Juan I Montijano

List of Publications by Year
in descending order

73 papers	1,142 citations	394421 19 h-index	434195 31 g-index
73 all docs	73 docs citations	73 times ranked	397 citing authors

#	Article	IF	Citations
1	Structure preservation of exponentially fitted Rungeâ€“Kutta methods. Journal of Computational and Applied Mathematics, 2008, 218, 421-434.	2.0	79
2	Sixth-order symmetric and symplectic exponentially fitted Rungeâ€“Kutta methods of the Gauss type. Journal of Computational and Applied Mathematics, 2009, 223, 387-398.	2.0	79
3	Sixth-order symmetric and symplectic exponentially fitted modified Rungeâ€“Kutta methods of Gauss type. Computer Physics Communications, 2008, 178, 732-744.	7.5	67
4	Symmetric and symplectic exponentially fitted Rungeâ€“Kutta methods of high order. Computer Physics Communications, 2010, 181, 2044-2056.	7.5	63
5	On high order symmetric and symplectic trigonometrically fitted Runge-Kutta methods withÂanÂeven number of stages. BIT Numerical Mathematics, 2010, 50, 3-21.	2.0	55
6	Robust discrete time dynamic average consensus. Automatica, 2014, 50, 3131-3138.	5.0	55
7	On some new low storage implementations of time advancing Rungeâ€“Kutta methods. Journal of Computational and Applied Mathematics, 2012, 236, 3665-3675.	2.0	51
8	Energy-preserving methods for Poisson systems. Journal of Computational and Applied Mathematics, 2012, 236, 3890-3904.	2.0	48
9	On the Preservation of Invariants by Explicit Runge--Kutta Methods. SIAM Journal of Scientific Computing, 2006, 28, 868-885.	2.8	43
10	Chebyshev Polynomials in Distributed Consensus Applications. IEEE Transactions on Signal Processing, 2013, 61, 693-706.	5.3	37
11	On the effectiveness of spectral methods for the numerical solution of multi-frequency highly oscillatory Hamiltonian problems. Numerical Algorithms, 2019, 81, 345-376.	1.9	31
12	Iterative schemes for three-stage implicit Runge-Kutta methods. Applied Numerical Mathematics, 1995, 17, 363-382.	2.1	28
13	Spectrally accurate space-time solution of Hamiltonian PDEs. Numerical Algorithms, 2019, 81, 1183-1202.	1.9	28
14	A fifth-order interpolant for the Dormand and Prince Runge-Kutta method. Journal of Computational and Applied Mathematics, 1990, 29, 91-100.	2.0	27
15	Explicit Runge-Kutta methods for initial value problems with oscillating solutions. Journal of Computational and Applied Mathematics, 1996, 76, 195-212.	2.0	24
16	Projection methods preserving Lyapunov functions. BIT Numerical Mathematics, 2010, 50, 223-241.	2.0	23
17	High-order energy-conserving Line Integral Methods for charged particle dynamics. Journal of Computational Physics, 2019, 396, 209-227.	3.8	23
18	Stepsize selection for tolerance proportionality in explicit Rungeâ€“Kutta codes. Advances in Computational Mathematics, 1997, 7, 361-382.	1.6	21

#	Article	IF	Citations
19	On the Stability of Variable-Stepsize Nordsieck BDF Methods. SIAM Journal on Numerical Analysis, 1987, 24, 844-854.	2.3	19
20	An efficient family of strongly <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si30.gif" display="inline" overflow="scroll"><mml:mi>A</mml:mi></mml:math>-stable Rungeâ€“Kutta collocation methods for stiff systems and DAEs. Part I: Stability and order results. Journal of Computational and Applied Mathematics, 2010, 234, 1105-1116.	2.0	19
21	A new embedded pair of Runge-Kutta formulas of orders 5 and 6. Computers and Mathematics With Applications, 1990, 20, 15-24.	2.7	17
22	Iterative schemes for Gauss methods. Computers and Mathematics With Applications, 1994, 27, 67-81.	2.7	16
23	Error growth in the numerical integration of periodic orbits. Mathematics and Computers in Simulation, 2011, 81, 2646-2661.	4.4	14
24	Global error estimation based on the tolerance proportionality for some adaptive Rungeâ€“Kutta codes. Journal of Computational and Applied Mathematics, 2008, 218, 329-341.	2.0	13
25	On the change of step size in multistep codes. Numerical Algorithms, 1993, 4, 283-304.	1.9	12
26	Global error estimation with adaptive explicit Runge-Kutta methods. IMA Journal of Numerical Analysis, 1996, 16, 47-63.	2.9	12
27	Implementation of high-order implicit runge-kutta methods. Computers and Mathematics With Applications, 2001, 41, 1009-1024.	2.7	11
28	An efficient family of strongly A-stable Rungeâ€“Kutta collocation methods for stiff systems and DAEs. Part II: Convergence results. Applied Numerical Mathematics, 2012, 62, 1349-1360.	2.1	11
29	Rungeâ€“Kutta projection methods with low dispersion and dissipation errors. Advances in Computational Mathematics, 2015, 41, 231-251.	1.6	11
30	Two-step error estimators for implicit Runge--Kutta methods applied to stiff systems. ACM Transactions on Mathematical Software, 2004, 30, 1-18.	2.9	10
31	Approximate compositions of a near identity map by multi-revolution Runge-Kutta methods. Numerische Mathematik, 2004, 97, 635-666.	1.9	10
32	Adaptive consensus and algebraic connectivity estimation in sensor networks with chebyshev polynomials. , 2011, , .		10
33	Optimal starters for solving the elliptic Keplerâ€™s equation. Celestial Mechanics and Dynamical Astronomy, 2013, 115, 143-160.	1.4	10
34	Algorithm 968. ACM Transactions on Mathematical Software, 2017, 43, 1-14.	2.9	10
35	A viscous modified Gompertz model for the analysis of the kinetics of tumors under electrochemical therapy. Mathematics and Computers in Simulation, 2018, 151, 96-110.	4.4	10
36	On the derivation of explicit two-step peer methods. Applied Numerical Mathematics, 2011, 61, 395-409.	2.1	9

#	Article	IF	Citations
37	Step size analysis in discrete-time dynamic average consensus. , 2014, , .		9
38	A0-stability of variable stepsize BDF methods. Journal of Computational and Applied Mathematics, 1993, 45, 29-39.	2.0	8
39	Starting algorithms for Gauss Runge-Kutta methods for Hamiltonian systems. Computers and Mathematics With Applications, 2003, 45, 401-410.	2.7	8
40	Two-Step High Order Starting Values for Implicit Rungeâ€"Kutta Methods. Advances in Computational Mathematics, 2003, 19, 401-412.	1.6	7
41	Variable-order starting algorithms for implicit Runge?Kutta methods on stiff problems*1. Applied Numerical Mathematics, 2003, 44, 77-94.	2.1	7
42	Fast distributed consensus with Chebyshev polynomials. , 2011, , .		7
43	Numerical methods for non conservative perturbations of conservative problems. Computer Physics Communications, 2015, 187, 72-82.	7.5	7
44	On the Solution of Discontinuous IVPs by Adaptive Rungeâ€"Kutta Codes. Numerical Algorithms, 2003, 33, 163-182.	1.9	6
45	On explicit multi-revolution Rungeâ€"Kutta schemes. Advances in Computational Mathematics, 2007, 26, 105-120.	1.6	6
46	Approximate preservation of quadratic first integrals by explicit Rungeâ€"Kutta methods. Advances in Computational Mathematics, 2010, 32, 255-274.	1.6	6
47	Fast distributed algebraic connectivity estimation in large scale networks. Journal of the Franklin Institute, 2017, 354, 5421-5442.	3.4	6
48	New formulation of the Gompertz equation to describe the kinetics of untreated tumors. PLoS ONE, 2019, 14, e0224978.	2.5	6
49	A note on the stability of timeâ€"accurate and highlyâ€"stable explicit operators for stiff differential equations. Journal of Computational Physics, 2021, 436, 110316.	3.8	6
50	Functionally Fitted Explicit Two Step Peer Methods. Journal of Scientific Computing, 2015, 64, 938-958.	2.3	5
51	Doseâ€response study for the highly aggressive and metastatic primary F3II mammary carcinoma under direct current. Bioelectromagnetics, 2018, 39, 460-475.	1.6	5
52	Improving the efficiency of the iterative schemes for implicit Runge-Kutta methods. Journal of Computational and Applied Mathematics, 1996, 66, 227-238.	2.0	4
53	On the convergence of Runge-Kutta methods for stiff non linear differential equations. Numerische Mathematik, 1998, 81, 31-51.	1.9	4
54	Stabilized starting algorithms for collocation Runge-Kutta methods. Computers and Mathematics With Applications, 2003, 45, 411-428.	2.7	4

#	ARTICLE	IF	CITATIONS
55	Explicit Rungeâ€“Kutta Methods for Stiff Problems with a Gap in Their Eigenvalue Spectrum. Journal of Scientific Computing, 2018, 77, 1055-1083.	2.3	4
56	A polyvalent Runge-Kutta triple. Applied Numerical Mathematics, 1994, 15, 13-26.	2.1	3
57	On the numerical integration of orthogonal flows with Rungeâ€“Kutta methods. Journal of Computational and Applied Mathematics, 2000, 115, 121-135.	2.0	3
58	On the iterative solution of the algebraic equations in fully implicit Runge-Kutta methods. Numerical Algorithms, 2000, 23, 97-113.	1.9	3
59	Efficacy of direct current generated by multiple-electrode arrays on F3II mammary carcinoma: experiment and mathematical modeling. Journal of Translational Medicine, 2020, 18, 190.	4.4	3
60	On the existence of solution of stage equations in implicit Rungeâ€“Kutta methods. Journal of Computational and Applied Mathematics, 1999, 111, 25-36.	2.0	2
61	Initializers for RK-Gauss methods based on pseudo-symplecticity. Journal of Computational and Applied Mathematics, 2006, 189, 228-241.	2.0	2
62	Spatio temporal dynamics of direct current in treated anisotropic tumors. Mathematics and Computers in Simulation, 2023, 203, 609-632.	4.4	2
63	A note on the error growth in the numerical integration of periodic orbits. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2020047-2020048.	0.2	1
64	Some Optimal Rungeâ€Kutta Collocation Methods for Stiff Problems and DAEs. , 2008, , .		1
65	Optimization of Spatial and Minimum Storage RK Schemes for Computational Acoustics. , 2009, , .		1
66	On The Stability of Variable Stepsize Adams Methods in Nordsieck Form. North-Holland Mathematics Studies, 1987, , 193-203.	0.2	0
67	A Code Based on Gauss Methods for Second Order Differential Systems. AIP Conference Proceedings, 2007, , .	0.4	0
68	On the Long Time Error of First Integrals of Some Numerical Integrators. , 2008, , .		0
69	On the Preservation of Lyapunov Functions by Rungeâ€"Kutta Methods. , 2009, , .		0
70	Recent Advances on Preserving Methods for Poisson Systems. , 2011, , .		0
71	Exponential fitting techniques for the solution of stiff problems with explicit methods. AIP Conference Proceedings, 2015, , .	0.4	0
72	On the numerical stability of the exponentially fitted methods for first order IVPs. Applied Mathematics and Computation, 2020, 379, 125249.	2.2	0

#	Article	IF	Citations
73	Variable Step-Size Control Based on Two-Steps for Radau IIA Methods. ACM Transactions on Mathematical Software, 2020, 46, 1-24.	2.9	0