Raymond J Spiteri

List of Publications by Year
in descending order

93 papers	3,637 citations	257450 24 h-index	133252 59 g-index
105 all docs	105 docs citations	105 times ranked	3483 citing authors

#	Article	IF	Citations
1	Qualitative property preservation of high-order operator splitting for the SIR model. Applied Numerical Mathematics, 2022, 172, 332-350.	2.1	5
2	Nonlinear regimes of the electron cyclotron drift instability in Vlasov simulations. Physics of Plasmas, 2022, 29, .	1.9	8
3	Using Twitter to Examine Stigma Against People With Dementia During COVID-19: Infodemiology Study. JMIR Aging, 2022, 5, e35677.	3.0	13
4	A new very simply explicitly invertible approximation for the standard normal cumulative distribution function. AIMS Mathematics, 2022, 7, 11635-11646.	1.6	4
5	When and how to split? A comparison of two IMEX splitting techniques for solving advection-diffusion-reaction equations. Journal of Computational and Applied Mathematics, 2022, , 114418.	2.0	1
6	Examining the Impact of COVID-19 on People With Dementia From the Perspective of Family and Friends: Thematic Analysis of Tweets. JMIR Aging, 2022, 5, e38363.	3.0	0
7	The Application of Machine Learning to a General Risk–Need Assessment Instrument in the Prediction of Criminal Recidivism. Criminal Justice and Behavior, 2021, 48, 518-538.	1.8	21
8	Using Twitter to Understand the COVID-19 Experiences of People With Dementia: Infodemiology Study. Journal of Medical Internet Research, 2021, 23, e26254.	4.3	36
9	Backward waves in the nonlinear regime of the Buneman instability. Physics of Plasmas, 2021, 28, .	1.9	6
10	The numerical implementation of land models: Problem formulation and laugh tests. Journal of Hydrometeorology, 2021, , .	1.9	7
11	Performance improvements to modern hydrological models via lookup table optimizations. Environmental Modelling and Software, 2021, 139, 105018.	4.5	2
12	WDPM: the Wetland DEM Ponding Model. Journal of Open Source Software, 2021, 6, 2276.	4.6	0
13	Structural analysis of integro-differential–algebraic equations. Journal of Computational and Applied Mathematics, 2021, 394, 113568.	2.0	0
14	A Simulation-Based Method to Study the LQT1 Syndrome Remotely Using the EMI Model. Advances in Science, Technology and Innovation, 2021, , 179-189.	0.4	5
15	The role of noise in PIC and Vlasov simulations of the Buneman instability. Physics of Plasmas, 2021, 28, .	1.9	6
16	Inherent structure landscape of hard spheres confined to narrow cylindrical channels. Physical Review E, 2021, 104, 064602.	2.1	0
17	Efficient partitioned numerical integrators for myocardial cell models. Applied Mathematics and Computation, 2020, 366, 124738.	2.2	1
18	Deferred Correction Methods for Ordinary Differential Equations. Journal of Scientific Computing, 2020, 83, 1.	2.3	10

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19	A Finite Volume Blowing Snow Model for Use With Variable Resolution Meshes. Water Resources Research, 2020, 56, e2019WR025307.	4.2	29
20	Chaste: Cancer, Heart and Soft Tissue Environment. Journal of Open Source Software, 2020, 5, 1848.	4.6	58
21	Direct Function Evaluation versus Lookup Tables: When to Use Which?. SIAM Journal of Scientific Computing, 2019, 41, C194-C218.	2.8	3
22	The effect of soft repulsive interactions on the diffusion of particles in quasi-one-dimensional channels: A hopping time approach. Journal of Chemical Physics, 2019, 150, 224501.	3.0	3
23	A comparison of fourth-order operator splitting methods for cardiac simulations. Applied Numerical Mathematics, 2019, 145, 227-235.	2.1	7
24	Analyzing dominant particle-flow structures inside a bubbling fluidized bed. International Journal of Heat and Fluid Flow, 2019, 77, 232-241.	2.4	4
25	Extended BACOLI. ACM Transactions on Mathematical Software, 2019, 45, 1-19.	2.9	3
26	Gating-enhanced IMEX splitting methods for cardiac monodomain simulation. Numerical Algorithms, 2019, 81, 1443-1457.	1.9	4
27	Mother Tree Optimization. , 2019, , .		4
28	High-Order Operator Splitting for the Bidomain and Monodomain Models. SIAM Journal of Scientific Computing, 2018, 40, A769-A786.	2.8	9
29	Incoherent Scatter Spectra Based On Monte Carlo Simulations of Ion Velocity Distributions Under Strong Ion Frictional Heating. Radio Science, 2018, 53, 269-287.	1.6	5
30	Effect of particle stress tensor in simulations of dense gas–particle flows in fluidized beds. Particuology, 2018, 38, 31-43.	3.6	10
31	A comprehensive assessment of different wall boundary conditions on the simulation of bubbling fluidized beds. International Journal of Multiphase Flow, 2018, 99, 500-511.	3.4	6
32	High-Order Operator-Splitting Methods for the Bidomain and Monodomain Models. SEMA SIMAI Springer Series, 2018, , 23-40.	0.7	0
33	Quantum control for high-fidelity multi-qubit gates. New Journal of Physics, 2018, 20, 113009.	2.9	19
34	Consumerism, Waste, and Re-Use in Twentieth-Century Fiction: Legacies of the Avant-Garde by Rachele Dini. Modernism/Modernity, 2018, 25, 618-620.	0.0	0
35	Energy budget analysis of a dense gas-particle flow inside a fluidized bed. Powder Technology, 2018, 340, 154-162.	4.2	0
36	Multi-objective unstructured triangular mesh generation for use in hydrological and land surface models. Computers and Geosciences, 2018, 119, 49-67.	4.2	18

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37	Fast automated airborne electromagnetic data interpretation using parallelized particle swarm optimization. Computers and Geosciences, 2017, 109, 268-280.	4.2	8
38	Monte-Carlo simulations of ion velocity distributions and resulting incoherent radar spectra under strong ion frictional heating conditions. , 2017, , .		0
39	Operator splitting for the bidomain model revisited. Journal of Computational and Applied Mathematics, 2016, 296, 550-563.	2.0	10
40	Extending BACOLI to Solve the Monodomain Model. , 2016, , 447-457.		1
41	Revisionist integral deferred correction with adaptive step-size control. Communications in Applied Mathematics and Computational Science, 2015, 10, 1-25.	1.8	11
42	An analysis of errors caused by leakage currents and unintentional potential groundings in the electrical resistivity method. Journal of Applied Geophysics, 2015, 114, 251-258.	2.1	0
43	A CPFD model for a bubbly biomassâ€"sand fluidized bed. Powder Technology, 2015, 275, 39-50.	4.2	35
44	odeToJava. ACM Transactions on Mathematical Software, 2015, 41, 1-33.	2.9	0
45	Stable time integration suppresses unphysical oscillations in the bidomain model. Frontiers in Physics, 2014, 2, .	2.1	8
46	3â€Ð laser images of splashâ€form tektites and their use in aerodynamic numerical simulations of tektite formation. Meteoritics and Planetary Science, 2014, 49, 740-749.	1.6	3
47	Understanding the Effect of Kinetic and Mass Transport Processes in Cathode Agglomerates. Journal of the Electrochemical Society, 2014, 161, E3125-E3137.	2.9	62
48	A transition state theory for calculating hopping times and diffusion in highly confined fluids. Journal of Chemical Physics, 2014, 140, 024505.	3.0	12
49	Cellular cardiac electrophysiology modeling with Chaste and CellML. Frontiers in Physiology, 2014, 5, 511.	2.8	27
50	A study of singular modes associated with over-reflection and related phenomena. Journal of Fluid Mechanics, 2013, 728, 120-145.	3.4	2
51	Efficient SIMD solution of multiple systems of stiff IVPs. Journal of Computational Science, 2013, 4, 377-385.	2.9	7
52	Study of factors affecting syngas quality and their interactions in fluidized bed gasification of lignite coal. Fuel, 2013, 103, 308-320.	6.4	75
53	Modeling and simulation of the CLS cryogenic system. Applied Mathematical Modelling, 2013, 37, 34-49.	4.2	2
54	A Runge-Kutta BVODE Solver with Global Error and Defect Control. ACM Transactions on Mathematical Software, 2013, 39, 1-22.	2.9	8

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55	How linear features alter predator movement and the functional response. Interface Focus, 2012, 2, 205-216.	3.0	137
56	Single file and normal dual mode diffusion in highly confined hard sphere mixtures under flow. Journal of Chemical Physics, 2012, 137, 104501.	3.0	4
57	Convergence order vs. parallelism in the numerical simulation of the bidomain equations. Journal of Physics: Conference Series, 2012, 385, 012009.	0.4	3
58	The Secrets to the Success of the Rushâ€"Larsen Method and its Generalizations. IEEE Transactions on Biomedical Engineering, 2012, 59, 2506-2515.	4.2	42
59	Step-optimized Particle Swarm Optimization. , 2012, , .		4
60	Implications of mountain shading on calculating energy for snowmelt using unstructured triangular meshes. Hydrological Processes, 2012, 26, 1767-1778.	2.6	52
61	The shape distribution of splash-form tektites predicted by numerical simulations of rotating fluid drops. Journal of Fluid Mechanics, 2011, 667, 358-368.	3.4	20
62	Stiffness Analysis of Cardiac Electrophysiological Models. Annals of Biomedical Engineering, 2010, 38, 3592-3604.	2.5	22
63	Time stepping for vectorial operator splitting. Journal of Computational and Applied Mathematics, 2010, 235, 460-469.	2.0	1
64	He's healthy, but will he survive the plague? Possible constraints on mate choice for disease resistance. Animal Behaviour, 2009, 77, 67-78.	1.9	39
65	CO_2 + CH_4 Chemistry over Pd: Results of Kinetic Simulations Relevant to Environmental Issues. Journal of Physical Chemistry C, 2009, 113, 2340-2346.	3.1	8
66	On Converting Any One-Step Method to a Variational Integrator of the Same Order. , 2009, , .		3
67	Observations on the fifth-order WENO method with non-uniform meshes. Applied Mathematics and Computation, 2008, 196, 433-447.	2.2	30
68	Two uses for updating the partial singular value decomposition in latent semantic indexing. Applied Numerical Mathematics, 2008, 58, 499-510.	2.1	5
69	On the Performance of an Implicitâ€"Explicit Runge--Kutta Method in Models of Cardiac Electrical Activity. IEEE Transactions on Biomedical Engineering, 2008, 55, 1488-1495.	4.2	29
70	Linear Instability of the Fifth-Order WENO Method. SIAM Journal on Numerical Analysis, 2007, 45, 1871-1901.	2.3	66
71	A comparison of non-standard solvers for ODEs describing cellular reactions in the heart. Computer Methods in Biomechanics and Biomedical Engineering, 2007, 10, 317-326.	1.6	24
72	Updating the partial singular value decomposition in latent semantic indexing. Computational Statistics and Data Analysis, 2007, 52, 174-183.	1.2	19

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73	ASYMPTOTICALLY CONSISTENT NON-STANDARD FINITE-DIFFERENCE METHODS FOR SOLVING MATHEMATICAL MODELS ARISING IN POPULATION BIOLOGY. , 2005, , 385-421.		12
74	Reduction of intrinsic kinetic and thermodynamic barriers for enzyme-catalysed proton transfers from carbon acid substrates. Journal of Theoretical Biology, 2005, 233, 563-571.	1.7	5
75	Female choice for male immunocompetence: when is it worth it?. Behavioral Ecology, 2005, 16, 871-879.	2.2	26
76	Optimal HIV treatment by maximising immune response. Journal of Mathematical Biology, 2004, 48, 545-562.	1.9	183
77	The control of linear time-periodic systems using Floquetâ€"Lyapunov theory. International Journal of Control, 2004, 77, 472-490.	1.9	69
78	A Gramian-Based Controller for Linear Periodic Systems. IEEE Transactions on Automatic Control, 2004, 49, 1380-1385.	5.7	19
79	High-Order Strong-Stability-Preserving Runge--Kutta Methods with Downwind-Biased Spatial Discretizations. SIAM Journal on Numerical Analysis, 2004, 42, 974-996.	2.3	61
80	Real Floquet factors of linear time-periodic systems. Systems and Control Letters, 2003, 50, 251-262.	2.3	30
81	Non-linear evolution using optimal fourth-order strong-stability-preserving Rungeâ€"Kutta methods. Mathematics and Computers in Simulation, 2003, 62, 125-135.	4.4	74
82	An Efficient Non-standard Finite Difference Scheme for an Ionic Model of Cardiac Action Potentials. Journal of Difference Equations and Applications, 2003, 9, 1069-1081.	1.1	10
83	Monotonicity-Preserving Linear Multistep Methods. SIAM Journal on Numerical Analysis, 2003, 41, 605-623.	2.3	78
84	Inverting Gravitational Lenses. SIAM Review, 2002, 44, 111-130.	9.5	4
85	A Predicted Sequential Regularization Method for Index-2 Hessenberg DAEs. SIAM Journal on Numerical Analysis, 2002, 39, 1889-1913.	2.3	4
86	A New Class of Optimal High-Order Strong-Stability-Preserving Time Discretization Methods. SIAM Journal on Numerical Analysis, 2002, 40, 469-491.	2.3	902
87	Two Barriers on Strong-Stability-Preserving Time Discretization Methods. Journal of Scientific Computing, 2002, 17, 211-220.	2.3	70
88	The continuous spectrum for a boundary layer in a streamwise pressure gradient. Physics of Fluids, 2001, 13, 1294-1299.	4.0	12
89	Pitfalls of a least-squares-equivalent controller for linear, time-periodic systems. International Journal of Control, 2001, 74, 199-204.	1.9	8
90	Programming and control of robots by means of differential algebraic inequalities. IEEE Transactions on Automation Science and Engineering, 2000, 16, 135-145.	2.3	16

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91	Implicit-explicit Runge-Kutta methods for time-dependent partial differential equations. Applied Numerical Mathematics, 1997, 25, 151-167.	2.1	854
92	Collocation Software for Boundary Value Differential-Algebraic Equations. SIAM Journal of Scientific Computing, 1994, 15, 938-952.	2.8	89
93	Chaos in extended linear arrays of Josephson weak links. Physical Review B, 1989, 40, 11294-11296.	3.2	3