Shengfeng Zhu

List of Publications by Year
in descending order

29	468	623734 14	713466 21
papers	citations	h-index	g-index

29	29	29	275
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Inhomogeneous Dirichlet Boundary-Value Problems of Space-Fractional Diffusion Equations and their Finite Element Approximations. SIAM Journal on Numerical Analysis, 2014, 52, 1292-1310.	2.3	65
2	A Petrovâ€“Galerkin finite element method for variable-coefficient fractional diffusion equations. Computer Methods in Applied Mechanics and Engineering, 2015, 290, 45-56.	6.6	46
3	New Variational Formulations for Level Set Evolution WithoutÂReinitializationÂwith Applications to Image Segmentation. Journal of Mathematical Imaging and Vision, 2011, 41, 194-209.	1.3	25
4	Accuracy of Finite Element Methods for Boundary-Value Problems of Steady-State Fractional Diffusion Equations. Journal of Scientific Computing, 2017, 70, 429-449.	2.3	25
5	Variational piecewise constant level set methods for shape optimization of a two-density drum. Journal of Computational Physics, 2010, 229, 5062-5089.	3.8	24
6	Isogeometric analysis and proper orthogonal decomposition for parabolic problems. Numerische Mathematik, 2017, 135, 333-370.	1.9	24
7	Effective Shape Optimization of Laplace Eigenvalue Problems Using Domain Expressions of Eulerian Derivatives. Journal of Optimization Theory and Applications, 2018, 176, 17-34.	1.5	23
8	Binary level set methods for topology and shape optimization of a two-density inhomogeneous drum. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2970-2986.	6.6	20
9	Shape and topology optimization for elliptic boundary value problems using a piecewise constant level set method. Applied Numerical Mathematics, 2011, 61, 752-767.	2.1	20
10	Laguerre pseudospectral approximation to the Thomasâ€“Fermi equation. Journal of Computational and Applied Mathematics, 2015, 282, 251-261.	2.0	20
11	Isogeometric analysis and proper orthogonal decomposition for the acoustic wave equation. ESAIM: Mathematical Modelling and Numerical Analysis, 2017, 51, 1197-1221.	1.9	17
12	A multi-mesh finite element method for phase-field based photonic band structure optimization. Journal of Computational Physics, 2018, 357, 324-337.	3.8	17
13	Numerical solution of the Falknerâ€“Skan equation based on quasilinearization. Applied Mathematics and Computation, 2009, 215, 2472-2485.	2.2	16
14	Convergence analysis of mixed finite element approximations to shape gradients in the Stokes equation. Computer Methods in Applied Mechanics and Engineering, 2019, 343, 127-150.	6.6	16
15	An adaptive algorithm for the Thomasâ€“Fermi equation. Numerical Algorithms, 2012, 59, 359-372.	1.9	13
16	Proper orthogonal decomposition with SUPG-stabilized isogeometric analysis for reduced order modelling of unsteady convection-dominated convection-diffusion-reaction problems. Journal of Computational Physics, 2019, 387, 280-302.	3.8	13
17	A level set method for shape optimization in semilinear elliptic problems. Journal of Computational Physics, 2018, 355, 104-120.	3.8	12
18	The time-dependent generalized membrane shell model and its numerical computation. Computer Methods in Applied Mechanics and Engineering, 2019, 344, 54-70.	6.6	11

#	Article	IF	Citations
19	Shape identification in Stokes flow with distributed shape gradients. Applied Mathematics Letters, 2019, 95, 165-171.	2.7	9
20	Convergence analysis of Galerkin finite element approximations to shape gradients in eigenvalue optimization. BIT Numerical Mathematics, 2020, 60, 853-878.	2.0	9
21	RBF-FD solution for a financial partial-integro differential equation utilizing the generalized multiquadric function. Computers and Mathematics With Applications, 2021, 82, 161-178.	2.7	9
22	On Discrete Shape Gradients of Boundary Type for PDE-constrained Shape Optimization. SIAM Journal on Numerical Analysis, 2021, 59, 1510-1541.	2.3	9
23	Isogeometric analysis for time-fractional partial differential equations. Numerical Algorithms, 2020, 85, 909-930.	1.9	6
24	On a high-order Gaussian radial basis function generated Hermite finite difference method and its application. Calcolo, 2021, 58, 1.	1.1	5
25	A variational binary level-set method for elliptic shape optimization problems. International Journal of Computer Mathematics, 2011, 88, 3026-3045.	1.8	4
26	On accuracy of approximate boundary and distributed <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e325" altimg="si300.svg"><mml:msup><mml:mrow><mml:mi>H</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow><mml:mrow><mml:mn>0</mml:mn></mml:mrow></mml:msup></mml:math> shape gradient flows for eigenvalue optimization. Journal of Computational and Applied Mathematics, 2020, 365, 112374.	2.0	3
27	A Two-Grid Binary Level Set Method for Eigenvalue Optimization. Journal of Scientific Computing, 2021, 89, 1.	2.3	3
28	A level set method for Laplacian eigenvalue optimization subject to geometric constraints. Computational Optimization and Applications, 2022, 82, 499-524.	1.6	3
29	A two-grid binary level set method for structural topology optimization. Engineering Optimization, 2023, 55, 1100-1117.	2.6	1