

Kevin Burrage

List of Publications by Citations

Source: <https://exaly.com/author-pdf/6276876/kevin-burrage-publications-by-citations.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

202
papers

8,079
citations

49
h-index

84
g-index

226
ext. papers

9,054
ext. citations

3.5
avg, IF

6.27
L-index

#	Paper	IF	Citations
202	Stability and convergence of the difference methods for the space-time fractional advection-diffusion equation. <i>Applied Mathematics and Computation</i> , 2007 , 191, 12-20	2.7	384
201	Stochastic approaches for modelling in vivo reactions. <i>Computational Biology and Chemistry</i> , 2004 , 28, 165-78	3.6	241
200	A Crank-Nicolson ADI Spectral Method for a Two-Dimensional Riesz Space Fractional Nonlinear Reaction-Diffusion Equation. <i>SIAM Journal on Numerical Analysis</i> , 2014 , 52, 2599-2622	2.4	240
199	Stability Criteria for Implicit Runge-Kutta Methods. <i>SIAM Journal on Numerical Analysis</i> , 1979 , 16, 46-57	2.4	219
198	Binomial leap methods for simulating stochastic chemical kinetics. <i>Journal of Chemical Physics</i> , 2004 , 121, 10356-64	3.9	217
197	Fourier spectral methods for fractional-in-space reaction-diffusion equations. <i>BIT Numerical Mathematics</i> , 2014 , 54, 937-954	1.7	215
196	Oscillatory regulation of Hes1: Discrete stochastic delay modelling and simulation. <i>PLoS Computational Biology</i> , 2006 , 2, e117	5	193
195	Non-linear stability of a general class of differential equation methods. <i>BIT Numerical Mathematics</i> , 1980 , 20, 185-203	1.7	182
194	ISIS, the intron information system, reveals the high frequency of alternative splicing in the human genome. <i>Nature Genetics</i> , 2000 , 24, 340-1	36.3	179
193	Stochastic models for regulatory networks of the genetic toggle switch. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 8372-7	11.5	170
192	Numerical method and analytical technique of the modified anomalous subdiffusion equation with a nonlinear source term. <i>Journal of Computational and Applied Mathematics</i> , 2009 , 231, 160-176	2.4	159
191	Identifying optimal lipid raft characteristics required to promote nanoscale protein-protein interactions on the plasma membrane. <i>Molecular and Cellular Biology</i> , 2006 , 26, 313-23	4.8	156
190	A new fractional finite volume method for solving the fractional diffusion equation. <i>Applied Mathematical Modelling</i> , 2014 , 38, 3871-3878	4.5	150
189	Numerical methods and analysis for a class of fractional advection-dispersion models. <i>Computers and Mathematics With Applications</i> , 2012 , 64, 2990-3007	2.7	146
188	An Efficient Implicit FEM Scheme for Fractional-in-Space Reaction-Diffusion Equations. <i>SIAM Journal of Scientific Computing</i> , 2012 , 34, A2145-A2172	2.6	141
187	A special family of Runge-Kutta methods for solving stiff differential equations. <i>BIT Numerical Mathematics</i> , 1978 , 18, 22-41	1.7	134
186	Fractional diffusion models of cardiac electrical propagation: role of structural heterogeneity in dispersion of repolarization. <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20140352	4.1	132

185	Analytical solutions for the multi-term time-space Caputo-Riesz fractional advection-diffusion equations on a finite domain. <i>Journal of Mathematical Analysis and Applications</i> , 2012 , 389, 1117-1127	1.1	132
184	Restarted GMRES preconditioned by deflation. <i>Journal of Computational and Applied Mathematics</i> , 1996 , 69, 303-318	2.4	128
183	Finite difference methods and a fourier analysis for the fractional reaction-subdiffusion equation. <i>Applied Mathematics and Computation</i> , 2008 , 198, 754-769	2.7	123
182	Stochastic delay differential equations for genetic regulatory networks. <i>Journal of Computational and Applied Mathematics</i> , 2007 , 205, 696-707	2.4	120
181	Bayesian model predicts the response of axons to molecular gradients. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 10296-301	11.5	116
180	Analytical solutions for the multi-term time-fractional diffusion-wave/diffusion equations in a finite domain. <i>Computers and Mathematics With Applications</i> , 2012 , 64, 3377-3388	2.7	114
179	Sources of anomalous diffusion on cell membranes: a Monte Carlo study. <i>Biophysical Journal</i> , 2007 , 92, 1975-87	2.9	108
178	Order Conditions of Stochastic Runge-Kutta Methods by B-Series. <i>SIAM Journal on Numerical Analysis</i> , 2000 , 38, 1626-1646	2.4	99
177	An implementation of singly-implicit Runge-Kutta methods. <i>BIT Numerical Mathematics</i> , 1980 , 20, 326-340	4.7	95
176	Prediction of protein solvent accessibility using support vector machines. <i>Proteins: Structure, Function and Bioinformatics</i> , 2002 , 48, 566-70	4.2	93
175	Variability in cardiac electrophysiology: Using experimentally-calibrated populations of models to move beyond the single virtual physiological human paradigm. <i>Progress in Biophysics and Molecular Biology</i> , 2016 , 120, 115-27	4.7	89
174	A multiscale investigation of repolarization variability and its role in cardiac arrhythmogenesis. <i>Biophysical Journal</i> , 2011 , 101, 2892-902	2.9	84
173	Novel techniques in parameter estimation for fractional dynamical models arising from biological systems. <i>Computers and Mathematics With Applications</i> , 2011 , 62, 822-833	2.7	83
172	Numerical Methods for Second-Order Stochastic Differential Equations. <i>SIAM Journal of Scientific Computing</i> , 2007 , 29, 245-264	2.6	80
171	Multiscale Modeling of Chemical Kinetics via the Master Equation. <i>Multiscale Modeling and Simulation</i> , 2008 , 6, 1146-1168	1.8	79
170	A multi-scaled approach for simulating chemical reaction systems. <i>Progress in Biophysics and Molecular Biology</i> , 2004 , 85, 217-34	4.7	79
169	Simulated maximum likelihood method for estimating kinetic rates in gene expression. <i>Bioinformatics</i> , 2007 , 23, 84-91	7.2	77
168	Bistability and switching in the lysis/lysogeny genetic regulatory network of bacteriophage lambda. <i>Journal of Theoretical Biology</i> , 2004 , 227, 229-37	2.3	75

167	Inferring diffusion in single live cells at the single-molecule level. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013 , 368, 20120029	5.8	73
166	Bridging experiments, models and simulations: an integrative approach to validation in computational cardiac electrophysiology. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2012 , 303, H144-55	5.2	72
165	Stochastic chemical kinetics and the total quasi-steady-state assumption: application to the stochastic simulation algorithm and chemical master equation. <i>Journal of Chemical Physics</i> , 2008 , 129, 095105	3.9	70
164	Implicit Taylor methods for stiff stochastic differential equations. <i>Applied Numerical Mathematics</i> , 2001 , 38, 167-185	2.5	69
163	Prediction of cis/trans isomerization in proteins using PSI-BLAST profiles and secondary structure information. <i>BMC Bioinformatics</i> , 2006 , 7, 124	3.6	68
162	Binomial tau-leap spatial stochastic simulation algorithm for applications in chemical kinetics. <i>Journal of Chemical Physics</i> , 2007 , 127, 104101	3.9	66
161	Numerical solutions of stochastic differential equations Implementation and stability issues. <i>Journal of Computational and Applied Mathematics</i> , 2000 , 125, 171-182	2.4	62
160	Predicting disulfide connectivity from protein sequence using multiple sequence feature vectors and secondary structure. <i>Bioinformatics</i> , 2007 , 23, 3147-54	7.2	60
159	Stochastic simulation in systems biology. <i>Computational and Structural Biotechnology Journal</i> , 2014 , 12, 14-25	6.8	55
158	In Vivo and In Silico Investigation Into Mechanisms of Frequency Dependence of Repolarization Alternans in Human Ventricular Cardiomyocytes. <i>Circulation Research</i> , 2016 , 118, 266-78	15.7	52
157	mRNA expression levels in failing human hearts predict cellular electrophysiological remodeling: a population-based simulation study. <i>PLoS ONE</i> , 2013 , 8, e56359	3.7	50
156	The systems biology approach to drug development: application to toxicity assessment of cardiac drugs. <i>Clinical Pharmacology and Therapeutics</i> , 2010 , 88, 130-4	6.1	50
155	A study of B-convergence of Runge-Kutta methods. <i>Computing (Vienna/New York)</i> , 1986 , 36, 17-34	2.2	50
154	A Variable Stepsize Implementation for Stochastic Differential Equations. <i>SIAM Journal of Scientific Computing</i> , 2003 , 24, 848-864	2.6	49
153	Using complex network metrics to predict the persistence of metapopulations with asymmetric connectivity patterns. <i>Ecological Modelling</i> , 2008 , 214, 201-209	3	48
152	Protein contact prediction using patterns of correlation. <i>Proteins: Structure, Function and Bioinformatics</i> , 2004 , 56, 679-84	4.2	48
151	Numerical simulation of stochastic ordinary differential equations in biomathematical modelling. <i>Mathematics and Computers in Simulation</i> , 2004 , 64, 271-277	3.3	48
150	Predicting residue-wise contact orders in proteins by support vector regression. <i>BMC Bioinformatics</i> , 2006 , 7, 425	3.6	47

149	Parallel methods for initial value problems. <i>Applied Numerical Mathematics</i> , 1993 , 11, 5-25	2.5	47
148	Determination of somatic and cancer stem cell self-renewing symmetric division rate using sphere assays. <i>PLoS ONE</i> , 2011 , 6, e15844	3.7	47
147	An improved firefly algorithm for global continuous optimization problems. <i>Expert Systems With Applications</i> , 2020 , 149, 113340	7.8	43
146	A computationally effective alternating direction method for the space and time fractional Bloch-Torrey equation in 3-D. <i>Applied Mathematics and Computation</i> , 2012 , 219, 4082-4095	2.7	42
145	Unlocking data sets by calibrating populations of models to data density: A study in atrial electrophysiology. <i>Science Advances</i> , 2018 , 4, e1701676	14.3	41
144	A Stable Fast Time-Stepping Method for Fractional Integral and Derivative Operators. <i>Journal of Scientific Computing</i> , 2018 , 77, 283-307	2.3	41
143	Generalized binomial tau-leap method for biochemical kinetics incorporating both delay and intrinsic noise. <i>Journal of Chemical Physics</i> , 2008 , 128, 205107	3.9	41
142	Inexact Uniformization Method for Computing Transient Distributions of Markov Chains. <i>SIAM Journal of Scientific Computing</i> , 2007 , 29, 2562-2580	2.6	41
141	A note on the Balanced method. <i>BIT Numerical Mathematics</i> , 2006 , 46, 689-710	1.7	41
140	The composite Euler method for stiff stochastic differential equations. <i>Journal of Computational and Applied Mathematics</i> , 2001 , 131, 407-426	2.4	39
139	Numerical solution of time fractional diffusion systems. <i>Applied Numerical Mathematics</i> , 2017 , 116, 82-94.5	4.5	37
138	On the performance of various adaptive preconditioned GMRES strategies. <i>Numerical Linear Algebra With Applications</i> , 1998 , 5, 101-121	1.6	37
137	Modeling ion channel dynamics through reflected stochastic differential equations. <i>Physical Review E</i> , 2012 , 85, 051907	2.4	35
136	Numerical simulation of a new two-dimensional variable-order fractional percolation equation in non-homogeneous porous media. <i>Computers and Mathematics With Applications</i> , 2014 , 68, 2133-2141	2.7	34
135	Fast stochastic simulation of biochemical reaction systems by alternative formulations of the chemical Langevin equation. <i>Journal of Chemical Physics</i> , 2010 , 132, 164109	3.9	34
134	Low rank Runge-Kutta methods, symplecticity and stochastic Hamiltonian problems with additive noise. <i>Journal of Computational and Applied Mathematics</i> , 2012 , 236, 3920-3930	2.4	31
133	Order Properties of Implicit Multivalued Methods for Ordinary Differential Equations. <i>IMA Journal of Numerical Analysis</i> , 1988 , 8, 43-69	1.8	31
132	Fast parallel Markov clustering in bioinformatics using massively parallel computing on GPU with CUDA and ELLPACK-R sparse format. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2012 , 9, 679-92	3	30

131	Implicit Stochastic Runge-Kutta Methods for Stochastic Differential Equations. <i>BIT Numerical Mathematics</i> , 2004 , 44, 21-39	1.7	30
130	Adaptive stepsize based on control theory for stochastic differential equations. <i>Journal of Computational and Applied Mathematics</i> , 2004 , 170, 317-336	2.4	30
129	Modelling and simulation techniques for membrane biology. <i>Briefings in Bioinformatics</i> , 2007 , 8, 234-44	13.4	29
128	Efficiently Implementable Algebraically Stable Runge-Kutta Methods. <i>SIAM Journal on Numerical Analysis</i> , 1982 , 19, 245-258	2.4	29
127	High order algebraically stable Runge-Kutta methods. <i>BIT Numerical Mathematics</i> , 1978 , 18, 373-383	1.7	29
126	Comment on "Numerical methods for stochastic differential equations". <i>Physical Review E</i> , 2006 , 74, 068701	2.4	28
125	Use of advanced techniques to optimize a multi-dimensional dairy model. <i>Agricultural Systems</i> , 1996 , 50, 239-253	6.1	28
124	Two-stage and Three-stage Diagonally Implicit Runge-Kutta Nyström Methods of Orders Three and Four. <i>IMA Journal of Numerical Analysis</i> , 1990 , 10, 489-504	1.8	28
123	Stability and convergence of an implicit numerical method for the space and time fractional Bloch-Torrey equation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013 , 371, 20120150	3	26
122	On the Order of the Fractional Laplacian in Determining the Spatio-Temporal Evolution of a Space-Fractional Model of Cardiac Electrophysiology. <i>PLoS ONE</i> , 2015 , 10, e0143938	3.7	26
121	Robust parameter settings of evolutionary algorithms for the optimisation of agricultural systems models. <i>Agricultural Systems</i> , 2001 , 69, 199-213	6.1	26
120	Population of computational rabbit-specific ventricular action potential models for investigating sources of variability in cellular repolarisation. <i>PLoS ONE</i> , 2014 , 9, e90112	3.7	25
119	Efficient block predictor-corrector methods with a small number of corrections. <i>Journal of Computational and Applied Mathematics</i> , 1993 , 45, 139-150	2.4	25
118	Advanced computing for systems biology. <i>Briefings in Bioinformatics</i> , 2006 , 7, 390-8	13.4	24
117	Using the canonical modelling approach to simplify the simulation of function in functional-structural plant models. <i>New Phytologist</i> , 2005 , 166, 845-57	9.8	24
116	Accurate Stationary Densities with Partitioned Numerical Methods for Stochastic Differential Equations. <i>SIAM Journal on Numerical Analysis</i> , 2009 , 47, 1601-1618	2.4	23
115	Probability distributed time delays: integrating spatial effects into temporal models. <i>BMC Systems Biology</i> , 2010 , 4, 19	3.5	23
114	Anomalous Diffusion in Cardiac Tissue as an Index of Myocardial Microstructure. <i>IEEE Transactions on Medical Imaging</i> , 2016 , 35, 2200-2207	11.7	22

113	Structure-preserving Runge-Kutta methods for stochastic Hamiltonian equations with additive noise. <i>Numerical Algorithms</i> , 2014 , 65, 519-532	2.1	22
112	10. Parallel Methods for Systems of Ordinary Differential Equations 1996 , 101-120		21
111	Survival of the fittest genetic algorithms versus evolution strategies in the optimization of systems models. <i>Agricultural Systems</i> , 1999 , 60, 113-122	6.1	20
110	A high accuracy defect-correction multigrid method for the steady incompressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , 1994 , 114, 227-233	4.1	20
109	From ionic to cellular variability in human atrial myocytes: an integrative computational and experimental study. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2018 , 314, H895-H916	5.7	20
108	A four-stage index 2 Diagonally Implicit Runge-Kutta method. <i>Applied Numerical Mathematics</i> , 2002 , 40, 415-432	2.5	19
107	Simplifying assumptions for the order of partitioned multivalued methods. <i>BIT Numerical Mathematics</i> , 1980 , 20, 452-465	1.7	19
106	Stochastic Simulation for Spatial Modelling of Dynamic Processes in a Living Cell 2011 , 43-62		18
105	Bayes-optimal chemotaxis. <i>Neural Computation</i> , 2011 , 23, 336-73	2.9	18
104	On the performance of parallel waveform relaxations for differential systems. <i>Applied Numerical Mathematics</i> , 1996 , 20, 39-55	2.5	18
103	On Order Reduction for Runge-Kutta Methods Applied to Differential/Algebraic Systems and to Stiff Systems of ODEs. <i>SIAM Journal on Numerical Analysis</i> , 1990 , 27, 447-456	2.4	18
102	A stochastic exponential Euler scheme for simulation of stiff biochemical reaction systems. <i>BIT Numerical Mathematics</i> , 2014 , 54, 1067-1085	1.7	17
101	Constructing the hallucinations of psychosis in Virtual Reality. <i>Journal of Network and Computer Applications</i> , 2004 , 27, 1-11	7.9	17
100	Rabbit-specific computational modelling of ventricular cell electrophysiology: Using populations of models to explore variability in the response to ischemia. <i>Progress in Biophysics and Molecular Biology</i> , 2016 , 121, 169-84	4.7	17
99	Populations of Models, Experimental Designs and Coverage of Parameter Space by Latin Hypercube and Orthogonal Sampling. <i>Procedia Computer Science</i> , 2015 , 51, 1762-1771	1.6	16
98	Predictor-Corrector Methods of Runge-Kutta Type for Stochastic Differential Equations. <i>SIAM Journal on Numerical Analysis</i> , 2002 , 40, 1516-1537	2.4	16
97	The error behaviour of a general class of predictor-corrector methods. <i>Applied Numerical Mathematics</i> , 1991 , 8, 201-216	2.5	16
96	Quantitative study of the effect of tissue microstructure on contraction in a computational model of rat left ventricle. <i>PLoS ONE</i> , 2014 , 9, e92792	3.7	15

95	Environmental factors in breast cancer invasion: a mathematical modelling review. <i>Pathology</i> , 2017 , 49, 172-180	1.6	14
94	Stiffly accurate Runge-Kutta methods for stiff stochastic differential equations. <i>Computer Physics Communications</i> , 2001 , 142, 186-190	4.2	14
93	Optimal control of acute myeloid leukaemia. <i>Journal of Theoretical Biology</i> , 2019 , 470, 30-42	2.3	13
92	Designing combination therapies using multiple optimal controls. <i>Journal of Theoretical Biology</i> , 2020 , 497, 110277	2.3	13
91	Numerical simulation for two-dimensional Riesz space fractional diffusion equations with a nonlinear reaction term. <i>Open Physics</i> , 2013 , 11,	1.3	13
90	Strong first order S-ROCK methods for stochastic differential equations. <i>Journal of Computational and Applied Mathematics</i> , 2013 , 242, 261-274	2.4	13
89	The search for the Holy Grail, or: predictor-corrector methods for solving ODEs. <i>Applied Numerical Mathematics</i> , 1993 , 11, 125-141	2.5	13
88	Evolving Noisy Oscillatory Dynamics in Genetic Regulatory Networks. <i>Lecture Notes in Computer Science</i> , 2006 , 290-299	0.9	13
87	Studying the role of lipid rafts on protein receptor bindings with cellular automata. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2013 , 10, 760-70	3	12
86	Weak second order S-ROCK methods for Stratonovich stochastic differential equations. <i>Journal of Computational and Applied Mathematics</i> , 2012 , 236, 2895-2908	2.4	12
85	Simulation methods with extended stability for stiff biochemical Kinetics. <i>BMC Systems Biology</i> , 2010 , 4, 110	3.5	12
84	Optimizing chemotaxis by measuring unbound-bound transitions. <i>Physica D: Nonlinear Phenomena</i> , 2010 , 239, 477-484	3.3	12
83	Mathematical Models of Cancer Cell Plasticity. <i>Journal of Oncology</i> , 2019 , 2019, 2403483	4.5	11
82	Stochastic dynamics of interacting haematopoietic stem cell niche lineages. <i>PLoS Computational Biology</i> , 2014 , 10, e1003794	5	11
81	Stochastic simulation of chemical reactions in spatially complex media. <i>Computers and Mathematics With Applications</i> , 2008 , 55, 1007-1018	2.7	11
80	Identifiability analysis for stochastic differential equation models in systems biology. <i>Journal of the Royal Society Interface</i> , 2020 , 17, 20200652	4.1	11
79	Investigating the Complex Arrhythmic Phenotype Caused by the Gain-of-Function Mutation KCNQ1-G229D. <i>Frontiers in Physiology</i> , 2019 , 10, 259	4.6	10
78	Effects of intrinsic and extrinsic noise can accelerate juxtacrine pattern formation. <i>Bulletin of Mathematical Biology</i> , 2008 , 70, 971-91	2.1	10

77	A genetic estimation algorithm for parameters of stochastic ordinary differential equations. <i>Computational Statistics and Data Analysis</i> , 2004 , 47, 255-275	1.6	10
76	Application of stochastic phenomenological modelling to cell-to-cell and beat-to-beat electrophysiological variability in cardiac tissue. <i>Journal of Theoretical Biology</i> , 2015 , 365, 325-36	2.3	9
75	Numerical investigation of three types of space and time fractional Bloch-Torrey equations in 2D. <i>Open Physics</i> , 2013 , 11,	1.3	9
74	Weak Second Order Explicit Exponential Runge-Kutta Methods for Stochastic Differential Equations. <i>SIAM Journal of Scientific Computing</i> , 2017 , 39, A2857-A2878	2.6	9
73	Look before you leap: a confidence-based method for selecting species criticality while avoiding negative populations in fleaping. <i>Journal of Chemical Physics</i> , 2011 , 134, 084109	3.9	9
72	On smoothing and order reduction effects for implicit Runge-Kutta formulae. <i>Journal of Computational and Applied Mathematics</i> , 1993 , 45, 17-27	2.4	9
71	Quantitative analysis of tumour spheroid structure. <i>ELife</i> , 2021 , 10,	8.9	9
70	Slow Recovery of Excitability Increases Ventricular Fibrillation Risk as Identified by Emulation. <i>Frontiers in Physiology</i> , 2018 , 9, 1114	4.6	9
69	High-throughput cardiac science on the Grid. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010 , 368, 3907-23	3	8
68	Persistence as an Optimal Hedging Strategy. <i>Biophysical Journal</i> , 2021 , 120, 133-142	2.9	8
67	Exact solutions to the fractional time-space Bloch-Torrey equation for magnetic resonance imaging. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2017 , 52, 91-109	3.7	7
66	Multi-scale approach for simulating time-delay biochemical reaction systems. <i>IET Systems Biology</i> , 2015 , 9, 31-8	1.4	7
65	Mathematical modelling of gas production and compositional shift of a CSG (coal seam gas) field: Local model development. <i>Energy</i> , 2015 , 88, 621-635	7.9	7
64	Modelling biochemical reaction systems by stochastic differential equations with reflection. <i>Journal of Theoretical Biology</i> , 2016 , 396, 90-104	2.3	7
63	Stable strong order 1.0 schemes for solving stochastic ordinary differential equations. <i>BIT Numerical Mathematics</i> , 2012 , 52, 539-557	1.7	7
62	A higher-order numerical framework for stochastic simulation of chemical reaction systems. <i>BMC Systems Biology</i> , 2012 , 6, 85	3.5	7
61	Krylov and steady-state techniques for the solution of the chemical master equation for the mitogen-activated protein kinase cascade. <i>Numerical Algorithms</i> , 2009 , 51, 281-307	2.1	7
60	Supplement: Efficient weak second order stochastic Runge-Kutta methods for non-commutative Stratonovich stochastic differential equations. <i>Journal of Computational and Applied Mathematics</i> , 2011 , 235, 5326-5329	2.4	6

59	Phenomenological modeling of cell-to-cell and beat-to-beat variability in isolated Guinea Pig ventricular myocytes. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2010, 2010, 1457-60</i>	0.9	6
58	Stochastic Modeling of Na ^v T Cell Homeostasis for Competing Clonotypes via the Master Equation. <i>Multiscale Modeling and Simulation, 2010, 8, 1325-1347</i>	1.8	6
57	The dichotomy of stiffness: pragmatism versus theory. <i>Applied Mathematics and Computation, 1989, 31, 92-111</i>	2.7	6
56	Order and stability properties of explicit multivalued methods. <i>Applied Numerical Mathematics, 1985, 1, 363-379</i>	2.5	6
55	Variability in electrophysiological properties and conducting obstacles controls re-entry risk in heterogeneous ischaemic tissue. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190341</i>	3	6
54	A space-fractional-reaction-diffusion model for pattern formation in coral reefs. <i>Cogent Mathematics & Statistics, 2018, 5, 1426524</i>	0.9	5
53	Construction of A-Stable Diagonally Implicit Multivalued Methods. <i>SIAM Journal on Numerical Analysis, 1989, 26, 397-413</i>	2.4	5
52	Inference of ventricular activation properties from non-invasive electrocardiography. <i>Medical Image Analysis, 2021, 73, 102143</i>	15.4	5
51	A derivative-free explicit method with order 1.0 for solving stochastic delay differential equations. <i>Journal of Computational and Applied Mathematics, 2013, 253, 51-65</i>	2.4	4
50	Efficient simulation of stochastic chemical kinetics with the Stochastic Bulirsch-Stoer extrapolation method. <i>BMC Systems Biology, 2014, 8, 71</i>	3.5	4
49	A Bayesian network model of proteins association with promyelocytic leukemia (PML) nuclear bodies. <i>Journal of Computational Biology, 2010, 17, 617-30</i>	1.7	4
48	Fast Parallel Markov Clustering in Bioinformatics Using Massively Parallel Graphics Processing Unit Computing 2010,		4
47	Extremotaxis computing with a bacterial-inspired algorithm. <i>BioSystems, 2008, 94, 47-54</i>	1.9	4
46	Convergence of the parallel chaotic waveform relaxation method for stiff systems. <i>Journal of Computational and Applied Mathematics, 2003, 151, 201-213</i>	2.4	4
45	Surface fitting using GCV smoothing splines on supercomputers 1995,		4
44	An adaptive numerical integration code for a chain of transputers. <i>Parallel Computing, 1990, 16, 305-312</i>		4
43	Stability and efficiency properties of implicit Runge-Kutta methods. <i>Bulletin of the Australian Mathematical Society, 1978, 19, 297-298</i>	0.4	4
42	An improved dynamic Finite State Projection algorithm for the numerical solution of the chemical master equation with applications. <i>ANZIAM Journal, 49, 413</i>		4

41	Fractional models for the migration of biological cells in complex spatial domains. <i>ANZIAM Journal</i> , 54, 250		4
40	S-ROCK methods for stochastic delay differential equations with one fixed delay. <i>Journal of Computational and Applied Mathematics</i> , 2019, 353, 345-354	2.4	4
39	A population of bang-bang switches of defective interfering particles makes within-host dynamics of dengue virus controllable. <i>PLoS Computational Biology</i> , 2019, 15, e1006668	5	3
38	Accurate stationary densities with partitioned numerical methods for stochastic partial differential equations. <i>Stochastics and Partial Differential Equations: Analysis and Computations</i> , 2014, 2, 262-280	0.9	3
37	Effect of Fibre Orientation Optimisation in an Electromechanical Model of Left Ventricular Contraction in Rat. <i>Lecture Notes in Computer Science</i> , 2013, 46-53	0.9	3
36	Opportunistic timing and manipulation in Australian Federal Elections. <i>European Journal of Operational Research</i> , 2009, 192, 677-691	5.6	3
35	Fast generalized cross validation using Krylov subspace methods. <i>Numerical Algorithms</i> , 2008, 47, 109-131	1.1	3
34	On the Convergence of LMF-type Methods for SODEs. <i>Mediterranean Journal of Mathematics</i> , 2004, 1, 297-313	0.9	3
33	Parallel half-block methods for initial value problems. <i>Applied Numerical Mathematics</i> , 2000, 32, 255-271	2.5	3
32	A GPU Implementation of Fast Parallel Markov Clustering in Bioinformatics Using EllPACK-R Sparse Data Format 2010,		2
31	Comparison of continuous and discrete stochastic ion channel models. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011, 2011, 704-7	0.9	2
30	New Multivalued Methods for Differential Algebraic Equations. <i>Numerical Algorithms</i> , 2002, 31, 193-213	2.1	2
29	A new index 2 Runge-Kutta method for the simulation of batch and discontinuous processes. <i>Computers and Chemical Engineering</i> , 2000, 24, 625-630	4	2
28	(k, l)-Algebraic Stability of Runge-Kutta Methods. <i>IMA Journal of Numerical Analysis</i> , 1988, 8, 385-400	1.8	2
27	Oscillatory Regulation of Hes1: Discrete Stochastic Delay Modelling and Simulation. <i>PLoS Computational Biology</i> , 2005, preprint, e117	5	2
26	Computational Approaches for Modeling Intrinsic Noise and Delays in Genetic Regulatory Networks 2010, 169-197		2
25	Perlin Noise Generation of Physiologically Realistic Patterns of Fibrosis		2
24	On the Analysis of Mixed-Index Time Fractional Differential Equation Systems. <i>Axioms</i> , 2018, 7, 25	1.6	2

23	Implementation and acceleration of optimal control for systems biology. <i>Journal of the Royal Society Interface</i> , 2021 , 18, 20210241	4.1	2
22	Accelerated Leap Methods for Simulating Discrete Stochastic Chemical Kinetics 359-366		2
21	Using population of models to investigate and quantify gas production in a spatially heterogeneous coal seam gas field. <i>Applied Mathematical Modelling</i> , 2017 , 49, 338-353	4.5	1
20	A Review of Stochastic and Delay Simulation Approaches in Both Time and Space in Computational Cell Biology 2017 , 241-261		1
19	Stochastic linear multistep methods for the simulation of chemical kinetics. <i>Journal of Chemical Physics</i> , 2015 , 142, 064101	3.9	1
18	Exploring the parameter space of a rabbit ventricular action potential model to investigate the effect of variation on action potential and calcium transients. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 2412-5	0.9	1
17	Stability and Convergence of Implicit Numerical Methods for a Class of Fractional Advection-Dispersion Models 2011 ,		1
16	Computing with motile bio-agents 2006 ,		1
15	(k, l)-Algebraic Stability of Gauss Methods. <i>IMA Journal of Numerical Analysis</i> , 1987 , 7, 251-259	1.8	1
14	Stochastic Modelling and Simulation of Coupled Autoregulated Oscillators in a Multicellular Environment: The her1/her7 Genes. <i>Lecture Notes in Computer Science</i> , 2007 , 778-785	0.9	1
13	Persistence as an optimal hedging strategy		1
12	A class of new Magnus-type methods for semi-linear non-commutative Itô stochastic differential equations. <i>Numerical Algorithms</i> , 1	2.1	1
11	Quantitative analysis of tumour spheroid structure		1
10	Machine Learning Identification of Pro-arrhythmic Structures in Cardiac Fibrosis. <i>Frontiers in Physiology</i> , 2021 , 12, 709485	4.6	1
9	Stochastic Modelling of T Cell Homeostasis for Two Competing Clonotypes Via the Master Equation 2011 , 207-225		1
8	Exploring synonymous codon usage preferences of disulfide-bonded and non-disulfide bonded cysteines in the E. coli genome. <i>Journal of Theoretical Biology</i> , 2006 , 241, 390-401	2.3	0
7	Graph-based homogenisation for modelling cardiac fibrosis. <i>Journal of Computational Physics</i> , 2022 , 459, 111126	4.1	0
6	Parameter estimation and uncertainty quantification using information geometry.. <i>Journal of the Royal Society Interface</i> , 2022 , 19, 20210940	4.1	0

- 5 Numerical methods for the chemical master equation and applications to stochastic models of receptor oligomerisation. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 2110001-2110002^{0.2}
- 4 A Mathematical Model for Genetic Regulation of the Lactose Operon. *Lecture Notes in Computer Science*, **2005**, 1245-1253 0.9
- 3 Localization and Pseudospectra of Twisted Toeplitz Matrices with Applications to Ion Channels. *SIAM Journal on Matrix Analysis and Applications*, **2021**, 42, 1656-1679 1.5
- 2 Estimation of Conductivity Tensors from Human Ventricular Optical Mapping Recordings. *Lecture Notes in Computer Science*, **2013**, 224-231 0.9
- 1 A stochastic model of jaguar abundance in the Peruvian Amazon under climate variation scenarios. *Ecology and Evolution*, **2020**, 10, 10829-10850 2.8