Nuutti HyvÃ¶nen

List of Publications by Year
in descending order

63 papers	926 citations	567281 15 h-index	526287 27 g-index
64 all docs	64 docs citations	64 times ranked	451 citing authors

#	Article	IF	Citations
1	Complete Electrode Model of Electrical Impedance Tomography: Approximation Properties and Characterization of Inclusions. SIAM Journal on Applied Mathematics, 2004, 64, 902-931.	1.8	72
2	JUSTIFICATION OF POINT ELECTRODE MODELS IN ELECTRICAL IMPEDANCE TOMOGRAPHY. Mathematical Models and Methods in Applied Sciences, 2011, 21, 1395-1413.	3.3	62
3	Factorization method and irregular inclusions in electrical impedance tomography. Inverse Problems, 2007, 23, 2159-2170.	2.0	52
4	The Factorization Method Applied to the Complete Electrode Model of Impedance Tomography. SIAM Journal on Applied Mathematics, 2008, 68, 1097-1121.	1.8	48
5	Simultaneous Reconstruction of Outer Boundary Shape and Admittivity Distribution in Electrical Impedance Tomography. SIAM Journal on Imaging Sciences, 2013, 6, 176-198.	2.2	47
6	Fine-tuning electrode information in electrical impedance tomography. Inverse Problems and Imaging, 2012, 6, 399-421.	1.1	37
7	Simultaneous recovery of admittivity and body shape in electrical impedance tomography: an experimental evaluation. Inverse Problems, 2013, 29, 085004.	2.0	36
8	Optimizing Electrode Positions in Electrical Impedance Tomography. SIAM Journal on Applied Mathematics, 2014, 74, 1831-1851.	1.8	35
9	APPROXIMATING IDEALIZED BOUNDARY DATA OF ELECTRIC IMPEDANCE TOMOGRAPHY BY ELECTRODE MEASUREMENTS. Mathematical Models and Methods in Applied Sciences, 2009, 19, 1185-1202.	3.3	33
10	An $H_mathsf{div}$-Based Mixed Quasi-reversibility Method for Solving Elliptic Cauchy Problems. SIAM Journal on Numerical Analysis, 2013, 51, 2123-2148.	2.3	29
11	Numerical implementation of the factorization method within the complete electrode model of electrical impedance tomography. Inverse Problems and Imaging, 2007, 1, 299-317.	1.1	28
12	Characterizing inclusions in optical tomography. Inverse Problems, 2004, 20, 737-751.	2.0	20
13	Detecting stochastic inclusions in electrical impedance tomography. Inverse Problems, 2017, 33, 115012.	2.0	19
14	Smoothened Complete Electrode Model. SIAM Journal on Applied Mathematics, 2017, 77, 2250-2271.	1.8	18
15	Convex backscattering support in electric impedance tomography. Numerische Mathematik, 2011, 117, 373-396.	1.9	17
16	Edge-Enhancing Reconstruction Algorithm for Three-Dimensional Electrical Impedance Tomography. SIAM Journal of Scientific Computing, 2015, 37, B60-B78.	2.8	16
17	Application of the factorization method to the characterization of weak inclusions in electrical impedance tomography. Advances in Applied Mathematics, 2007, 39, 197-221.	0.7	14
18	Convex Source Support and Its Application to Electric Impedance Tomography. SIAM Journal on Imaging Sciences, 2008, 1, 364-378.	2.2	14

#	Article	IF	Citations
19	Application of stochastic Galerkin FEM to the complete electrode model of electrical impedance tomography. Journal of Computational Physics, 2014, 269, 181-200.	3.8	14
20	On computation of test dipoles for factorization method. BIT Numerical Mathematics, 2009, 49, 75-91.	2.0	13
21	Factorization method and inclusions of mixed type in an inverse elliptic boundary value problem. Inverse Problems and Imaging, 2008, 2, 355-372.	1.1	13
22	Three-dimensional dental X-ray imaging by combination of panoramic and projection data. Inverse Problems and Imaging, 2010, 4, 257-271.	1.1	13
23	ANALYSIS OF OPTICAL TOMOGRAPHY WITH NON-SCATTERING REGIONS. Proceedings of the Edinburgh Mathematical Society, 2002, 45, 257-276.	0.3	12
24	Point Measurements for a Neumann-to-Dirichlet Map and the CalderÃ³n Problem in the Plane. SIAM Journal on Mathematical Analysis, 2012, 44, 3526-3536.	1.9	12
25	Application of a weaker formulation of the factorization method to the characterization of absorbing inclusions in optical tomography. Inverse Problems, 2005, 21, 1331-1343.	2.0	11
26	An Inverse Backscatter Problem for Electric Impedance Tomography. SIAM Journal on Mathematical Analysis, 2009, 41, 1948-1966.	1.9	11
27	Ultrasound-modulated optical tomography: recovery of amplitude of vibration in the insonified region from boundary measurement of light correlation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 2322.	1.5	11
28	On the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si42.gif" display="inline" overflow="scroll"><mml:mi>h</mml:mi><mml:mi>p</mml:mi></mml:math>-adaptive solution of complete electrode model forward problems of electrical impedance tomography. Journal of Computational and Applied Mathematics, 2012, 236, 4645-4659.	2.0	11
29	Reconstruction algorithm based on stochastic Galerkin finite element method for electrical impedance tomography. Inverse Problems, 2014, 30, 065006.	2.0	11
30	Polynomial Collocation for Handling an Inaccurately Known Measurement Configuration in Electrical Impedance Tomography. SIAM Journal on Applied Mathematics, 2017, 77, 202-223.	1.8	11
31	Compensation for geometric modeling errors by positioning of electrodes in electrical impedance tomography. Inverse Problems, 2017, 33, 035006.	2.0	11
32	Generalized linearization techniques in electrical impedance tomography. Numerische Mathematik, 2018, 140, 95-120.	1.9	11
33	Computational Framework for Applying Electrical Impedance Tomography to Head Imaging. SIAM Journal of Scientific Computing, 2019, 41, B1034-B1060.	2.8	11
34	Monotonicity-Based Reconstruction of Extreme Inclusions in Electrical Impedance Tomography. SIAM Journal on Mathematical Analysis, 2020, 52, 6234-6259.	1.9	10
35	Locating Transparent Regions in Optical Absorption and Scattering Tomography. SIAM Journal on Applied Mathematics, 2007, 67, 1101-1123.	1.8	9
36	Efficient Inclusion of Total Variation Type Priors in Quantitative Photoacoustic Tomography. SIAM Journal on Imaging Sciences, 2016, 9, 1132-1153.	2.2	9

#	Article	IF	Citations
37	FrÃ©chet Derivative with Respect to the Shape of an Internal Electrode in Electrical Impedance Tomography. SIAM Journal on Applied Mathematics, 2010, 70, 1878-1898.	1.8	8
38	Construction of Indistinguishable Conductivity Perturbations for the Point Electrode Model in Electrical Impedance Tomography. SIAM Journal on Applied Mathematics, 2015, 75, 2093-2109.	1.8	8
39	Edge-promoting reconstruction of absorption and diffusivity in optical tomography. Inverse Problems, 2016, 32, 015008.	2.0	8
40	Enhancing D-bar reconstructions for electrical impedance tomography with conformal maps. Inverse Problems and Imaging, 2018, 12, 373-400.	1.1	8
41	Source supports in electrostatics. BIT Numerical Mathematics, 2008, 48, 245-264.	2.0	7
42	Two noniterative algorithms for locating inclusions using one electrode measurement of electric impedance tomography. Inverse Problems, 2008, 24, 055018.	2.0	7
43	A regularized Newton method for locating thin tubular conductivity inhomogeneities. Inverse Problems, 2011, 27, 115008.	2.0	7
44	Stochastic Galerkin Finite Element Method with Local Conductivity Basis for Electrical Impedance Tomography. SIAM-ASA Journal on Uncertainty Quantification, 2015, 3, 998-1019.	2.0	7
45	Sweep data of electrical impedance tomography. Inverse Problems, 2011, 27, 115006.	2.0	6
46	An inverse boundary value problem for the <i>p</i> -Laplacian: a linearization approach. Inverse Problems, 2019, 35, 034001.	2.0	6
47	On Regularity of the Logarithmic Forward Map of Electrical Impedance Tomography. SIAM Journal on Mathematical Analysis, 2020, 52, 197-220.	1.9	6
48	Approximation error method for imaging the human head by electrical impedance tomography*. Inverse Problems, 2021, 37, 125008.	2.0	5
49	FrÃ©chet derivative with respect to the shape of a strongly convex nonscattering region in optical tomography. Inverse Problems, 2007, 23, 2249-2270.	2.0	4
50	Comparison of idealized and electrode Dirichlet-to-Neumann maps in electric impedance tomography with an application to boundary determination of conductivity. Inverse Problems, 2009, 25, 085008.	2.0	4
51	Detection of multiple inclusions from sweep data of electrical impedance tomography. Inverse Problems, 2012, 28, 095014.	2.0	4
52	Convex source support in three dimensions. BIT Numerical Mathematics, 2012, 52, 45-63.	2.0	4
53	Optimal Depth-Dependent Distinguishability Bounds for Electrical Impedance Tomography in Arbitrary Dimension. SIAM Journal on Applied Mathematics, 2020, 80, 20-43.	1.8	4
54	Sequentially optimized projections in x-ray imaging [*]. Inverse Problems, 2021, 37, 075006.	2.0	4

#	Article	IF	Citations
55	Convex source support in half-plane. Inverse Problems and Imaging, 2010, 4, 429-448.	1.1	4
56	Mimicking relative continuum measurements by electrode data in two-dimensional electrical impedance tomography. Numerische Mathematik, 2021, 147, 579-609.	1.9	3
57	Series reversion in CalderÃ³nâ€™s problem. , 0, , .		3
58	Edge-Promoting Adaptive Bayesian Experimental Design for X-ray Imaging. SIAM Journal of Scientific Computing, 2022, 44, B506-B530.	2.8	3
59	Generalized eigenvalue decomposition of the field autocorrelation in correlation diffusion of photons in turbid media. Mathematical Methods in the Applied Sciences, 2013, 36, 1447-1458.	2.3	2
60	Reconstruction of singular and degenerate inclusions in CalderÃ³n's problem. Inverse Problems and Imaging, 2022, 16, 1219.	1.1	2
61	Inverse Heat Source Problem and Experimental Design for Determining Iron Loss Distribution. SIAM Journal of Scientific Computing, 2021, 43, B243-B270.	2.8	1
62	Thermal Tomography with Unknown Boundary. SIAM Journal of Scientific Computing, 2018, 40, B663-B683.	2.8	0
63	A note on analyticity properties of far field patterns. Inverse Problems and Imaging, 2013, 7, 491-498.	1.1	0