Maria-Luisa Rapun

List of Publications by Year
in descending order

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42	628	567281	610901
papers	citations	15 h-index	24 g-index

42	42	42	265
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Solving inhomogeneous inverse problems by topological derivative methods. Inverse Problems, 2008, 24, 045014.	2.0	92
2	Reduced order models based on local POD plus Galerkin projection. Journal of Computational Physics, 2010, 229, 3046-3063.	3.8	90
3	Topological Sensitivity for Solving Inverse Multiple Scattering Problems in Three-dimensional Electromagnetism. Part I: One Step Method. SIAM Journal on Imaging Sciences, 2017, 10, 1291-1321.	2.2	36
4	Defect Detection from Multi-frequency Limited Data via Topological Sensitivity. Journal of Mathematical Imaging and Vision, 2016, 55, 19-35.	1.3	35
5	Topological Derivatives for Shape Reconstruction. Lecture Notes in Mathematics, 2008, , 85-133.	0.2	26
6	Hybrid topological derivative and gradient-based methods for electrical impedance tomography. Inverse Problems, 2012, 28, 095010.	2.0	26
7	Boundary integral approximation of a heat-diffusion problem in time-harmonic regime. Numerical Algorithms, 2006, 41, 127-160.	1.9	24
8	Adaptive PODâ€based lowâ€dimensional modeling supported by residual estimates. International Journal for Numerical Methods in Engineering, 2015, 104, 844-868.	2.8	21
9	When topological derivatives met regularized Gauss-Newton iterations in holographic 3D imaging. Journal of Computational Physics, 2019, 388, 224-251.	3.8	21
10	Domain reconstruction using photothermal techniques. Journal of Computational Physics, 2008, 227, 8083-8106.	3.8	20
11	Mixed boundary integral methods for Helmholtz transmission problems. Journal of Computational and Applied Mathematics, 2008, 214, 238-258.	2.0	19
12	Determining Planar Multiple Sound-Soft Obstacles fromÂScattered Acoustic Fields. Journal of Mathematical Imaging and Vision, 2010, 36, 185-199.	1.3	18
13	Boundary Element Simulation of Thermal Waves. Archives of Computational Methods in Engineering, 2007, 14, 3-46.	10.2	17
14	Symmetric boundary integral formulations for Helmholtz transmission problems. Applied Numerical Mathematics, 2009, 59, 2814-2823.	2.1	16
15	Detection of multiple impedance obstacles by non-iterative topological gradient based methods. Journal of Computational Physics, 2019, 388, 534-560.	3.8	15
16	Detecting corrosion using thermal measurements. Inverse Problems, 2007, 23, 53-72.	2.0	14
17	Topological Sensitivity for Solving Inverse Multiple Scattering Problems in Three-Dimensional Electromagnetism. Part II: Iterative Method. SIAM Journal on Imaging Sciences, 2018, 11, 734-769.	2.2	14
18	Noninvasive Imaging of Three-Dimensional Micro and Nanostructures by Topological Methods. SIAM Journal on Imaging Sciences, 2016, 9, 1324-1354.	2.2	11

#	Article	IF	Citations
19	Solving inverse geometry heat conduction problems by postprocessing steady thermograms. International Journal of Heat and Mass Transfer, 2019, 143, 118490.	4.8	11
20	Indirect Methods with Brakhage-Werner Potentials for Helmholtz Transmission Problems. , 2006, , 1146-1154.		11
21	Dirac delta methods for Helmholtz transmission problems. Advances in Computational Mathematics, 2008, 28, 119-139.	1.6	10
22	An iterative method for parameter identification and shape reconstruction. Inverse Problems in Science and Engineering, 2010, 18, 35-50.	1.2	9
23	Parameter Identification in Photothermal Imaging. Journal of Mathematical Imaging and Vision, 2014, 49, 273-288.	1.3	9
24	LUPOD: Collocation in POD via LU decomposition. Journal of Computational Physics, 2017, 335, 1-20.	3.8	9
25	Detecting Damage in Thin Plates by Processing Infrared Thermographic Data with Topological Derivatives. Advances in Mathematical Physics, 2019, 2019, 1-18.	0.8	7
26	Topological sensitivity analysis revisited for time-harmonic wave scattering problems. Part I: the free space case. Engineering Computations, 2022, 39, 232-271.	1.4	7
27	A mixed-FEM and BEM coupling for the approximation of the scattering of thermal waves in locally non-homogeneous media. ESAIM: Mathematical Modelling and Numerical Analysis, 2006, 40, 871-896.	1.9	6
28	Hybrid Topological Derivative-Gradient Based Methods for Nondestructive Testing. Abstract and Applied Analysis, 2013, 2013, 1-20.	0.7	6
29	Processing the 2D and 3D Fresnel experimental databases via topological derivative methods. Inverse Problems, 2021, 37, 105012.	2.0	6
30	On the solution of direct and inverse multiple scattering problems for mixed sound-soft, sound-hard and penetrable objects. Inverse Problems, 2020, 36, 095014.	2.0	5
31	Application of the topological derivative to post-processing infrared time-harmonic thermograms for defect detection. Journal of Mathematics in Industry, 2020, 10, .	1.2	4
32	Topological sensitivity analysis revisited for time-harmonic wave scattering problems. Part II: recursive computations by the boundary integral equation method. Engineering Computations, 2022, 39, 272-312.	1.4	3
33	Non-Invasive Testing of Physical Systems Using Topological Sensitivity. Applied Sciences (Switzerland), 2021, 11, 1341.	2.5	2
34	Multifrequency Topological Derivative Approach to Inverse Scattering Problems in Attenuating Media. Symmetry, 2021, 13, 1702.	2.2	2
35	Exterior Dirichlet and Neumann Problems for the Helmholtz Equation as Limits of Transmission Problems. , 2008, , 207-216.		2
36	Numerical methods for direct and inverse problems in Acoustics and Photothermal Science. BoletÃn De La Sociedad EspaÃ‘ola De MatemÃ‡tica Aplicada, 2013, 61, 79-103.	0.9	1

#	Article	IF	Citations
37	Adaptive sampling and modal expansions in pattern-forming systems. Advances in Computational Mathematics, 2021, 47, 1.	1.6	1
38	A Mixed BEM Applied to Scattering of Thermal Waves in Composite Materials. , 2004, , 31-36.		1
39	Topological Imaging Methods for the Iterative Detection of Multiple Impedance Obstacles. Journal of Mathematical Imaging and Vision, 2022, 64, 321-340.	1.3	1
40	Variational Methods for Inverse Conductivity Problem. , 2011, , .		0
41	Domain and Parameter Reconstruction in Photothermal Imaging. Mathematics in Industry, 2016, , 235-242.	0.3	0
42	Fully Online ROMs and Collocation Based on LUPOD. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2020, , 81-93.	0.2	0