# Raymond J Spiteri

List of Publications by Year
in descending order

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

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | 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 |
| 2 | Implicit-explicit Runge-Kutta methods for time-dependent partial differential equations. Applied Numerical Mathematics, 1997, 25, 151-167. | 2.1 | 854 |
| 3 | Optimal HIV treatment by maximising immune response. Journal of Mathematical Biology, 2004, 48, 545-562. | 1.9 | 183 |
| 4 | How linear features alter predator movement and the functional response. Interface Focus, 2012, 2, 205-216. | 3.0 | 137 |
| 5 | Collocation Software for Boundary Value Differential-Algebraic Equations. SIAM Journal of Scientific Computing, 1994, 15, 938-952. | 2.8 | 89 |
| 6 | Monotonicity-Preserving Linear Multistep Methods. SIAM Journal on Numerical Analysis, 2003, 41, 605-623. | 2.3 | 78 |
| 7 | Study of factors affecting syngas quality and their interactions in fluidized bed gasification of lignite coal. Fuel, 2013, 103, 308-320. | 6.4 | 75 |
| 8 | Non-linear evolution using optimal fourth-order strong-stability-preserving Runge–Kutta methods. Mathematics and Computers in Simulation, 2003, 62, 125-135. | 4.4 | 74 |
| 9 | Two Barriers on Strong-Stability-Preserving Time Discretization Methods. Journal of Scientific Computing, 2002, 17, 211-220. | 2.3 | 70 |
| 10 | The control of linear time-periodic systems using Floquet–Lyapunov theory. International Journal of Control, 2004, 77, 472-490. | 1.9 | 69 |
| 11 | Linear Instability of the Fifth-Order WENO Method. SIAM Journal on Numerical Analysis, 2007, 45, 1871-1901. | 2.3 | 66 |
| 12 | Understanding the Effect of Kinetic and Mass Transport Processes in Cathode Agglomerates. Journal of the Electrochemical Society, 2014, 161, E3125-E3137. | 2.9 | 62 |
| 13 | 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 |
| 14 | Chaste: Cancer, Heart and Soft Tissue Environment. Journal of Open Source Software, 2020, 5, 1848. | 4.6 | 58 |
| 15 | Implications of mountain shading on calculating energy for snowmelt using unstructured triangular meshes. Hydrological Processes, 2012, 26, 1767-1778. | 2.6 | 52 |
| 16 | The Secrets to the Success of the Rush–Larsen Method and its Generalizations. IEEE Transactions on Biomedical Engineering, 2012, 59, 2506-2515. | 4.2 | 42 |
| 17 | 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 |
| 18 | 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 |

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|---|---------|-----|-----------|
| 19 | A CPFD model for a bubbly biomass–sand fluidized bed. Powder Technology, 2015, 275, 39-50. | 4.2 | 35 |
| 20 | Real Floquet factors of linear time-periodic systems. Systems and Control Letters, 2003, 50, 251-262. | 2.3 | 30 |
| 21 | Observations on the fifth-order WENO method with non-uniform meshes. Applied Mathematics and Computation, 2008, 196, 433-447. | 2.2 | 30 |
| 22 | On the Performance of an Implicit–Explicit Runge--Kutta Method in Models of Cardiac Electrical Activity. IEEE Transactions on Biomedical Engineering, 2008, 55, 1488-1495. | 4.2 | 29 |
| 23 | A Finite Volume Blowing Snow Model for Use With Variable Resolution Meshes. Water Resources Research, 2020, 56, e2019WR025307. | 4.2 | 29 |
| 24 | Cellular cardiac electrophysiology modeling with Chaste and CellML. Frontiers in Physiology, 2014, 5, 511. | 2.8 | 27 |
| 25 | Female choice for male immunocompetence: when is it worth it?. Behavioral Ecology, 2005, 16, 871-879. | 2.2 | 26 |
| 26 | 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 |
| 27 | Stiffness Analysis of Cardiac Electrophysiological Models. Annals of Biomedical Engineering, 2010, 38, 3592-3604. | 2.5 | 22 |
| 28 | 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 |
| 29 | 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 |
| 30 | A Gramian-Based Controller for Linear Periodic Systems. IEEE Transactions on Automatic Control, 2004, 49, 1380-1385. | 5.7 | 19 |
| 31 | Updating the partial singular value decomposition in latent semantic indexing. Computational Statistics and Data Analysis, 2007, 52, 174-183. | 1.2 | 19 |
| 32 | Quantum control for high-fidelity multi-qubit gates. New Journal of Physics, 2018, 20, 113009. | 2.9 | 19 |
| 33 | Multi-objective unstructured triangular mesh generation for use in hydrological and land surface models. Computers and Geosciences, 2018, 119, 49-67. | 4.2 | 18 |
| 34 | 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 |
| 35 | Using Twitter to Examine Stigma Against People With Dementia During COVID-19: Infodemiology Study. JMIR Aging, 2022, 5, e35677. | 3.0 | 13 |
| 36 | The continuous spectrum for a boundary layer in a streamwise pressure gradient. Physics of Fluids, 2001, 13, 1294-1299. | 4.0 | 12 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|-----|-----------|
| 37 | ASYMPTOTICALLY CONSISTENT NON-STANDARD FINITE-DIFFERENCE METHODS FOR SOLVING MATHEMATICAL MODELS ARISING IN POPULATION BIOLOGY. , 2005, , 385-421. | | 12 |
| 38 | A transition state theory for calculating hopping times and diffusion in highly confined fluids. Journal of Chemical Physics, 2014, 140, 024505. | 3.0 | 12 |
| 39 | Revisionist integral deferred correction with adaptive step-size control. Communications in Applied Mathematics and Computational Science, 2015, 10, 1-25. | 1.8 | 11 |
| 40 | 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 |
| 41 | Operator splitting for the bidomain model revisited. Journal of Computational and Applied Mathematics, 2016, 296, 550-563. | 2.0 | 10 |
| 42 | Effect of particle stress tensor in simulations of dense gas–particle flows in fluidized beds. Particuology, 2018, 38, 31-43. | 3.6 | 10 |
| 43 | Deferred Correction Methods for Ordinary Differential Equations. Journal of Scientific Computing, 2020, 83, 1. | 2.3 | 10 |
| 44 | High-Order Operator Splitting for the Bidomain and Monodomain Models. SIAM Journal of Scientific Computing, 2018, 40, A769-A786. | 2.8 | 9 |
| 45 | Pitfalls of a least-squares-equivalent controller for linear, time-periodic systems. International Journal of Control, 2001, 74, 199-204. | 1.9 | 8 |
| 46 | $CO_2$ + $CH_4$ Chemistry over Pd: Results of Kinetic Simulations Relevant to Environmental Issues. Journal of Physical Chemistry C, 2009, 113, 2340-2346. | 3.1 | 8 |
| 47 | A Runge-Kutta BVODE Solver with Global Error and Defect Control. ACM Transactions on Mathematical Software, 2013, 39, 1-22. | 2.9 | 8 |
| 48 | Stable time integration suppresses unphysical oscillations in the bidomain model. Frontiers in Physics, 2014, 2, . | 2.1 | 8 |
| 49 | Fast automated airborne electromagnetic data interpretation using parallelized particle swarm optimization. Computers and Geosciences, 2017, 109, 268-280. | 4.2 | 8 |
| 50 | Nonlinear regimes of the electron cyclotron drift instability in Vlasov simulations. Physics of Plasmas, 2022, 29, . | 1.9 | 8 |
| 51 | Efficient SIMD solution of multiple systems of stiff IVPs. Journal of Computational Science, 2013, 4, 377-385. | 2.9 | 7 |
| 52 | A comparison of fourth-order operator splitting methods for cardiac simulations. Applied Numerical Mathematics, 2019, 145, 227-235. | 2.1 | 7 |
| 53 | The numerical implementation of land models: Problem formulation and laugh tests. Journal of Hydrometeorology, 2021, , . | 1.9 | 7 |
| 54 | 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 |

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|---|---------|-----|-----------|
| 55 | Backward waves in the nonlinear regime of the Buneman instability. Physics of Plasmas, 2021, 28, . | 1.9 | 6 |
| 56 | The role of noise in PIC and Vlasov simulations of the Buneman instability. Physics of Plasmas, 2021, 28, . | 1.9 | 6 |
| 57 | 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 |
| 58 | Two uses for updating the partial singular value decomposition in latent semantic indexing. Applied Numerical Mathematics, 2008, 58, 499-510. | 2.1 | 5 |
| 59 | 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 |
| 60 | 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 |
| 61 | Qualitative property preservation of high-order operator splitting for the SIR model. Applied Numerical Mathematics, 2022, 172, 332-350. | 2.1 | 5 |
| 62 | Inverting Gravitational Lenses. SIAM Review, 2002, 44, 111-130. | 9.5 | 4 |
| 63 | A Predicted Sequential Regularization Method for Index-2 Hessenberg DAEs. SIAM Journal on Numerical Analysis, 2002, 39, 1889-1913. | 2.3 | 4 |
| 64 | 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 |
| 65 | Step-optimized Particle Swarm Optimization. , 2012, , . | | 4 |
| 66 | Analyzing dominant particle-flow structures inside a bubbling fluidized bed. International Journal of Heat and Fluid Flow, 2019, 77, 232-241. | 2.4 | 4 |
| 67 | Gating-enhanced IMEX splitting methods for cardiac monodomain simulation. Numerical Algorithms, 2019, 81, 1443-1457. | 1.9 | 4 |
| 68 | Mother Tree Optimization. , 2019, , . | | 4 |
| 69 | A new very simply explicitly invertible approximation for the standard normal cumulative distribution function. AIMS Mathematics, 2022, 7, 11635-11646. | 1.6 | 4 |
| 70 | Chaos in extended linear arrays of Josephson weak links. Physical Review B, 1989, 40, 11294-11296. | 3.2 | 3 |
| 71 | Convergence order vs. parallelism in the numerical simulation of the bidomain equations. Journal of Physics: Conference Series, 2012, 385, 012009. | 0.4 | 3 |
| 72 | 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 |

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| 73 | Direct Function Evaluation versus Lookup Tables: When to Use Which?. SIAM Journal of Scientific Computing, 2019, 41, C194-C218. | 2.8 | 3 |
| 74 | 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 |
| 75 | Extended BACOLI. ACM Transactions on Mathematical Software, 2019, 45, 1-19. | 2.9 | 3 |
| 76 | On Converting Any One-Step Method to a Variational Integrator of the Same Order. , 2009, , . | | 3 |
| 77 | A study of singular modes associated with over-reflection and related phenomena. Journal of Fluid Mechanics, 2013, 728, 120-145. | 3.4 | 2 |
| 78 | Modeling and simulation of the CLS cryogenic system. Applied Mathematical Modelling, 2013, 37, 34-49. | 4.2 | 2 |
| 79 | Performance improvements to modern hydrological models via lookup table optimizations. Environmental Modelling and Software, 2021, 139, 105018. | 4.5 | 2 |
| 80 | Time stepping for vectorial operator splitting. Journal of Computational and Applied Mathematics, 2010, 235, 460-469. | 2.0 | 1 |
| 81 | Efficient partitioned numerical integrators for myocardial cell models. Applied Mathematics and Computation, 2020, 366, 124738. | 2.2 | 1 |
| 82 | Extending BACOLI to Solve the Monodomain Model. , 2016, , 447-457. | | 1 |
| 83 | 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 |
| 84 | 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 |
| 85 | odeToJava. ACM Transactions on Mathematical Software, 2015, 41, 1-33. | 2.9 | 0 |
| 86 | Monte-Carlo simulations of ion velocity distributions and resulting incoherent radar spectra under strong ion frictional heating conditions. , 2017, , . | | 0 |
| 87 | High-Order Operator-Splitting Methods for the Bidomain and Monodomain Models. SEMA SIMAI Springer Series, 2018, , 23-40. | 0.7 | 0 |
| 88 | 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 |
| 89 | Energy budget analysis of a dense gas-particle flow inside a fluidized bed. Powder Technology, 2018, 340, 154-162. | 4.2 | 0 |
| 90 | WDPM: the Wetland DEM Ponding Model. Journal of Open Source Software, 2021, 6, 2276. | 4.6 | 0 |

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| 91 | Structural analysis of integro-differential–algebraic equations. Journal of Computational and Applied Mathematics, 2021, 394, 113568. | 2.0 | 0 |
| 92 | Inherent structure landscape of hard spheres confined to narrow cylindrical channels. Physical Review E, 2021, 104, 064602. | 2.1 | 0 |
| 93 | 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 |