Niall Niall Madden

List of Publications by Year
in descending order

30 papers	674 citations	687363 13 h-index	552781 26 g-index
35 all docs	35 docs citations	35 times ranked	610 citing authors

#	Article	IF	Citations
1	A Boundary-Layer Preconditioner for Singularly Perturbed Convection Diffusion. SIAM Journal on Matrix Analysis and Applications, 2022, 43, 561-583.	1.4	0
2	An analysis of diagonal and incomplete Cholesky preconditioners for singularly perturbed problems on layer-adapted meshes. Journal of Applied Mathematics and Computing, 2021, 65, 245-272.	2.5	2
3	Layer-adapted meshes for solute dispersion in a steady flow through an annulus with wall absorption: Application to a catheterized artery. Korea Australia Rheology Journal, 2021, 33, 11-24.	1.7	13
4	A weighted and balanced FEM for singularly perturbed reaction-diffusion problems. Calcolo, 2021, 58, 1.	1.1	9
5	Finite element modelling of geophysical electromagnetic data with goal-oriented hr-adaptivity. Computational Geosciences, 2020, 24, 1257-1283.	2.4	2
6	First-Order System Least Squares Finite-Elements for Singularly Perturbed Reaction-Diffusion Equations. Lecture Notes in Computer Science, 2020, , 3-14.	1.3	3
7	Boundary layer preconditioners for finite-element discretizations of singularly perturbed reaction-diffusion problems. Numerical Algorithms, 2018, 79, 281-310.	1.9	3
8	An Introduction to the Analysis and Implementation of Sparse Grid Finite Element Methods. Computational Methods in Applied Mathematics, 2017, 17, 299-322.	0.8	3
9	Applying a Patched Mesh Method to Efficiently Solve a Singularly Perturbed Reaction-Diffusion Problem. , 2017, , 41-53.		1
10	An optimal time-stepping algorithm for unsteady advectionâ€“diffusion problems. Journal of Computational and Applied Mathematics, 2016, 294, 57-77.	2.0	4
11	A C 1 -conforming hp finite element method for fourth order singularly perturbed boundary value problems. Applied Numerical Mathematics, 2016, 104, 81-97.	2.1	13
12	A first-order system Petrovâ€“Galerkin discretization for a reactionâ€“diffusion problem on a fitted mesh. IMA Journal of Numerical Analysis, 2016, 36, 1281-1309.	2.9	10
13	A multiscale sparse grid finite element method for a two-dimensional singularly perturbed reaction-diffusion problem. Advances in Computational Mathematics, 2015, 41, 987-1014.	1.6	9
14	Cholesky Factorisation of Linear Systems Coming from Finite Difference Approximations of Singularly Perturbed Problems. Lecture Notes in Computational Science and Engineering, 2015, , 209-220.	0.3	4
15	A Multiscale Sparse Grid Technique for a Two-Dimensional Convection-Diffusion Problem with Exponential Layers. Lecture Notes in Computational Science and Engineering, 2015, , 245-255.	0.3	1
16	Robust Solution of Singularly Perturbed Problems Using Multigrid Methods. SIAM Journal of Scientific Computing, 2013, 35, A2225-A2254.	2.8	21
17	Bayesian networks for mathematical models: Techniques for automatic construction and efficient inference. International Journal of Approximate Reasoning, 2013, 54, 323-342.	3.3	7
18	hp Finite Element Methods for Fourth Order Singularly Perturbed Boundary Value Problems. Lecture Notes in Computer Science, 2013, , 532-539.	1.3	0

#	Article	IF	Citations
19	A two-scale sparse grid method for a singularly perturbed reaction-diffusion problem in two dimensions. IMA Journal of Numerical Analysis, 2009, 29, 986-1007.	2.9	42
20	A parameter-uniform Schwarz method for a coupled system of reactionâ€“diffusion equations. Journal of Computational and Applied Mathematics, 2009, 230, 360-370.	2.0	24
21	A Schwarz Technique for a System of Reaction Diffusion Equations with Differing Parameters. Lecture Notes in Computational Science and Engineering, 2009, , 247-255.	0.3	3
22	A parameter-robust numerical method for a system of reactionâ€“diffusion equations in two dimensions. Numerical Methods for Partial Differential Equations, 2008, 24, 312-334.	3.6	28
23	Software for calculating blood lactate endurance markers. Journal of Sports Sciences, 2007, 25, 1403-1409.	2.0	118
24	Parameter uniform approximations for time-dependent reaction-diffusion problems. Numerical Methods for Partial Differential Equations, 2007, 23, 1290-1300.	3.6	26
25	Grid equidistribution for reactionâ€“diffusion problems in one dimension. Numerical Algorithms, 2005, 40, 305-322.	1.9	43
26	A finite element analysis of a coupled system of singularly perturbed reactionâ€“diffusion equations. Applied Mathematics and Computation, 2004, 148, 869-880.	2.2	31
27	Accurate Solution of a System of Coupled Singularly Perturbed Reaction-diffusion Equations. Computing (Vienna/New York), 2003, -1, 1-1.	4.8	9
28	Uniform convergence of a finite difference scheme for a system of coupledreaction-diffusion equations. Proceedings in Applied Mathematics and Mechanics, 2003, 3, 567-568.	0.2	1
29	A uniformly convergent numerical method for a coupled system of two singularly perturbed linear reaction-diffusion problems. IMA Journal of Numerical Analysis, 2003, 23, 627-644.	2.9	101
30	An Improved Error Estimate for a Numerical Method for a System of Coupled Singularly Perturbed Reaction-diffusion Equations. Computational Methods in Applied Mathematics, 2003, 3, 417-423.	0.8	21