Eugene O'Riordan

List of Publications by Year
in descending order

81	2,776	236925 25	233421 45
papers	citations	h-index	g-index

86	86	86	596
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A numerical algorithm to computationally solve the Hemker problem using Shishkin meshes. Journal of Computational and Applied Mathematics, 2022, 409, 114155.	2.0	0
2	Parameter-uniform approximations for a singularly perturbed convection-diffusion problem with a discontinuous initial condition. Applied Numerical Mathematics, 2021, 162, 106-123.	2.1	2
3	Numerical approximations to a singularly perturbed convection-diffusion problem with a discontinuous initial condition. Numerical Algorithms, 2021, 88, 1851-1873.	1.9	2
4	Convergence analysis of a finite difference scheme for a two-point boundary value problem with a Riemannâ€“Liouvilleâ€“Caputo fractional derivative. BIT Numerical Mathematics, 2020, 60, 411-439.	2.0	9
5	Singularly perturbed reactionâ€“diffusion problems with discontinuities in the initial and/or the boundary data. Journal of Computational and Applied Mathematics, 2020, 370, 112638.	2.0	4
6	Numerical approximations to the scaled first derivatives of the solution to a two parameter singularly perturbed problem. Journal of Computational and Applied Mathematics, 2019, 347, 128-149.	2.0	11
7	Parameter-uniform numerical methods for singularly perturbed parabolic problems with incompatible boundary-initial data. Applied Numerical Mathematics, 2019, 146, 436-451.	2.1	5
8	A parameter-uniform numerical method for a singularly perturbed convectionâ€“diffusion problem posed on an annulus. Computers and Mathematics With Applications, 2019, 78, 3329-3344.	2.7	5
9	A Fitted Scheme for a Caputo Initial-Boundary Value Problem. Journal of Scientific Computing, 2018, 76, 583-609.	2.3	27
10	Convergence in Positive Time for a Finite Difference Method Applied to a Fractional Convection-Diffusion Problem. Computational Methods in Applied Mathematics, 2018, 18, 33-42.	0.8	41
11	Error Analysis of a Finite Difference Method on Graded Meshes for a Time-Fractional Diffusion Equation. SIAM Journal on Numerical Analysis, 2017, 55, 1057-1079.	2.3	577
12	A singularly perturbed convectionâ€“diffusion problem with a moving pulse. Journal of Computational and Applied Mathematics, 2017, 321, 371-388.	2.0	3
13	Parameter-uniform numerical method for singularly perturbed convection-diffusion problem on a circular domain. Advances in Computational Mathematics, 2017, 43, 885-909.	1.6	3
14	Necessary conditions for convergence of difference schemes for fractional-derivative two-point boundary value problems. BIT Numerical Mathematics, 2016, 56, 1455-1477.	2.0	2
15	Numerical Solution of a Singularly Perturbed Problem on a Circular Domain. Modelirovanie I Analiz Informacionnyh Sistem, 2016, 23, 349-356.	0.3	3
16	Scaled discrete derivatives of singularly perturbed elliptic problems. Numerical Methods for Partial Differential Equations, 2015, 31, 225-252.	3.6	2
17	Numerical approximation of solution derivatives of singularly perturbed parabolic problems of convection-diffusion type. Mathematics of Computation, 2015, 85, 581-599.	2.1	9
18	A linearised singularly perturbed convectionâ€“diffusion problem with an interior layer. Applied Numerical Mathematics, 2015, 98, 1-17.	2.1	13

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19	Numerical approximation of solution derivatives in the case of singularly perturbed time dependent reactionâ€“diffusion problems. Journal of Computational and Applied Mathematics, 2015, 273, 13-24.	2.0	11
20	A Singularly Perturbed Reaction-Diffusion Problem with Incompatible Boundary-Initial Data. Lecture Notes in Computer Science, 2013, , 303-310.	1.3	2
21	Parameter-uniform numerical methods for some singularly perturbed nonlinear initial value problems. Numerical Algorithms, 2012, 61, 579-611.	1.9	4
22	A singularly perturbed parabolic problem with a layer in the initial condition. Applied Mathematics and Computation, 2012, 219, 498-510.	2.2	10
23	A Singularly Perturbed Convection Diffusion Turning Point Problem with an Interior Layer. Computational Methods in Applied Mathematics, 2012, 12, 206-220.	0.8	10
24	Opposing flows in a one dimensional convection-diffusion problem. Central European Journal of Mathematics, 2012, 10, 85-100.	0.7	4
25	Parameter-uniform numerical methods for some linear and nonlinear singularly perturbed convection diffusion boundary turning point problems. BIT Numerical Mathematics, 2011, 51, 317-337.	2.0	22
26	A parameter robust Petrovâ€“Galerkin scheme for advectionâ€“diffusionâ€“reaction equations. Numerical Algorithms, 2011, 56, 107-127.	1.9	10
27	A parameter-uniform numerical method for a singularly perturbed two parameter elliptic problem. Advances in Computational Mathematics, 2011, 35, 57-82.	1.6	11
28	A coupled system of singularly perturbed parabolic reaction-diffusion equations. Advances in Computational Mathematics, 2010, 32, 43-61.	1.6	30
29	Numerical analysis of a strongly coupled system of two singularly perturbed convectionâ€“diffusion problems. Advances in Computational Mathematics, 2009, 30, 101-121.	1.6	27
30	A class of singularly perturbed quasilinear differential equations with interior layers. Mathematics of Computation, 2009, 78, 103-103.	2.1	11
31	Fitted mesh numerical methods for singularly perturbed elliptic problems with mixed derivatives. IMA Journal of Numerical Analysis, 2009, 29, 712-730.	2.9	9
32	A System of Singularly Perturbed Semilinear Equations. Lecture Notes in Computational Science and Engineering, 2009, , 163-172.	0.3	9
33	A Patched Mesh Method for Singularly Perturbed Eeaction-Diffusion Equations. Lecture Notes in Computational Science and Engineering, 2009, , 117-127.	0.3	2
34	Examination of the Performance of Robust Numerical Methods for Singularly Perturbed Quasilinear Problems with Interior Layers. Lecture Notes in Computational Science and Engineering, 2009, , 141-151.	0.3	0
35	Singularly Perturbed Reaction-Diffusion Problem with a Boundary Turning Point. Lecture Notes in Computational Science and Engineering, 2009, , 129-139.	0.3	0
36	Parameter uniform numerical methods for singularly perturbed elliptic problems with parabolic boundary layers. Applied Numerical Mathematics, 2008, 58, 1761-1772.	2.1	19

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37	A numerical method for a singular perturbation problem arising in the modelling of plasma sheaths. International Journal of Computing Science and Mathematics, 2007, 1, 322.	0.3	2
38	A technique to prove parameter-uniform convergence for a singularly perturbed convectionâ€“diffusion equation. Journal of Computational and Applied Mathematics, 2007, 206, 136-145.	2.0	16
39	Parameter-uniform finite difference schemes for singularly perturbed parabolic diffusion-convection-reaction problems. Mathematics of Computation, 2006, 75, 1135-1155.	2.1	54
40	A defectâ€“correction parameter-uniform numerical method for a singularly perturbed convectionâ€“diffusion problem in one dimension. Numerical Algorithms, 2006, 41, 359-385.	1.9	16
41	A parameter robust second order numerical method for a singularly perturbed two-parameter problem. Applied Numerical Mathematics, 2006, 56, 962-980.	2.1	61
42	A class of singularly perturbed semilinear differential equations with interior layers. Mathematics of Computation, 2005, 74, 1759-1777.	2.1	28
43	A Shishkin mesh for a singularly perturbed Riccati equation. Journal of Computational and Applied Mathematics, 2005, 182, 372-387.	2.0	10
44	A parameter robust numerical method for a two dimensional reaction-diffusion problem. Mathematics of Computation, 2005, 74, 1743-1759.	2.1	70
45	Global maximum norm parameter-uniform numerical method for a singularly perturbed convection-diffusion problem with discontinuous convection coefficient. Mathematical and Computer Modelling, 2004, 40, 1375-1392.	2.0	71
46	A parameter robust numerical method for a system of two singularly perturbed convectionâ€“diffusion equations. Applied Numerical Mathematics, 2004, 51, 171-186.	2.1	49
47	Singularly perturbed parabolic problems with non-smooth data. Journal of Computational and Applied Mathematics, 2004, 166, 233-245.	2.0	43
48	Singularly perturbed convectionâ€“diffusion problems with boundary and weak interior layers. Journal of Computational and Applied Mathematics, 2004, 166, 133-151.	2.0	71
49	Numerical techniques for flow problems with singularities. International Journal for Numerical Methods in Fluids, 2003, 43, 915-936.	1.6	2
50	Computing realistic Reynolds-uniform error bounds for discrete derivatives of flow velocities in the boundary layer for Prandtl's problem. International Journal for Numerical Methods in Fluids, 2003, 43, 895-902.	1.6	1
51	A Fitted Mesh Method for a Class of Singularly Perturbed Parabolic Problems with a Boundary Turning Point. Computational Methods in Applied Mathematics, 2003, 3, 361-372.	0.8	25
52	Singularly Perturbed Problems Modeling Reaction-convection-diffusion Processes. Computational Methods in Applied Mathematics, 2003, 3, 424-442.	0.8	51
53	John Miller - 65. Computational Methods in Applied Mathematics, 2003, 3, 359-360.	0.8	2
54	An experimental technique for computing parameter-uniform error estimates for numerical solutions of singular perturbation problems, with an application to Prandtl's problem at high Reynolds number. Applied Numerical Mathematics, 2002, 40, 143-149.	2.1	3

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55	The convergence of classical Schwarz methods applied toÂconvectionâ€“diffusion problems with regular boundary layers. Applied Numerical Mathematics, 2002, 43, 297-313.	2.1	11
56	A numerical method for a system of singularly perturbed reactionâ€“diffusion equations. Journal of Computational and Applied Mathematics, 2002, 145, 151-166.	2.0	83
57	Parameterâ€“uniform Fitted Mesh Method for Quasilinear Differential Equations with Boundary Layers. Computational Methods in Applied Mathematics, 2001, 1, 154-172.	0.8	8
58	A second-order parameter-uniform overlapping Schwarz method for reactionâ€“diffusion problems with boundary layers. Journal of Computational and Applied Mathematics, 2001, 130, 231-244.	2.0	22
59	Numerical experiments for advectionâ€“diffusion problems in a channel with a 180Â° bend. Applied Mathematics and Computation, 2001, 118, 223-246.	2.2	3
60	Parameter-Uniform Numerical Methods for a Class of Singularly Perturbed Problems with a Neumann Boundary Condition. Lecture Notes in Computer Science, 2001, , 292-303.	1.3	2
61	A parameter-uniform Schwarz method for a singularly perturbed reactionâ€“diffusion problem with an interior layer. Applied Numerical Mathematics, 2000, 35, 323-337.	2.1	26
62	On the non-existence of $epsilon$-uniform finite difference methods on uniform meshes for semilinear two-point boundary value problems. Mathematics of Computation, 1998, 67, 603-618.	2.1	28
63	A Uniformly Convergent Galerkin Method on a Shishkin Mesh for a Convection-Diffusion Problem. Journal of Mathematical Analysis and Applications, 1997, 214, 36-54.	1.0	108
64	A Uniformly Convergent Finite Difference Scheme for a Singularly Perturbed Semilinear Equation. SIAM Journal on Numerical Analysis, 1996, 33, 1135-1149.	2.3	34
65	Special Meshes for Finite Difference Approximations to an Advection-Diffusion Equation with Parabolic Layers. Journal of Computational Physics, 1995, 117, 47-54.	3.8	34
66	On a novel mesh for the regular boundary layers arising in advection-dominated transport in two dimensions. Communications in Numerical Methods in Engineering, 1995, 11, 435-441.	1.3	5
67	On piecewise-uniform meshes for upwind- and central-difference operators for solving singularly perturbed problems. IMA Journal of Numerical Analysis, 1995, 15, 89-99.	2.9	46
68	Use of central-difference operators for solution of singularly perturbed problems. Communications in Numerical Methods in Engineering, 1994, 10, 297-302.	1.3	7
69	A Comparison of Uniformly Convergent Difference Schemes for Two-Dimensional Convectionâ€”Diffusion Problems. Journal of Computational Physics, 1993, 105, 24-32.	3.8	37
70	A Globally Uniformly Convergent Finite Element Method for a Singularly Perturbed Elliptic Problem in Two Dimensions. Mathematics of Computation, 1991, 57, 47.	2.1	43
71	Uniformly convergent difference schemes for singularly perturbed parabolic diffusion-convection problems without turning points. Numerische Mathematik, 1989, 55, 521-544.	1.9	48
72	Numerical methods for time-dependent convection-diffusion equations. Journal of Computational and Applied Mathematics, 1988, 21, 289-310.	2.0	58

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73	L 1 andL ? Uniform convergence of a difference scheme for a semilinear singular perturbation problem. Numerische Mathematik, 1987, 50, 519-531.	1.9	14
74	A uniform finite element method for a conservative singularly perturbed problem. Journal of Computational and Applied Mathematics, 1987, 18, 163-174.	2.0	8
75	A Uniformly Accurate Finite Element Method for a Singular Perturbation Problem in Conservative Form. SIAM Journal on Numerical Analysis, 1986, 23, 369-375.	2.3	24
76	A Uniformly Accurate Finite-Element Method for a Singularly Perturbed One-Dimensional Reaction-Diffusion Problem. Mathematics of Computation, 1986, 47, 555.	2.1	46
77	A finite element method for a singularly perturbed boundary value problem. Numerische Mathematik, 1986, 50, 1-15.	1.9	47
78	An Analysis of a Superconvergence Result for a Singularly Perturbed Boundary Value Problem. Mathematics of Computation, 1986, 46, 81.	2.1	22
79	Petrov-Galerkin finite element methods with a hinged test space for singularly perturbed problems. International Journal for Numerical Methods in Engineering, 1985, 21, 1803-1812.	2.8	3
80	Singularly perturbed finite element methods. Numerische Mathematik, 1984, 44, 425-434.	1.9	20
81	Parameterâ€uniform numerical methods for singularly perturbed linear transport problems. Mathematical Methods in the Applied Sciences, 0, , .	2.3	0