Miguel Moscoso

List of Publications by Year
in descending order

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81 papers	1,768 citations	236925 25 h-index	276875 41 g-index
81 all docs	81 docs citations	81 times ranked	925 citing authors

#	Article	IF	Citations
1	RBF-FD formulas and convergence properties. Journal of Computational Physics, 2010, 229, 8281-8295.	3.8	140
2	Array imaging using intensity-only measurements. Inverse Problems, 2011, 27, 015005.	2.0	130
3	Optimal constant shape parameter for multiquadric based RBF-FD method. Journal of Computational Physics, 2011, 230, 7384-7399.	3.8	102
4	Self-oscillations of domains in doped GaAs-AlAs superlattices. Physical Review B, 1995, 52, 13761-13764.	3.2	95
5	Depolarization and blurring of optical images by biological tissue. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 948.	1.5	74
6	Current-voltage characteristic and stability in resonant-tunneling n-dopedsemiconductor superlattices. Physical Review B, 1997, 55, 2466-2475.	3.2	69
7	Self-Oscillations of the Current in Doped Semiconductor Superlattices. Japanese Journal of Applied Physics, 1995, 34, 4526-4528.	1.5	64
8	Crack reconstruction using a level-set strategy. Journal of Computational Physics, 2009, 228, 5710-5721.	3.8	58
9	Optimal variable shape parameter for multiquadric based RBF-FD method. Journal of Computational Physics, 2012, 231, 2466-2481.	3.8	52
10	Influence of the relative refractive index on the depolarization of multiply scattered waves. Physical Review E, 2001, 64, 026612.	2.1	49
11	Backscattering of circularly polarized pulses. Optics Letters, 2002, 27, 1589.	3.3	49
12	Microscopic model for sequential tunneling in semiconductor multiple quantum wells. Physical Review B, 1997, 55, R16053-R16056.	3.2	48
13	Microwave Imaging for Early Breast Cancer Detection Using a Shape-based Strategy. IEEE Transactions on Biomedical Engineering, 2009, 56, 1143-1153.	4.2	47
14	Current self-oscillations, spikes, and crossover between charge monopole and dipole waves in semiconductor superlattices. Physical Review B, 1999, 60, 4489-4492.	3.2	42
15	Application of the RBF meshless method to the solution of the radiative transport equation. Journal of Computational Physics, 2010, 229, 1897-1908.	3.8	40
16	Chebyshev Spectral Methods for Radiative Transfer. SIAM Journal of Scientific Computing, 2002, 23, 2074-2094.	2.8	39
17	An Adjoint-Field Technique for Shape Reconstruction of 3-D Penetrable Object Immersed in Lossy Medium. IEEE Transactions on Antennas and Propagation, 2009, 57, 520-534.	5.1	39
18	Gaussian RBF-FD weights and its corresponding local truncation errors. Engineering Analysis With Boundary Elements, 2012, 36, 1361-1369.	3.7	37

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19	History matching problem in reservoir engineering using the propagationâ€“backpropagation method. Inverse Problems, 2005, 21, 565-590.	2.0	35
20	Structural level set inversion for microwave breast screening. Inverse Problems, 2010, 26, 035015.	2.0	32
21	Periodic Generation and Propagation of Traveling Fronts in DC Voltage Biased Semiconductor Superlattices. SIAM Journal on Applied Mathematics, 1997, 57, 1588-1614.	1.8	29
22	Robust imaging of localized scatterers using the singular value decomposition and â„“ 1 minimization. Inverse Problems, 2013, 29, 025016.	2.0	29
23	Beam propagation in sharply peaked forward scattering media. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2004, 21, 797.	1.5	28
24	Fluorescence lifetime imaging from time resolved measurements using a shape-based approach. Optics Express, 2009, 17, 8843.	3.4	26
25	Radiative transport theory for optical molecular imaging. Inverse Problems, 2006, 22, 23-42.	2.0	25
26	Imaging Strong Localized Scatterers with Sparsity Promoting Optimization. SIAM Journal on Imaging Sciences, 2014, 7, 1358-1387.	2.2	25
27	A level set evolution strategy in microwave imaging for early breast cancer detection. Computers and Mathematics With Applications, 2008, 56, 607-618.	2.7	23
28	Illumination Strategies for Intensity-Only Imaging. SIAM Journal on Imaging Sciences, 2015, 8, 1547-1573.	2.2	22
29	Polarization effects of seismic waves on the basis of radiative transport theory. Geophysical Journal International, 2000, 142, 571-585.	2.4	21
30	Laurent series based RBF-FD method to avoid ill-conditioning. Engineering Analysis With Boundary Elements, 2015, 52, 24-31.	3.7	21
31	Radiative transfer computations for optical beams. Journal of Computational Physics, 2003, 185, 50-60.	3.8	19
32	Light transport in two-layer tissues. Journal of Biomedical Optics, 2005, 10, 034015.	2.6	17
33	A differential equations approach to l ₁ -minimization with applications to array imaging. Inverse Problems, 2012, 28, 105001.	2.0	16
34	Shape reconstruction of cardiac ischemia from non-contact intracardiac recordings: A model study. Mathematical and Computer Modelling, 2012, 55, 1770-1781.	2.0	16
35	Radial basis function interpolation in the limit of increasingly flat basis functions. Journal of Computational Physics, 2016, 307, 225-242.	3.8	16
36	Spikes in the Current Self-Oscillations of Doped GaAs/AlAs Superlattices. Physica Status Solidi (B): Basic Research, 1997, 204, 500-503.	1.5	15

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37	Bifurcation Behavior of a Superlattice Model. SIAM Journal on Applied Mathematics, 2000, 60, 2029-2057.	1.8	15
38	Backscattering of beams by forward-peaked scattering media. Optics Letters, 2004, 29, 74.	3.3	15
39	Detection of Small Tumors in Microwave Medical Imaging Using Level Sets and Music. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2006, 2, 43-47.	0.4	13
40	Synthetic Aperture Imaging of Direction- and Frequency-Dependent Reflectivities. SIAM Journal on Imaging Sciences, 2016, 9, 52-81.	2.2	10
41	Multifrequency Interferometric Imaging with Intensity-Only Measurements. SIAM Journal on Imaging Sciences, 2017, 10, 1005-1032.	2.2	10
42	Theoretical and numerical analysis of polarization for time-dependent radiative transfer equations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2001, 70, 75-98.	2.3	9
43	Diffusion of Polarized Light. Multiscale Modeling and Simulation, 2011, 9, 1624-1645.	1.6	8
44	Laurent expansion of the inverse of perturbed, singular matrices. Journal of Computational Physics, 2015, 299, 307-319.	3.8	8
45	Reservoir characterization using stochastic initializations and the level set method. Computers and Mathematics With Applications, 2008, 56, 697-708.	2.7	7
46	Coherent Imaging without Phases. SIAM Journal on Imaging Sciences, 2016, 9, 1689-1707.	2.2	7
47	Robust multifrequency imaging with MUSIC. Inverse Problems, 2019, 35, 015007.	2.0	6
48	Dynamics of electric-field domains and chaos in semiconductor superlattices. Solid-State Electronics, 1996, 40, 161-165.	1.4	5
49	Reconstructing a thin absorbing obstacle in a half-space of tissue. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 3456.	1.5	5
50	Source location from fluorescence lifetime in disordered media. Optics Letters, 2012, 37, 951.	3.3	5
51	The Noise Collector for sparse recovery in high dimensions. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11226-11232.	7.1	5
52	Imaging low sensitivity regions in petroleum reservoirs using topological perturbations and level sets. Journal of Inverse and Ill-Posed Problems, 2007, 15, 199-223.	1.0	4
53	Robust depth selectivity in mesoscopic scattering regimes using angle-resolved measurements. Optics Letters, 2013, 38, 787.	3.3	4
54	Optimized Finite Difference Formulas for Accurate High Frequency Components. Mathematical Problems in Engineering, 2016, 2016, 1-15.	1.1	4

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55	Array imaging of localized objects in homogeneous and heterogeneous media. Inverse Problems, 2016, 32, 104003.	2.0	4
56	A Closed-Form Formula for the RBF-Based Approximation of the Laplaceâ€“Beltrami Operator. Journal of Scientific Computing, 2018, 77, 1115-1132.	2.3	4
57	Shape Reconstruction from Two-Phase Incompressible Flow Data using Level Sets. Mathematics and Visualization, 2007, , 381-401.	0.6	4
58	SPATIOTEMPORAL STRUCTURES IN UNDOPED PHOTOEXCITED SEMICONDUCTOR SUPERLATTICES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 2817-2822.	1.7	3
59	Detecting and imaging dielectric objects from real data: A shape-based approach. Mathematical and Computer Modelling, 2009, 50, 743-749.	2.0	3
60	Quantitative subsurface imaging in strongly scattering media. Optics Express, 2018, 26, 27346.	3.4	3
61	Dynamics of electric field domain walls in semiconductor superlattices. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 7, 299-301.	2.7	2
62	Levelâ€set techniques for microwave medical imaging. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1151601-1151602.	0.2	2
63	Synthetic Aperture Imaging With Intensity-Only Data. IEEE Transactions on Computational Imaging, 2020, 6, 87-94.	4.4	2
64	Imaging with highly incomplete and corrupted data. Inverse Problems, 2020, 36, 035010.	2.0	2
65	Fast Signal Recovery From Quadratic Measurements. IEEE Transactions on Signal Processing, 2021, 69, 2042-2055.	5.3	2
66	Iterative Microwave Inversion Algorithm Based on the Adjoint-Field Method for Breast Cancer Application. Mathematics in Industry, 2008, , 587-591.	0.3	2
67	Beam propagation in multiple scattering media. , 2003, 4976, 98.		1
68	On the stability of surface shape reconstruction using microwave algorithm for 3-D breast tumor based on the adjoint-fields scheme. , 2007, , .		1
69	Recovering fluorophore location and orientation from lifetimes. Optics Express, 2013, 21, 421.	3.4	1
70	Iterative Microwave Inversion for Breast Cancer Detection Using Level Sets. Mathematics in Industry, 2008, , 592-596.	0.3	1
71	Characterization of Reservoirs by Evolving Level Set Functions Obtained from Geostatistics. Mathematics in Industry, 2008, , 597-602.	0.3	1
72	Introduction to Image Reconstruction. Lecture Notes in Mathematics, 2008, , 1-16.	0.2	1

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73	Optical polarization imaging in biological tissue. , 2001, 4261, 105.		0
74	Backscattering of circularly polarized pulses. , 2003, , .		0
75	Reconstruction of transmembrane currents using Support Vector machines and its application to endocardial mapping: A model study. , 2007, , .		0
76	Passive imaging with cross correlations in a discrete random medium. Proceedings of SPIE, 2010, , .	0.8	0
77	Combining diffuse optical tomography and spectroscopy to detect and characterize lesions in two-layered tissues. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 450.	1.5	0
78	Wave Propagation and Oscillations in a Semiconductor Nanostructure. , 2000, , 209-217.		0
79	Polarization-Based Optical Imaging. Lecture Notes in Mathematics, 2008, , 67-83.	0.2	0
80	Inversion Algorithm for Microwave Breast Cancer Detection Using Level Sets. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2009, 5, 461-465.	0.4	0
81	Sparse signal recovery from correlation measurements using the noise collector. , 2021, , .		0