

Isaias Alonso-Mallo

List of Publications by Year in descending order

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32
papers

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933447

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docs citations

32
times ranked

98
citing authors

#	ARTICLE	IF	CITATIONS
1	Runge-Kutta methods without order reduction for linear initial boundary value problems. <i>Numerische Mathematik</i> , 2002, 91, 577-603.	1.9	32
2	Weak Ill-Posedness of Spatial Discretizations of Absorbing Boundary Conditions for Schrödinger-Type Equations. <i>SIAM Journal on Numerical Analysis</i> , 2002, 40, 134-158.	2.3	31
3	Spectral-fractional step Runge–Kutta discretizations for initial boundary value problems with time dependent boundary conditions. <i>Mathematics of Computation</i> , 2004, 73, 1801-1826.	2.1	24
4	Spectral/Rosenbrock discretizations without order reduction for linear parabolic problems. <i>Applied Numerical Mathematics</i> , 2002, 41, 247-268.	2.1	19
5	Abstract initial boundary value problems. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 1994, 124, 879-908.	1.2	18
6	Discrete Absorbing Boundary Conditions for Schrödinger-Type Equations. <i>Construction and Error Analysis. SIAM Journal on Numerical Analysis</i> , 2003, 41, 1824-1850.	2.3	18
7	Optimal orders of convergence for Runge–Kutta methods and linear, initial boundary value problems. <i>Applied Numerical Mathematics</i> , 2003, 44, 1-19.	2.1	16
8	Stability of Runge–Kutta–Nyström methods. <i>Journal of Computational and Applied Mathematics</i> , 2006, 189, 120-131.	2.0	15
9	Avoiding order reduction when integrating reaction–diffusion boundary value problems with exponential splitting methods. <i>Journal of Computational and Applied Mathematics</i> , 2019, 357, 228-250.	2.0	12
10	Order reduction and how to avoid it when explicit Runge–Kutta–Nyström methods are used to solve linear partial differential equations. <i>Journal of Computational and Applied Mathematics</i> , 2005, 176, 293-318.	2.0	11
11	On the convolution operators arising in the study of abstract initial boundary value problems. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 1996, 126, 515-539.	1.2	10
12	A high order finite element discretization with local absorbing boundary conditions of the linear Schrödinger equation. <i>Journal of Computational Physics</i> , 2006, 220, 409-421.	3.8	10
13	Rational methods with optimal order of convergence for partial differential equations. <i>Applied Numerical Mathematics</i> , 2000, 35, 265-292.	2.1	9
14	Discrete absorbing boundary conditions for Schrödinger-type equations. Practical implementation. <i>Mathematics of Computation</i> , 2003, 73, 127-142.	2.1	9
15	Avoiding Order Reduction of Runge–Kutta Discretizations for Linear Time-Dependent Parabolic Problems. <i>BIT Numerical Mathematics</i> , 2004, 44, 1-20.	2.0	9
16	Analysis of order reduction when integrating linear initial boundary value problems with Lawson methods. <i>Applied Numerical Mathematics</i> , 2017, 118, 64-74.	2.1	9
17	Avoiding order reduction when integrating linear initial boundary value problems with exponential splitting methods. <i>IMA Journal of Numerical Analysis</i> , 2018, 38, 1294-1323.	2.9	9
18	Explicit single step methods with optimal order of convergence for partial differential equations. <i>Applied Numerical Mathematics</i> , 1999, 31, 117-131.	2.1	8

#	ARTICLE	IF	CITATIONS
19	Optimal time order when implicit Runge-Kutta-Nyström methods solve linear partial differential equations. Applied Numerical Mathematics, 2008, 58, 539-562.	2.1	8
20	The stability of rational approximations of cosine functions on Hilbert spaces. Applied Numerical Mathematics, 2009, 59, 21-38.	2.1	7
21	Simulation of coherent structures in nonlinear Schrödinger-type equations. Journal of Computational Physics, 2010, 229, 8180-8198.	3.8	7
22	Numerical detection and generation of solitary waves for a nonlinear wave equation. Wave Motion, 2015, 56, 137-146.	2.0	6
23	Time exponential splitting technique for the Klein-Gordon equation with Hagstrom-Warburton high-order absorbing boundary conditions. Journal of Computational Physics, 2016, 311, 196-212.	3.8	6
24	Absorbing boundary conditions and geometric integration: A case study for the wave equation. Mathematics and Computers in Simulation, 2015, 111, 1-16.	4.4	5
25	Stable Runge-Kutta-Nyström methods for dissipative stiff problems. Numerical Algorithms, 2006, 42, 193-203.	1.9	4
26	A proof of the well posedness of discretized wave equation with an absorbing boundary condition. Journal of Numerical Mathematics, 2014, 22, .	3.5	4
27	Efficient Time Integration of Nonlinear Partial Differential Equations by Means of Rosenbrock Methods. Mathematics, 2021, 9, 1970.	2.2	4
28	High order full discretizations of coupled wave equations with absorbing boundary conditions and geometric integration. Journal of Computational Physics, 2014, 265, 16-33.	3.8	3
29	Avoiding order reduction when integrating linear initial boundary value problems with Lawson methods. IMA Journal of Numerical Analysis, 0, , drw052.	2.9	3
30	Time exponential splitting integrator for the Klein-Gordon equation with free parameters in the Hagstrom-Warburton absorbing boundary conditions. Journal of Computational and Applied Mathematics, 2018, 333, 185-199.	2.0	2
31	A self-adjusting algorithm for solitary wave simulations. International Journal of Computer Mathematics, 2013, 90, 2174-2184.	1.8	1
32	Integrating Semilinear Wave Problems with Time-Dependent Boundary Values Using Arbitrarily High-Order Splitting Methods. Mathematics, 2021, 9, 1113.	2.2	1