

Armin Lechleiter

List of Publications by Year in descending order

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53
papers

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all docs

55
docs citations

55
times ranked

401
citing authors

#	ARTICLE	IF	CITATIONS
1	Newton regularizations for impedance tomography: convergence by local injectivity. Inverse Problems, 2008, 24, 065009.	2.0	76
2	The Factorization Method Applied to the Complete Electrode Model of Impedance Tomography. SIAM Journal on Applied Mathematics, 2008, 68, 1097-1121.	1.8	48
3	The factorization method is independent of transmission eigenvalues. Inverse Problems and Imaging, 2009, 3, 123-138.	1.1	48
4	Newton regularizations for impedance tomography: a numerical study. Inverse Problems, 2006, 22, 1967-1987.	2.0	42
5	Towards a general convergence theory for inexact Newton regularizations. Numerische Mathematik, 2010, 114, 521-548.	1.9	38
6	The inside-outside duality for scattering problems by inhomogeneous media. Inverse Problems, 2013, 29, 104011.	2.0	38
7	A regularization technique for the factorization method. Inverse Problems, 2006, 22, 1605-1625.	2.0	31
8	An improved time domain linear sampling method for Robin and Neumann obstacles. Applicable Analysis, 2014, 93, 369-390.	1.3	30
9	Direct and Inverse Medium Scattering in a Three-Dimensional Homogeneous Planar Waveguide. SIAM Journal on Applied Mathematics, 2011, 71, 753-772.	1.8	29
10	Photonic Crystals: Mathematical Analysis and Numerical Approximation. , 2011, , .		27
11	A hybrid approach for Structural Monitoring with self-organizing multi-agent systems and inverse numerical methods in material-embedded sensor networks. Mechatronics, 2016, 34, 12-37.	3.3	27
12	The Floquet-Bloch transform and scattering from locally perturbed periodic surfaces. Journal of Mathematical Analysis and Applications, 2017, 446, 605-627.	1.0	26
13	Factorization Method for Electromagnetic Inverse Scattering from Biperiodic Structures. SIAM Journal on Imaging Sciences, 2013, 6, 1111-1139.	2.2	25
14	A trigonometric Galerkin method for volume integral equations arising in TM grating scattering. Advances in Computational Mathematics, 2014, 40, 1-25.	1.6	24
15	Inside-Outside Duality and the Determination of Electromagnetic Interior Transmission Eigenvalues. SIAM Journal on Mathematical Analysis, 2015, 47, 684-705.	1.9	20
16	Electromagnetic Wave Scattering from Rough Penetrable Layers. SIAM Journal on Mathematical Analysis, 2011, 43, 2418-2443.	1.9	19
17	Structural Health and Load Monitoring with Material-embedded Sensor Networks and Self-organizing Multi-agent Systems. Procedia Technology, 2014, 15, 668-690.	1.1	18
18	Imaging of periodic dielectrics. BIT Numerical Mathematics, 2010, 50, 59-83.	2.0	16

#	ARTICLE	IF	CITATIONS
19	Identifying Lam [∞] parameters from time-dependent elastic wave measurements. <i>Inverse Problems in Science and Engineering</i> , 2017, 25, 2-26.	1.2	16
20	Variational formulations for scattering in a three-dimensional acoustic waveguide. <i>Mathematical Methods in the Applied Sciences</i> , 2008, 31, 821-847.	2.3	15
21	The Limiting Absorption Principle and a Radiation Condition for the Scattering by a Periodic Layer. <i>SIAM Journal on Mathematical Analysis</i> , 2018, 50, 2536-2565.	1.9	15
22	On the Factorization Method for a Far Field Inverse Scattering Problem in the Time Domain. <i>SIAM Journal on Mathematical Analysis</i> , 2019, 51, 854-872.	1.9	15
23	Tikhonov regularization in L^p applied to inverse medium scattering. <i>Inverse Problems</i> , 2013, 29, 075003.	2.0	13
24	Volume integral equations for scattering from anisotropic diffraction gratings. <i>Mathematical Methods in the Applied Sciences</i> , 2013, 36, 262-274.	2.3	12
25	Scattering of Herglotz waves from periodic structures and mapping properties of the Bloch transform. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 2015, 145, 1283-1311.	1.2	12
26	Determining transmission eigenvalues of anisotropic inhomogeneous media from far field data. <i>Communications in Mathematical Sciences</i> , 2015, 13, 1803-1827.	1.0	12
27	Analytical characterization and numerical approximation of interior eigenvalues for impenetrable scatterers from far fields. <i>Inverse Problems</i> , 2014, 30, 045006.	2.0	11
28	A Floquet–Bloch Transform Based Numerical Method for Scattering from Locally Perturbed Periodic Surfaces. <i>SIAM Journal of Scientific Computing</i> , 2017, 39, B819-B839.	2.8	11
29	A radiation condition arising from the limiting absorption principle for a closed full- or half-waveguide problem. <i>Mathematical Methods in the Applied Sciences</i> , 2018, 41, 3955-3975.	2.3	11
30	MUSIC for Extended Scatterers as an Instance of the Factorization Method. <i>SIAM Journal on Applied Mathematics</i> , 2009, 70, 1283-1304.	1.8	10
31	On uniqueness in electromagnetic scattering from biperiodic structures. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2013, 47, 1167-1184.	1.9	10
32	Difference Factorizations and Monotonicity in Inverse Medium Scattering for Contrasts with Fixed Sign on the Boundary. <i>SIAM Journal on Mathematical Analysis</i> , 2016, 48, 3688-3707.	1.9	10
33	A Convergent Numerical Scheme for Scattering of Aperiodic Waves from Periodic Surfaces Based on the Floquet–Bloch Transform. <i>SIAM Journal on Numerical Analysis</i> , 2017, 55, 713-736.	2.3	10
34	Spectral volumetric integral equation methods for acoustic medium scattering in a 3D waveguide. <i>IMA Journal of Numerical Analysis</i> , 2012, 32, 813-844.	2.9	9
35	Non-periodic acoustic and electromagnetic, scattering from periodic structures in 3D. <i>Computers and Mathematics With Applications</i> , 2017, 74, 2723-2738.	2.7	9
36	Reconstruction of local perturbations in periodic surfaces. <i>Inverse Problems</i> , 2018, 34, 035006.	2.0	9

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37	Factorization method for the inverse Stokes problem. <i>Inverse Problems and Imaging</i> , 2013, 7, 1271-1293.	1.1	9
38	A sparsity regularization and total variation based computational framework for the inverse medium problem in scattering. <i>Journal of Computational Physics</i> , 2017, 339, 1-30.	3.8	8
39	Explicit characterization of the support of non-linear inclusions. <i>Inverse Problems and Imaging</i> , 2011, 5, 675-694.	1.1	8
40	The time-domain Lippmann-Schwinger equation and convolution quadrature. <i>Numerical Methods for Partial Differential Equations</i> , 2015, 31, 517-540.	3.6	7
41	Artificial boundary conditions for axisymmetric eddy current probe problems. <i>Computers and Mathematics With Applications</i> , 2014, 68, 1844-1870.	2.7	6
42	The inside-outside duality for inverse scattering problems with near field data. <i>Inverse Problems</i> , 2015, 31, 085004.	2.0	6
43	Data Evaluation in Smart Sensor Networks Using Inverse Methods and Artificial Intelligence (AI): Towards Real-Time Capability and Enhanced Flexibility. <i>Advances in Science and Technology</i> , 0, , .	0.2	5
44	Non-linear Tikhonov regularization in Banach spaces for inverse scattering from anisotropic penetrable media. <i>Inverse Problems and Imaging</i> , 2017, 11, 151-176.	1.1	5
45	Identification of magnetic deposits in 2-D axisymmetric eddy current models via shape optimization. <i>Inverse Problems in Science and Engineering</i> , 2016, 24, 1385-1410.	1.2	4
46	Computing interior eigenvalues of domains from far fields. <i>IMA Journal of Numerical Analysis</i> , 2016, 36, 1452-1476.	2.9	4
47	Asymptotic models for scattering from unbounded media with high conductivity. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2010, 44, 1295-1317.	1.9	3
48	A non-iterative sampling approach using noise subspace projection for EIT. <i>Inverse Problems</i> , 2012, 28, 075015.	2.0	3
49	Reconstruction of a local perturbation in inhomogeneous periodic layers from partial near field measurements. <i>Inverse Problems</i> , 2019, 35, 114006.	2.0	3
50	Collocation discretization for an integral equation in ocean acoustics with depth-dependent speed of sound. <i>Mathematical Methods in the Applied Sciences</i> , 2017, 40, 1608-1624.	2.3	2
51	Algorithm 1001. <i>ACM Transactions on Mathematical Software</i> , 2019, 45, 1-20.	2.9	2
52	Factorization Method in Inverse Scattering. , 2015, , 479-485.		1
53	An introduction to direct and inverse scattering theory. , 2011, , 79-126.		0