

# Matti Lassas

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

88  
papers

2,878  
citations

25  
h-index

53  
g-index

94  
ext. papers

3,251  
ext. citations

2.1  
avg, IF

5.24  
L-index

#	Paper	IF	Citations
88	On nonuniqueness for Calderón inverse problem. <i>Mathematical Research Letters</i> , <b>2003</b> , 10, 685-693	0.6	313
87	Anisotropic conductivities that cannot be detected by EIT. <i>Physiological Measurement</i> , <b>2003</b> , 24, 413-9	2.9	259
86	Electromagnetic wormholes and virtual magnetic monopoles from metamaterials. <i>Physical Review Letters</i> , <b>2007</b> , 99, 183901	7.4	182
85	Full-Wave Invisibility of Active Devices at All Frequencies. <i>Communications in Mathematical Physics</i> , <b>2007</b> , 275, 749-789	2	176
84	Cloaking Devices, Electromagnetic Wormholes, and Transformation Optics. <i>SIAM Review</i> , <b>2009</b> , 51, 3-33	7.4	159
83	Inverse Boundary Spectral Problems		120
82	On determining a Riemannian manifold from the Dirichlet-to-Neumann map. <i>Annales Scientifiques De L'École Normale Supérieure</i> , <b>2001</b> , 34, 771-787	1.6	98
81	Wavelet-based reconstruction for limited-angle X-ray tomography. <i>IEEE Transactions on Medical Imaging</i> , <b>2006</b> , 25, 210-7	11.7	95
80	Invisibility and inverse problems. <i>Bulletin of the American Mathematical Society</i> , <b>2008</b> , 46, 55-97	1.3	88
79	On the existence and convergence of the solution of PML equations. <i>Computing (Vienna/New York)</i> , <b>1998</b> , 60, 229-241	2.2	87
78	Discretization-invariant Bayesian inversion and Besov space priors. <i>Inverse Problems and Imaging</i> , <b>2009</b> , 3, 87-122	2.1	86
77	Calderón's Inverse Problem for Anisotropic Conductivity in the Plane. <i>Communications in Partial Differential Equations</i> , <b>2005</b> , 30, 207-224	1.6	83
76	Isotropic transformation optics: approximate acoustic and quantum cloaking. <i>New Journal of Physics</i> , <b>2008</b> , 10, 115024	2.9	74
75	Learning the invisible: a hybrid deep learning-shearlet framework for limited angle computed tomography. <i>Inverse Problems</i> , <b>2019</b> , 35, 064002	2.3	72
74	The Dirichlet-to-Neumann map for complete Riemannian manifolds with boundary. <i>Communications in Analysis and Geometry</i> , <b>2003</b> , 11, 207-221	0.9	72
73	Can one use total variation prior for edge-preserving Bayesian inversion?. <i>Inverse Problems</i> , <b>2004</b> , 20, 1537-1563	2.3	65
72	Boundary regularity for the Ricci equation, geometric convergence, and Gel'fand's inverse boundary problem. <i>Inventiones Mathematicae</i> , <b>2004</b> , 158, 261-321	2.2	63

71	The Calderón problem for conormal potentials I: Global uniqueness and reconstruction. <i>Communications on Pure and Applied Mathematics</i> , <b>2003</b> , 56, 328-352	2.5	51
70	Analysis of the PML equations in general convex geometry. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , <b>2001</b> , 131, 1183-1207	1	49
69	Electrical impedance tomography problem with inaccurately known boundary and contact impedances. <i>IEEE Transactions on Medical Imaging</i> , <b>2008</b> , 27, 1404-14	11.7	41
68	Semiglobal boundary rigidity for Riemannian metrics. <i>Mathematische Annalen</i> , <b>2003</b> , 325, 767-793	1	38
67	Inverse problems for Lorentzian manifolds and non-linear hyperbolic equations. <i>Inventiones Mathematicae</i> , <b>2018</b> , 212, 781-857	2.2	35
66	The Calderón problem in transversally anisotropic geometries. <i>Journal of the European Mathematical Society</i> , <b>2016</b> , 18, 2579-2626	1.8	31
65	Iterative time-reversal control for inverse problems. <i>Inverse Problems and Imaging</i> , <b>2008</b> , 2, 63-81	2.1	27
64	Complex Riemannian metric and absorbing boundary conditions. <i>Journal Des Mathematiques Pures Et Appliquees</i> , <b>2001</b> , 80, 739-768	1.7	25
63	Determining a first order perturbation of the biharmonic operator by partial boundary measurements. <i>Journal of Functional Analysis</i> , <b>2012</b> , 262, 1781-1801	1.4	24
62	Inverse Problems With Partial Data for a Magnetic Schrödinger Operator in an Infinite Slab and on a Bounded Domain. <i>Communications in Mathematical Physics</i> , <b>2012</b> , 312, 87-126	2	24
61	Inverse Problems for Semilinear Wave Equations on Lorentzian Manifolds. <i>Communications in Mathematical Physics</i> , <b>2018</b> , 360, 555-609	2	23
60	Inverse boundary value problems for the perturbed polyharmonic operator. <i>Transactions of the American Mathematical Society</i> , <b>2013</b> , 366, 95-112	1	23
59	The Inverse Conductivity Problem with an Imperfectly Known Boundary in Three Dimensions. <i>SIAM Journal on Applied Mathematics</i> , <b>2007</b> , 67, 1440-1452	1.8	21
58	Inverse problem for the Riemannian wave equation with Dirichlet data and Neumann data on disjoint sets. <i>Duke Mathematical Journal</i> , <b>2014</b> , 163,	1.9	19
57	Inverse Scattering Problem for a Two Dimensional Random Potential. <i>Communications in Mathematical Physics</i> , <b>2008</b> , 279, 669-703	2	19
56	Maxwell's equations with a polarization independent wave velocity: Direct and inverse problems. <i>Journal Des Mathematiques Pures Et Appliquees</i> , <b>2006</b> , 86, 237-270	1.7	19
55	Hyperbolic inverse boundary-value problem and time-continuation of the non-stationary Dirichlet-to-Neumann map. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , <b>2002</b> , 132, 931-949	1	17
54	Rigidity of broken geodesic flow and inverse problems. <i>American Journal of Mathematics</i> , <b>2010</b> , 132, 529-562	1.2	16

53	Forward and inverse scattering on manifolds with asymptotically cylindrical ends. <i>Journal of Functional Analysis</i> , <b>2010</b> , 258, 2060-2118	1.4	16
52	The multidimensional Gel'fand inverse problem for non-self-adjoint operators. <i>Inverse Problems</i> , <b>1997</b> , 13, 1495-1501	2.3	16
51	Electromagnetic Wormholes via Handlebody Constructions. <i>Communications in Mathematical Physics</i> , <b>2008</b> , 281, 369-385	2	15
50	Recovering boundary shape and conductivity in electrical impedance tomography. <i>Inverse Problems and Imaging</i> , <b>2013</b> , 7, 217-242	2.1	15
49	Inverse problems for elliptic equations with power type nonlinearities. <i>Journal Des Mathematiques Pures Et Appliquees</i> , <b>2021</b> , 145, 44-82	1.7	14
48	Approximate Quantum and Acoustic Cloaking. <i>Journal of Spectral Theory</i> , <b>2011</b> , 27-80	0.9	13
47	Inverse problems and index formulae for Dirac operators. <i>Advances in Mathematics</i> , <b>2009</b> , 221, 170-216	1.3	12
46	Stability of the unique continuation for the wave operator via Tataru inequality and applications. <i>Journal of Differential Equations</i> , <b>2016</b> , 260, 6451-6492	2.1	11
45	Using the fibre structure of paper to determine authenticity of the documents: analysis of transmitted light images of stamps and banknotes. <i>Forensic Science International</i> , <b>2014</b> , 244, 252-8	2.6	11
44	An inverse problem for a wave equation with sources and observations on disjoint sets. <i>Inverse Problems</i> , <b>2010</b> , 26, 085012	2.3	10
43	Inverse scattering for a random potential. <i>Analysis and Applications</i> , <b>2019</b> , 17, 513-567	2.5	9
42	Inverse spectral problems on a closed manifold. <i>Journal Des Mathematiques Pures Et Appliquees</i> , <b>2008</b> , 90, 42-59	1.7	8
41	The borderlines of invisibility and visibility in Calderón inverse problem. <i>Analysis and PDE</i> , <b>2016</b> , 9, 43-98	1.7	8
40	Posterior consistency and convergence rates for Bayesian inversion with hypoelliptic operators. <i>Inverse Problems</i> , <b>2016</b> , 32, 085005	2.3	7
39	An inverse problem for the wave equation with one measurement and the pseudorandom source. <i>Analysis and PDE</i> , <b>2012</b> , 5, 887-912	1.7	7
38	Gel'fand Inverse Problem for a Quadratic Operator Pencil. <i>Journal of Functional Analysis</i> , <b>2000</b> , 176, 247-263	2.3	7
37	Inverse acoustic scattering problem in half-space with anisotropic random impedance. <i>Journal of Differential Equations</i> , <b>2017</b> , 262, 3139-3168	2.1	6
36	Unique recovery of lower order coefficients for hyperbolic equations from data on disjoint sets. <i>Journal of Differential Equations</i> , <b>2019</b> , 267, 2210-2238	2.1	6

35	Inverse problems for heat equation and space-time fractional diffusion equation with one measurement. <i>Journal of Differential Equations</i> , <b>2020</b> , 269, 7498-7528	2.1	6
34	Curvelet-based method for orientation estimation of particles from optical images. <i>Optical Engineering</i> , <b>2014</b> , 53, 033109	1.1	6
33	Inverse Problem for the Wave Equation with a White Noise Source. <i>Communications in Mathematical Physics</i> , <b>2014</b> , 332, 933-953	2	6
32	On the Inverse Problem of Finding Cosmic Strings and Other Topological Defects. <i>Communications in Mathematical Physics</i> , <b>2018</b> , 357, 569-595	2	6
31	Propagation and recovery of singularities in the inverse conductivity problem. <i>Analysis and PDE</i> , <b>2018</b> , 11, 1901-1943	1.7	5
30	Foreword: inverse problems in biology. <i>Journal of Mathematical Biology</i> , <b>2013</b> , 67, 1	2	5
29	Inverse Problems for Differential Forms on Riemannian Manifolds with Boundary. <i>Communications in Partial Differential Equations</i> , <b>2011</b> , 36, 1475-1509	1.6	5
28	Determination of a Riemannian manifold from the distance difference functions. <i>Asian Journal of Mathematics</i> , <b>2019</b> , 23, 173-200	0.5	5
27	The Light Ray Transform on Lorentzian Manifolds. <i>Communications in Mathematical Physics</i> , <b>2020</b> , 377, 1349-1379	2	4
26	All-optical majority gate based on an injection-locked laser. <i>Scientific Reports</i> , <b>2019</b> , 9, 14576	4.9	4
25	Inverse problems and invisibility cloaking for FEM models and resistor networks. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2015</b> , 25, 309-342	3.5	4
24	INVERSE PROBLEMS FOR LINEAR AND NON-LINEAR HYPERBOLIC EQUATIONS <b>2019</b> ,		4
23	Regularization strategy for an inverse problem for a 1 + 1 dimensional wave equation. <i>Inverse Problems</i> , <b>2016</b> , 32, 065001	2.3	4
22	Stability of the unique continuation for the wave operator via Tataru inequality: the local case. <i>Journal d'Analyse Mathématique</i> , <b>2018</b> , 134, 157-199	0.8	3
21	Inverse problems for nonlinear hyperbolic equations with disjoint sources and receivers. <i>Forum of Mathematics, Pi</i> , <b>2021</b> , 9,	2.1	3
20	Deep Neural Networks for Inverse Problems with Pseudodifferential Operators: An Application to Limited-Angle Tomography. <i>SIAM Journal on Imaging Sciences</i> , <b>2021</b> , 14, 470-505	1.9	3
19	Determination of the spacetime from local time measurements. <i>Mathematische Annalen</i> , <b>2016</b> , 365, 271-307		2
18	Determining Electrical and Heat Transfer Parameters Using Coupled Boundary Measurements. <i>SIAM Journal on Mathematical Analysis</i> , <b>2011</b> , 43, 2096-2115	1.7	2

17	Reconstruction of Betti numbers of manifolds for anisotropic Maxwell and Dirac systems. <i>Communications in Analysis and Geometry</i> , <b>2010</b> , 18, 963-985	0.9	2
16	Reconstruction and Interpolation of Manifolds. I: The Geometric Whitney Problem. <i>Foundations of Computational Mathematics</i> , <b>2020</b> , 20, 1035-1133	2.7	2
15	Reconstruction of a Riemannian Manifold from Noisy Intrinsic Distances. <i>SIAM Journal on Mathematics of Data Science</i> , <b>2020</b> , 2, 770-808	3.1	2
14	Inverse Problem for the Yang-Mills Equations. <i>Communications in Mathematical Physics</i> , <b>2021</b> , 384, 1187-1225	2.2	2
13	The Poisson embedding approach to the Calderón problem. <i>Mathematische Annalen</i> , <b>2020</b> , 377, 19-67	1	2
12	Bayesian signal restoration and Mumford-Shah functional. <i>Proceedings in Applied Mathematics and Mechanics</i> , <b>2007</b> , 7, 2080013-2080014	0.2	1
11	Calderón's inverse problem with an imperfectly known boundary in two and three dimensions. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 73, 012002	0.3	1
10	X-ray Transform in Asymptotically Conic Spaces. <i>International Mathematics Research Notices</i> , <b>2022</b> , 2022, 3918-3976	0.8	1
9	The Linearized Calderón Problem in Transversally Anisotropic Geometries. <i>International Mathematics Research Notices</i> , <b>2018</b> ,	0.8	1
8	Reconstruction and stability in Gelfand's inverse interior spectral problem. <i>Analysis and PDE</i> , <b>2022</b> , 15, 273-326	1.7	1
7	Analysis of a Dynamical System Modeling Lasers and Applications for Optical Neural Networks. <i>SIAM Journal on Applied Dynamical Systems</i> , <b>2022</b> , 21, 840-878	2.8	1
6	Material-separating regularizer for multi-energy x-ray tomography. <i>Inverse Problems</i> , <b>2022</b> , 38, 025013	2.3	0
5	An inverse problem for a hyperbolic system on a vector bundle and energy measurements. <i>Mathematische Annalen</i> , <b>2012</b> , 354, 1431-1464	1	
4	Infinite Photography: New Mathematical Model for High-Resolution Images. <i>Journal of Mathematical Imaging and Vision</i> , <b>2010</b> , 36, 140-158	1.6	
3	Wave Phenomena <b>2015</b> , 1205-1252		
2	Wave Phenomena <b>2011</b> , 867-909		
1	Correlation imaging in inverse scattering is tomography on probability distributions. <i>Inverse Problems</i> , <b>2019</b> , 35, 015010	2.3	