance measurement using the interrupter technique. Computer Methods and Programs in Biomedicine, 2011, 101, 115-125.	4.7	23
32	Short Time Algorithm of Power Waveforms Fundamental Harmonic Estimation With Use of Prony's Methods. Metrology and Measurement Systems, 2011, 18, 371-378.	1.4	22
33	A Hybrid Maximum Power Point Search Method Using Temperature Measurements in Partial Shading Conditions. Metrology and Measurement Systems, 2014, 21, 733-740.	1.4	21
34	Cylindrical Fibre Orientation Analysis by Light Scattering. Part 2: Experimental Aspects. Particle and Particle Systems Characterization, 1997, 14, 211-218.	2.3	16
35	Cylindrical Fibre Orientation Analysis by Light Scattering. Part 1: Numerical Aspects. Particle and Particle Systems Characterization, 1997, 14, 163-174.	2.3	15
36	Influence of sintering necks on the spectral behaviour of ITO clusters using the Discrete Dipole Approximation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 159, 11-18.	2.3	14

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37	Prony's Method with Reduced Sampling - Numerical Aspects. Metrology and Measurement Systems, 2014, 21, 521-534.	1.4	13
38	Approximate solution for optical measurements of the diameter and refractive index of a small and transparent fiber. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 667.	1.5	13
39	Twisted tilted fiber Bragg gratings: new structures and polarization properties. Optics Letters, 2018, 43, 4445.	3.3	12
40	Method of moments in light scattering data inversion in the particle size distribution function. Optics Communications, 1993, 99, 147-151.	2.1	8
41	Methods of temperature stabilization of light-emitting diode radiation. Review of Scientific Instruments, 1994, 65, 803-806.	1.3	8
42	Overhead Transmission Line Sag Estimation Using the Simple Opto-Mechanical System with Fiber Bragg Gratings—Part 2: Interrogation System. Sensors, 2020, 20, 2652.	3.8	8
43	Forward and inverse analysis for particle size distribution measurements of disperse samples: A review. Measurement: Journal of the International Measurement Confederation, 2022, 187, 110256.	5.0	8
44	Numerical analysis of primary rainbows from a homogeneous cylinder and an optical fiber for incident low-coherent light. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 195, 176-188.	2.3	7
45	New Parameters Extracted from Tilted Fiber Bragg Grating Spectra for the Determination of the Refractive Index and Cut-Off Wavelength. Sensors, 2019, 19, 1964.	3.8	7
46	Effects of homogeneous and heterogeneous changes in the lung periphery on spirometry results. Computer Methods and Programs in Biomedicine, 2019, 173, 139-145.	4.7	7
47	Application of the discrete Fourier transform linear interpolation method in the measurement of volume scattering function at small angle. Optical Engineering, 2000, 39, 1576.	1.0	5
48	Geometric matching of circular features by least squares fitting. Pattern Recognition Letters, 2002, 23, 885-894.	4.2	5
49	Influence of a laser beam's frequency stability on dislocation of vortex points in an optical vortex interferometer. Applied Optics, 2006, 45, 3982.	2.1	5
50	Method of testing and correcting signal amplifiers' transfer function using prony analysis. Metrology and Measurement Systems, 2012, 19, 489-498.	1.4	5
51	Modeling and analysis of the solar concentrator in photovoltaic systems. , 2015, , .		5
52	Adaptive digital synchronization of measuring window in low-cost DSP power quality measurement systems. , 2007, , .		4
53	A Distributed Telemedical System for Monitoring of the Respiratory Mechanics by Enhanced Interrupter Technique. Lecture Notes in Electrical Engineering, 2010, , 75-95.	0.4	4
54	Analysis of the method for ventilation heterogeneity assessment using the Otis model and forced oscillations. Computer Methods and Programs in Biomedicine, 2015, 122, 330-340.	4.7	4

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55	Estimation of Lung Properties Using ANN-Based Inverse Modeling of Spirometric Data. Lecture Notes in Computer Science, 2019, , 561-572.	1.3	4
56	Thermionic Electron Beam Current and Accelerating Voltage Controller for Gas Ion Sources. Sensors, 2021, 21, 2878.	3.8	4
57	Telemedical System "Pulmotel-2010" for Monitoring Patients with Chronic Pulmonary Diseases. Metrology and Measurement Systems, 2010, 17, .	1.4	4
58	REDUCED MODEL FOR FORCED EXPIRATION AND ANALYSIS OF ITS SENSITIVITY. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 159-164.	0.4	3
59	Reduction of a linear complex model for respiratory system during Airflow Interruption. , 2010, 2010, 730-3.		3
60	Maximum power point search method for photovoltaic panels which uses a light sensor in the conditions of real shading and temperature. Proceedings of SPIE, 2015, , .	0.8	3
61	Tomographic image reconstruction via estimation of sparse unidirectional gradients. Computers in Biology and Medicine, 2017, 81, 93-105.	7.0	3
62	Design and Manufacturing Optoelectronic Sensors for the Measurement of Refractive Index Changes under Unknown Polarization State. Sensors, 2021, 21, 7318.	3.8	3
63	Noniterative method for frequency estimation based on interpolated DFT with low-order harmonics elimination. Measurement: Journal of the International Measurement Confederation, 2022, 196, 111241.	5.0	3
64	Integral transform technique in particle sizing. Journal of Aerosol Science, 1989, 20, 1075-1077.	3.8	2
65	<title>Polarization characteristics of scattered radiation on fibers</title>. , 1997, , .		2
66	A metrological model for maximum expiration. Measurement: Journal of the International Measurement Confederation, 1998, 23, 265-270.	5.0	2
67	An analysis of an Optical Vortices Interferometer with focused beam. Proceedings of SPIE, 2008, , .	0.8	2
68	Measurement of Respiratory Input Impedance Using the Interrupter Technique – A Model Study. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 133-138.	0.4	2
69	Inverse near-critical-angle scattering as a tool to characterize bubble clouds. Proceedings of SPIE, 2010, , .	0.8	2
70	The methodology of source disturbances detection on an electroprecipitator example. , 2011, , .		2
71	An optical flow-based method for velocity field of fluid flow estimation. , 2017, , .		2
72	Solving the Inverse Problem in Spirometry with the Methods of Global and Local Estimation. , 2019, , .		2

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73	A low cost maximum power point tracker with the hybrid algorithm that uses temperature measurement. , 2019, , .		2
74	Estimation of Lung Properties From the Forced Expiration Data. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 3317-3324.	4.7	2
75	The Influence of Power Network Disturbances on Short Delayed Estimation of Fundamental Frequency Based on IpDFT Method with GMWD Windows. Energies, 2021, 14, 6465.	3.1	2
76	Red blood cell optical parameters in single and multiple light scattering models. , 2006, 6189, 423.		1
77	High precision parallel glass plate test with the use of the optical vortex interferometer. , 2006, , .		1
78	Model of light scattering on spheroidal particle with the use of three beam phase Doppler system. , 2006, 6189, 341.		1
79	Airway and tissue loading in postinterrupter response of the respiratory system - an identification algorithm construction. , 2010, 2010, 1473-6.		1
80	The concept of synchronization in description of sleep apnea syndrome &#x2014; A library of software procedures. , 2011, , .		1
81	Systematic Errors in the Interpolated-DFT-Based Frequency Estimation for the Control of Power Using Generalized Maximum Sidelobe Decay Windows. , 2019, , .		1
82	The Complexity and Variability Mapping for Prediction and Explainability of the Sleep Apnea Syndrome. IEEE Sensors Journal, 2021, 21, 14203-14212.	4.7	1
83	Hybrid model of arm for analysis of regional blood oxygenation in non-invasive optical diagnostics. , 2017, , .		1
84	Analysis of the Method for Determining Changes in the Airways from the Spirometric Curve Evolution. , 2019, , .		1
85	Conversion Method of Thermionic Emission Current to Voltage for High-Voltage Sources of Electrons. Electronics (Switzerland), 2021, 10, 2844.	3.1	1
86	<title>Refractive index and light scattering models in the volume scattering function measurement</title>. , 1995, , .		0
87	<title>Analysis of factors affecting the accuracy of the measurement of resistance in a charge balancing circuit</title>. , 2001, , .		0
88	Light scattering maps analysis to determine particles placement and concentration. , 2006, 6189, 432.		0
89	The scanning method for measuring surface shape using the regular lattice of optical vortices. Proceedings of SPIE, 2010, , .	0.8	0
90	The regular lattice of optical vortices used for measurement in two angular and one linear degree of freedom. Proceedings of SPIE, 2010, , .	0.8	0

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91	An improved time-domain interrupter monitoring of respiratory mechanics. , 2011, , .		0
92	Modeling the Impact of Heterogeneous Airway Narrowing on the Spirometric Curve. , 2017, , .		0
93	Frequency Estimation of Multifrequency Signals Based on the 3-Point and 4-Point Spectrum Interpolation for Short Measurement Time in PV Systems. , 2018, , .		0
94	Influence of Noise on Multifrequency Signals for the Amplitude and Phase Estimation in Photovoltaic Systems with a DSP Processor. , 2018, , .		0
95	Influence of Noise on the Interpolated DFT-based Frequency Estimation for the Control of Power Using Generalized Maximum Sidelobe Decay Windows. , 2019, , .		0
96	Quantitative Assessment of the Airway Response to Bronchial Tests Based on a Spirometric Curve Shift. IEEE Transactions on Biomedical Engineering, 2021, 68, 739-746.	4.2	0
97	Visualization of the power waveforms frequency fluctuations with the use of the constant length time window. Renewable Energy and Power Quality Journal, 0, , 436-440.	0.2	0
98	Software Tool for Assessment of Complexity and Variability in Physiological Signals of Respiration. , 2013, , 101-126.		0
99	Optical Signal Processing in Integral Transform Solution Applications in Particle Sizing. , 1995, , 163-166.		0
100	Fast and Accurate Frequency Estimation for Renewable Energy Systems using Maximum Decay Sidelobe Windows. Renewable Energy and Power Quality Journal, 0, , 21-25.	0.2	0
101	A hybrid maximum power point tracking algorithm that uses the illumination and the temperature sensor in solar tracking systems. , 2019, , .		0