

Harbir Antil

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.

59
papers

628
citations

15
h-index

23
g-index

62
ext. papers

808
ext. citations

2.1
avg, IF

4.97
L-index

#	Paper	IF	Citations
59	Galerkin v. least-squares Petrov-Galerkin projection in nonlinear model reduction. <i>Journal of Computational Physics</i> , 2017 , 330, 693-734	4.1	114
58	A Space-Time Fractional Optimal Control Problem: Analysis and Discretization. <i>SIAM Journal on Control and Optimization</i> , 2016 , 54, 1295-1328	1.9	37
57	A FEM for an Optimal Control Problem of Fractional Powers of Elliptic Operators. <i>SIAM Journal on Control and Optimization</i> , 2015 , 53, 3432-3456	1.9	37
56	Spectral Approximation of Fractional PDEs in Image Processing and Phase Field Modeling. <i>Computational Methods in Applied Mathematics</i> , 2017 , 17, 661-678	1.2	29
55	Two-Step Greedy Algorithm for Reduced Order Quadratures. <i>Journal of Scientific Computing</i> , 2013 , 57, 604-637	2.3	28
54	Domain decomposition and balanced truncation model reduction for shape optimization of the Stokes system. <i>Optimization Methods and Software</i> , 2011 , 26, 643-669	1.3	26
53	External optimal control of nonlocal PDEs. <i>Inverse Problems</i> , 2019 , 35, 084003	2.3	24
52	Sobolev Spaces with Non-Muckenhoupt Weights, Fractional Elliptic Operators, and Applications. <i>SIAM Journal on Mathematical Analysis</i> , 2019 , 51, 2479-2503	1.7	23
51	Domain decomposition and model reduction for the numerical solution of PDE constrained optimization problems with localized optimization variables. <i>Computing and Visualization in Science</i> , 2010 , 13, 249-264	1	23
50	Optimization with Respect to Order in a Fractional Diffusion Model: Analysis, Approximation and Algorithmic Aspects. <i>Journal of Scientific Computing</i> , 2018 , 77, 204-224	2.3	21
49	Fractional operators with inhomogeneous boundary conditions: analysis, control, and discretization. <i>Communications in Mathematical Sciences</i> , 2018 , 16, 1395-1426	1	21
48	Bilevel optimization, deep learning and fractional Laplacian regularization with applications in tomography. <i>Inverse Problems</i> , 2020 , 36, 064001	2.3	19
47	Modeling, Simulation, and Optimaization of Surface Acoustic Wave Driven Microfluidic Biochips. <i>Journal of Computational Mathematics</i> , 2010 , 28, 149-169	2.1	18
46	Reduced order modeling based shape optimization of surface acoustic wave driven microfluidic biochips. <i>Mathematics and Computers in Simulation</i> , 2012 , 82, 1986-2003	3.3	17
45	A Monte Carlo-based multi-objective optimization approach to merge different precipitation estimates for land surface modeling. <i>Journal of Hydrology</i> , 2019 , 570, 454-462	6	16
44	Detailed simulation of viral propagation in the built environment. <i>Computational Mechanics</i> , 2020 , 66, 1-15	4	15
43	Optimal control of the coefficient for the regional fractional begin{document} Δ -Laplace equation: Approximation and convergence. <i>Mathematical Control and Related Fields</i> , 2019 , 9, 1-38	1.5	13

42	Controlling the Kelvin force: basic strategies and applications to magnetic drug targeting. <i>Optimization and Engineering</i> , 2018 , 19, 559-589	2.1	12
41	A note on semilinear fractional elliptic equation: analysis and discretization. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2017 , 51, 2049-2067	1.8	11
40	External optimal control of fractional parabolic PDEs. <i>ESAIM - Control, Optimisation and Calculus of Variations</i> , 2020 , 26, 20	1	10
39	Application of the Discrete Empirical Interpolation Method to Reduced Order Modeling of Nonlinear and Parametric Systems 2014 , 101-136		10
38	Optimal control of fractional semilinear PDEs. <i>ESAIM - Control, Optimisation and Calculus of Variations</i> , 2020 , 26, 5	1	9
37	An a posteriori error analysis for an optimal control problem involving the fractional Laplacian. <i>IMA Journal of Numerical Analysis</i> , 2018 , 38, 198-226	1.8	9
36	Finite horizon model predictive control of electrowetting on dielectric with pinning. <i>Interfaces and Free Boundaries</i> , 2017 , 19, 1-30	0.7	9
35	Optimizing the Kelvin force in a moving target subdomain. <i>Mathematical Models and Methods in Applied Sciences</i> , 2018 , 28, 95-130	3.5	9
34	Optimal Control of a Free Boundary Problem: Analysis with Second-Order Sufficient Conditions. <i>SIAM Journal on Control and Optimization</i> , 2014 , 52, 2771-2799	1.9	8
33	Fractional elliptic quasi-variational inequalities: Theory and numerics. <i>Interfaces and Free Boundaries</i> , 2018 , 20, 1-24	0.7	7
32	Optimal Control of Fractional Elliptic PDEs with State Constraints and Characterization of the Dual of Fractional-Order Sobolev Spaces. <i>Journal of Optimization Theory and Applications</i> , 2020 , 186, 1-23	1.6	5
31	. <i>Computing in Science and Engineering</i> , 2018 , 20, 10-25	1.5	5
30	Fractional deep neural network via constrained optimization. <i>Machine Learning: Science and Technology</i> , 2021 , 2, 015003	5.1	5
29	Reduced Basis Methods for Fractional Laplace Equations via Extension. <i>SIAM Journal of Scientific Computing</i> , 2019 , 41, A3552-A3575	2.6	4
28	High fidelity modeling of aerosol pathogen propagation in built environments with moving pedestrians. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2021 , 37, e3428	2.6	4
27	Some applications of weighted norm inequalities to the error analysis of PDE-constrained optimization problems. <i>IMA Journal of Numerical Analysis</i> , 2018 , 38, 852-883	1.8	4
26	Optimal Control of a Free Boundary Problem with Surface Tension Effects: A Priori Error Analysis. <i>SIAM Journal on Numerical Analysis</i> , 2015 , 53, 2279-2306	2.4	3
25	Modeling and Simulation of Piezoelectrically Agitated Acoustic Streaming on Microfluidic Biochips. <i>Lecture Notes in Computational Science and Engineering</i> , 2008 , 305-312	0.3	3

24	High-Fidelity Simulation of Pathogen Propagation, Transmission and Mitigation in the Built Environment. <i>Archives of Computational Methods in Engineering</i> , 2021 , 1-26	7.8	3
23	Fractional diffusion maps. <i>Applied and Computational Harmonic Analysis</i> , 2021 , 54, 145-175	3.1	3
22	A Brief Introduction to PDE-Constrained Optimization. <i>The IMA Volumes in Mathematics and Its Applications</i> , 2018 , 3-40	0.5	2
21	A note on multigrid preconditioning for fractional PDE-constrained optimization problems. <i>Results in Applied Mathematics</i> , 2021 , 9, 100133	1.7	2
20	Shape Optimization of Shell Structure Acoustics. <i>SIAM Journal on Control and Optimization</i> , 2017 , 55, 1347-1376	1.9	1
19	Novel DNNs for Stiff ODEs with Applications to Chemically Reacting Flows. <i>Lecture Notes in Computer Science</i> , 2021 , 23-39	0.9	1
18	Adaptive Path Following Primal Dual Interior Point Methods for Shape Optimization of Linear and Nonlinear Stokes Flow Problems. <i>Lecture Notes in Computer Science</i> , 2008 , 259-266	0.9	1
17	Adaptive Multilevel Interior-Point Methods in PDE Constrained Optimization. <i>Lecture Notes in Computational Science and Engineering</i> , 2009 , 15-26	0.3	1
16	A Fast Solver for the Fractional Helmholtz Equation. <i>SIAM Journal of Scientific Computing</i> , 2021 , 43, A1362-A1388	6.2	1
15	Approximation of Integral Fractional Laplacian and Fractional PDEs via sinc-Basis. <i>SIAM Journal of Scientific Computing</i> , 2021 , 43, A2897-A2922	2.6	1
14	On a Fractional Version of a Murat Compactness Result and Applications. <i>SIAM Journal on Mathematical Analysis</i> , 2021 , 53, 3158-3187	1.7	1
13	Model reduction for fractional elliptic problems using Kato's formula. <i>Mathematical Control and Related Fields</i> , 2021 ,	1.5	1
12	A unified framework for optimal control of fractional in time subdiffusive semilinear PDEs. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2022 ,	2.8	0
11	Deep learning or interpolation for inverse modelling of heat and fluid flow problems?. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2021 , 31, 3036-3046	4.5	0
10	Risk-Averse Control of Fractional Diffusion with Uncertain Exponent. <i>SIAM Journal on Control and Optimization</i> , 2021 , 59, 1161-1187	1.9	0
9	Optimal control, numerics, and applications of fractional PDEs. <i>Handbook of Numerical Analysis</i> , 2022 , 87-114	1	0
8	Optimal control of parameterized stationary Maxwell's system: Reduced basis, convergence analysis, and a posteriori error estimates. <i>Mathematical Control and Related Fields</i> , 2022 ,	1.5	0
7	A deterministic pathogen transmission model based on high-fidelity physics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022 , 114929	5.7	0

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| 6 | Nondiffusive variational problems with distributional and weak gradient constraints. <i>Advances in Nonlinear Analysis</i> , 2022 , 11, 1466-1495 | 2.8 | o |
| 5 | Approximation of elliptic equations with bmo coefficients. <i>IMA Journal of Numerical Analysis</i> , 2015 , drv0018 | | |
| 4 | Optimal Control of a Degenerate PDE for Surface Shape. <i>Applied Mathematics and Optimization</i> , 2018 , 78, 297-328 | 1.5 | |
| 3 | A problem in control of elastodynamics with piezoelectric effects. <i>IMA Journal of Numerical Analysis</i> , 2020 , 40, 2839-2870 | 1.8 | |
| 2 | Determination of volumetric material data from boundary measurements. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2020 , 30, 4837-4863 | 4.5 | |
| 1 | Constrained optimization problems governed by PDE models of grain boundary motions. <i>Advances in Nonlinear Analysis</i> , 2022 , 11, 1249-1286 | 2.8 | |