Armin Lechleiter

List of Publications by Year
in descending order

53 papers	877 citations	516710 16 h-index	552781 26 g-index
55 all docs	55 docs citations	55 times ranked	401 citing authors

#	Article	IF	Citations
1	Reconstruction of a local perturbation in inhomogeneous periodic layers from partial near field measurements. Inverse Problems, 2019, 35, 114006.	2.0	3
2	On the Factorization Method for a Far Field Inverse Scattering Problem in the Time Domain. SIAM Journal on Mathematical Analysis, 2019, 51, 854-872.	1.9	15
3	Algorithm 1001. ACM Transactions on Mathematical Software, 2019, 45, 1-20.	2.9	2
4	Reconstruction of local perturbations in periodic surfaces. Inverse Problems, 2018, 34, 035006.	2.0	9
5	The Limiting Absorption Principle and a Radiation Condition for the Scattering by a Periodic Layer. SIAM Journal on Mathematical Analysis, 2018, 50, 2536-2565.	1.9	15
6	A radiation condition arising from the limiting absorption principle for a closed fullâ€•or halfâ€waveguide problem. Mathematical Methods in the Applied Sciences, 2018, 41, 3955-3975.	2.3	11
7	Identifying LamÃ© parameters from time-dependent elastic wave measurements. Inverse Problems in Science and Engineering, 2017, 25, 2-26.	1.2	16
8	A Convergent Numerical Scheme for Scattering of Aperiodic Waves from Periodic Surfaces Based on the Floquet--Bloch Transform. SIAM Journal on Numerical Analysis, 2017, 55, 713-736.	2.3	10
9	A sparsity regularization and total variation based computational framework for the inverse medium problem in scattering. Journal of Computational Physics, 2017, 339, 1-30.	3.8	8
10	Non-periodic acoustic and electromagnetic, scattering from periodic structures in 3D. Computers and Mathematics With Applications, 2017, 74, 2723-2738.	2.7	9
11	A Floquet--Bloch Transform Based Numerical Method for Scattering from Locally Perturbed Periodic Surfaces. SIAM Journal of Scientific Computing, 2017, 39, B819-B839.	2.8	11
12	The Floquetâ€"Bloch transform and scattering from locally perturbed periodic surfaces. Journal of Mathematical Analysis and Applications, 2017, 446, 605-627.	1.0	26
13	Collocation discretization for an integral equation in ocean acoustics with depthâ€dependent speed of sound. Mathematical Methods in the Applied Sciences, 2017, 40, 1608-1624.	2.3	2
14	Non-linear Tikhonov regularization in Banach spaces for inverse scattering from anisotropic penetrable media. Inverse Problems and Imaging, 2017, 11, 151-176.	1.1	5
15	Difference Factorizations and Monotonicity in Inverse Medium Scattering for Contrasts with Fixed Sign on the Boundary. SIAM Journal on Mathematical Analysis, 2016, 48, 3688-3707.	1.9	10
16	Identification of magnetic deposits in 2-D axisymmetric eddy current models via shape optimization. Inverse Problems in Science and Engineering, 2016, 24, 1385-1410.	1.2	4
17	Computing interior eigenvalues of domains from far fields. IMA Journal of Numerical Analysis, 2016, 36, 1452-1476.	2.9	4
18	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

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19	Scattering of Herglotz waves from periodic structures and mapping properties of the Bloch transform. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2015, 145, 1283-1311.	1.2	12
20	The timeâ€domain Lippmannâ€“Schwinger equation and convolution quadrature. Numerical Methods for Partial Differential Equations, 2015, 31, 517-540.	3.6	7
21	Inside-Outside Duality and the Determination of Electromagnetic Interior Transmission Eigenvalues. SIAM Journal on Mathematical Analysis, 2015, 47, 684-705.	1.9	20
22	The insideâ€“outside duality for inverse scattering problems with near field data. Inverse Problems, 2015, 31, 085004.	2.0	6
23	Determining transmission eigenvalues of anisotropic inhomogeneous media from far field data. Communications in Mathematical Sciences, 2015, 13, 1803-1827.	1.0	12
24	Factorization Method in Inverse Scattering. , 2015, , 479-485.		1
25	Analytical characterization and numerical approximation of interior eigenvalues for impenetrable scatterers from far fields. Inverse Problems, 2014, 30, 045006.	2.0	11
26	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
27	Artificial boundary conditions for axisymmetric eddy current probe problems. Computers and Mathematics With Applications, 2014, 68, 1844-1870.	2.7	6
28	An improved time domain linear sampling method for Robin and Neumann obstacles. Applicable Analysis, 2014, 93, 369-390.	1.3	30
29	A trigonometric Galerkin method for volume integral equations arising in TM grating scattering. Advances in Computational Mathematics, 2014, 40, 1-25.	1.6	24
30	Volume integral equations for scattering from anisotropic diffraction gratings. Mathematical Methods in the Applied Sciences, 2013, 36, 262-274.	2.3	12
31	The insideâ€“outside duality for scattering problems by inhomogeneous media. Inverse Problems, 2013, 29, 104011.	2.0	38
32	Tikhonov regularization in <i> L ^p </i> applied to inverse medium scattering. Inverse Problems, 2013, 29, 075003.	2.0	13
33	Factorization Method for Electromagnetic Inverse Scattering from Biperiodic Structures. SIAM Journal on Imaging Sciences, 2013, 6, 1111-1139.	2.2	25
34	On uniqueness in electromagnetic scattering from biperiodic structures. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 1167-1184.	1.9	10
35	Factorization method for the inverse Stokes problem. Inverse Problems and Imaging, 2013, 7, 1271-1293.	1.1	9
36	Spectral volumetric integral equation methods for acoustic medium scattering in a 3D waveguide. IMA Journal of Numerical Analysis, 2012, 32, 813-844.	2.9	9

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37	A non-iterative sampling approach using noise subspace projection for EIT. Inverse Problems, 2012, 28, 075015.	2.0	3
38	Photonic Crystals: Mathematical Analysis and Numerical Approximation. , 2011, , .		27
39	Direct and Inverse Medium Scattering in a Three-Dimensional Homogeneous Planar Waveguide. SIAM Journal on Applied Mathematics, 2011, 71, 753-772.	1.8	29
40	Electromagnetic Wave Scattering from Rough Penetrable Layers. SIAM Journal on Mathematical Analysis, 2011, 43, 2418-2443.	1.9	19
41	Explicit characterization of the support of non-linear inclusions. Inverse Problems and Imaging, 2011, 5, 675-694.	1.1	8
42	An introduction to direct and inverse scattering theory. , 2011, , 79-126.		0
43	Asymptotic models for scattering from unbounded media with high conductivity. ESAIM: Mathematical Modelling and Numerical Analysis, 2010, 44, 1295-1317.	1.9	3
44	Towards a general convergence theory for inexact Newton regularizations. Numerische Mathematik, 2010, 114, 521-548.	1.9	38
45	Imaging of periodic dielectrics. BIT Numerical Mathematics, 2010, 50, 59-83.	2.0	16
46	MUSIC for Extended Scatterers as an Instance of the Factorization Method. SIAM Journal on Applied Mathematics, 2009, 70, 1283-1304.	1.8	10
47	The factorization method is independent of transmission eigenvalues. Inverse Problems and Imaging, 2009, 3, 123-138.	1.1	48
48	Variational formulations for scattering in a three-dimensional acoustic waveguide. Mathematical Methods in the Applied Sciences, 2008, 31, 821-847.	2.3	15
49	The Factorization Method Applied to the Complete Electrode Model of Impedance Tomography. SIAM Journal on Applied Mathematics, 2008, 68, 1097-1121.	1.8	48
50	Newton regularizations for impedance tomography: convergence by local injectivity. Inverse Problems, 2008, 24, 065009.	2.0	76
51	Newton regularizations for impedance tomography: a numerical study. Inverse Problems, 2006, 22, 1967-1987.	2.0	42
52	A regularization technique for the factorization method. Inverse Problems, 2006, 22, 1605-1625.	2.0	31
53	Data Evaluation in Smart Sensor Networks Using Inverse Methods and Artificial Intelligence (AI): Towards Real-Time Capability and Enhanced Flexibility. Advances in Science and Technology, 0, , .	0.2	5