Kevin Burrage

List of Publications by Year in Descending Order

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	Graph-based homogenisation for modelling cardiac fibrosis. *Journal of Computational Physics*, **2022**, 459, 111126	4.1	0
201	Parameter estimation and uncertainty quantification using information geometry.. *Journal of the Royal Society Interface*, **2022**, 19, 20210940	4.1	0
200	Quantitative analysis of tumour spheroid structure. *ELife*, **2021**, 10,	8.9	9
199	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	
198	Persistence as an Optimal Hedging Strategy. *Biophysical Journal*, **2021**, 120, 133-142	2.9	8
197	Machine Learning Identification of Pro-arrhythmic Structures in Cardiac Fibrosis. *Frontiers in Physiology*, **2021**, 12, 709485	4.6	1
196	Implementation and acceleration of optimal control for systems biology. *Journal of the Royal Society Interface*, **2021**, 18, 20210241	4.1	2
195	Inference of ventricular activation properties from non-invasive electrocardiography. *Medical Image Analysis*, **2021**, 73, 102143	15.4	5
194	An improved firefly algorithm for global continuous optimization problems. *Expert Systems With Applications*, **2020**, 149, 113340	7.8	43
193	Designing combination therapies using multiple optimal controls. *Journal of Theoretical Biology*, **2020**, 497, 110277	2.3	13
192	Variability in electrophysiological properties and conducting obstacles controls re-entry risk in heterogeneous ischaemic tissue. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2020**, 378, 20190341	3	6
191	A stochastic model of jaguar abundance in the Peruvian Amazon under climate variation scenarios. *Ecology and Evolution*, **2020**, 10, 10829-10850	2.8	
190	Identifiability analysis for stochastic differential equation models in systems biology. *Journal of the Royal Society Interface*, **2020**, 17, 20200652	4.1	11
189	Optimal control of acute myeloid leukaemia. *Journal of Theoretical Biology*, **2019**, 470, 30-42	2.3	13
188	Investigating the Complex Arrhythmic Phenotype Caused by the Gain-of-Function Mutation KCNQ1-G229D. *Frontiers in Physiology*, **2019**, 10, 259	4.6	10
187	Mathematical Models of Cancer Cell Plasticity. *Journal of Oncology*, **2019**, 2019, 2403483	4.5	11
186	A population of bang-bang switches of defective interfering particles makes within-host dynamics of dengue virus controllable. *PLoS Computational Biology*, **2019**, 15, e1006668	5	3

185	S-ROCK methods for stochastic delay differential equations with one fixed delay. *Journal of Computational and Applied Mathematics*, **2019**, 353, 345-354	2.4	4
184	A space-fractional-reaction-diffusion model for pattern formation in coral reefs. *Cogent Mathematics & Statistics*, **2018**, 5, 1426524	0.9	5
183	Unlocking data sets by calibrating populations of models to data density: A study in atrial electrophysiology. *Science Advances*, **2018**, 4, e1701676	14.3	41
182	A Stable Fast Time-Stepping Method for Fractional Integral and Derivative Operators. *Journal of Scientific Computing*, **2018**, 77, 283-307	2.3	41
181	From ionic to cellular variability in human atrial myocytes: an integrative computational and experimental study. *American Journal of Physiology - Heart and Circulatory Physiology*, **2018**, 314, H895-H916	5.2	20
180	Slow Recovery of Excitability Increases Ventricular Fibrillation Risk as Identified by Emulation. *Frontiers in Physiology*, **2018**, 9, 1114	4.6	9
179	On the Analysis of Mixed-Index Time Fractional Differential Equation Systems. *Axioms*, **2018**, 7, 25	1.6	2
178	Environmental factors in breast cancer invasion: a mathematical modelling review. *Pathology*, **2017**, 49, 172-180	1.6	14
177	Numerical solution of time fractional diffusion systems. *Applied Numerical Mathematics*, **2017**, 116, 82-94	2.5	37
176	Exact solutions to the fractional time-space Bloch▯Torrey equation for magnetic resonance imaging. *Communications in Nonlinear Science and Numerical Simulation*, **2017**, 52, 91-109	3.7	7
175	Using population of models to investigate and quantify gas production in a spatially heterogeneous coal seam gas field. *Applied Mathematical Modelling*, **2017**, 49, 338-353	4.5	1
174	A Review of Stochastic and Delay Simulation Approaches in Both Time and Space in Computational Cell Biology **2017**, 241-261		1
173	Weak Second Order Explicit Exponential Runge--Kutta Methods for Stochastic Differential Equations. *SIAM Journal of Scientific Computing*, **2017**, 39, A2857-A2878	2.6	9
172	Anomalous Diffusion in Cardiac Tissue as an Index of Myocardial Microstructure. *IEEE Transactions on Medical Imaging*, **2016**, 35, 2200-2207	11.7	22
171	In Vivo and In Silico Investigation Into Mechanisms of Frequency Dependence of Repolarization Alternans in Human Ventricular Cardiomyocytes. *Circulation Research*, **2016**, 118, 266-78	15.7	52
170	Modelling biochemical reaction systems by stochastic differential equations with reflection. *Journal of Theoretical Biology*, **2016**, 396, 90-104	2.3	7
169	Variability in cardiac electrophysiology: Using experimentally-calibrated populations of models to move beyond the single virtual physiological human paradigm. *Progress in Biophysics and Molecular Biology*, **2016**, 120, 115-27	4.7	89
168	Rabbit-specific computational modelling of ventricular cell electrophysiology: Using populations of models to explore variability in the response to ischemia. *Progress in Biophysics and Molecular Biology*, **2016**, 121, 169-84	4.7	17

167	Application of stochastic phenomenological modelling to cell-to-cell and beat-to-beat electrophysiological variability in cardiac tissue. *Journal of Theoretical Biology*, **2015**, 365, 325-36	2.3	9
166	Multi-scale approach for simulating time-delay biochemical reaction systems. *IET Systems Biology*, **2015**, 9, 31-8	1.4	7
165	Mathematical modelling of gas production and compositional shift of a CSG (coal seam gas) field: Local model development. *Energy*, **2015**, 88, 621-635	7.9	7
164	On the Order of the Fractional Laplacian in Determining the Spatio-Temporal Evolution of a Space-Fractional Model of Cardiac Electrophysiology. *PLoS ONE*, **2015**, 10, e0143938	3.7	26
163	Populations of Models, Experimental Designs and Coverage of Parameter Space by Latin Hypercube and Orthogonal Sampling. *Procedia Computer Science*, **2015**, 51, 1762-1771	1.6	16
162	Stochastic linear multistep methods for the simulation of chemical kinetics. *Journal of Chemical Physics*, **2015**, 142, 064101	3.9	1
161	Structure-preserving Runge-Kutta methods for stochastic Hamiltonian equations with additive noise. *Numerical Algorithms*, **2014**, 65, 519-532	2.1	22
160	Fourier spectral methods for fractional-in-space reaction-diffusion equations. *BIT Numerical Mathematics*, **2014**, 54, 937-954	1.7	215
159	A new fractional finite volume method for solving the fractional diffusion equation. *Applied Mathematical Modelling*, **2014**, 38, 3871-3878	4.5	150
158	A Crank--Nicolson ADI Spectral Method for a Two-Dimensional Riesz Space Fractional Nonlinear Reaction-Diffusion Equation. *SIAM Journal on Numerical Analysis*, **2014**, 52, 2599-2622	2.4	240
157	A stochastic exponential Euler scheme for simulation of stiff biochemical reaction systems. *BIT Numerical Mathematics*, **2014**, 54, 1067-1085	1.7	17
156	Accurate stationary densities with partitioned numerical methods for stochastic partial differential equations. *Stochastics and Partial Differential Equations: Analysis and Computations*, **2014**, 2, 262-280	0.9	3
155	Fractional diffusion models of cardiac electrical propagation: role of structural heterogeneity in dispersion of repolarization. *Journal of the Royal Society Interface*, **2014**, 11, 20140352	4.1	132
154	Numerical simulation of a new two-dimensional variable-order fractional percolation equation in non-homogeneous porous media. *Computers and Mathematics With Applications*, **2014**, 68, 2133-2141	2.7	34
153	Population of computational rabbit-specific ventricular action potential models for investigating sources of variability in cellular repolarisation. *PLoS ONE*, **2014**, 9, e90112	3.7	25
152	Quantitative study of the effect of tissue microstructure on contraction in a computational model of rat left ventricle. *PLoS ONE*, **2014**, 9, e92792	3.7	15
151	Stochastic dynamics of interacting haematopoietic stem cell niche lineages. *PLoS Computational Biology*, **2014**, 10, e1003794	5	11
150	Stochastic simulation in systems biology. *Computational and Structural Biotechnology Journal*, **2014**, 12, 14-25	6.8	55

149	Efficient simulation of stochastic chemical kinetics with the Stochastic Bulirsch-Stoer extrapolation method. *BMC Systems Biology*, **2014**, 8, 71	3.5	4
148	Numerical investigation of three types of space and time fractional Bloch-Torrey equations in 2D. *Open Physics*, **2013**, 11,	1.3	9
147	Numerical simulation for two-dimensional Riesz space fractional diffusion equations with a nonlinear reaction term. *Open Physics*, **2013**, 11,	1.3	13
146	Effect of Fibre Orientation Optimisation in an Electromechanical Model of Left Ventricular Contraction in Rat. *Lecture Notes in Computer Science*, **2013**, 46-53	0.9	3
145	Studying the role of lipid rafts on protein receptor bindings with cellular automata. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **2013**, 10, 760-70	3	12
144	Stability and convergence of an implicit numerical method for the space and time fractional Bloch-Torrey equation. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2013**, 371, 20120150	3	26
143	A derivative-free explicit method with order 1.0 for solving stochastic delay differential equations. *Journal of Computational and Applied Mathematics*, **2013**, 253, 51-65	2.4	4
142	Strong first order S-ROCK methods for stochastic differential equations. *Journal of Computational and Applied Mathematics*, **2013**, 242, 261-274	2.4	13
141	Inferring diffusion in single live cells at the single-molecule level. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2013**, 368, 20120029	5.8	73
140	mRNA expression levels in failing human hearts predict cellular electrophysiological remodeling: a population-based simulation study. *PLoS ONE*, **2013**, 8, e56359	3.7	50
139	Estimation of Conductivity Tensors from Human Ventricular Optical Mapping Recordings. *Lecture Notes in Computer Science*, **2013**, 224-231	0.9	
138	Analytical solutions for the multi-term time–space Caputo–Riesz fractional advection–diffusion equations on a finite domain. *Journal of Mathematical Analysis and Applications*, **2012**, 389, 1117-1127	1.1	132
137	An Efficient Implicit FEM Scheme for Fractional-in-Space Reaction-Diffusion Equations. *SIAM Journal of Scientific Computing*, **2012**, 34, A2145-A2172	2.6	141
136	Stable strong order 1.0 schemes for solving stochastic ordinary differential equations. *BIT Numerical Mathematics*, **2012**, 52, 539-557	1.7	7
135	Bridging experiments, models and simulations: an integrative approach to validation in computational cardiac electrophysiology. *American Journal of Physiology - Heart and Circulatory Physiology*, **2012**, 303, H144-55	5.2	72
134	A higher-order numerical framework for stochastic simulation of chemical reaction systems. *BMC Systems Biology*, **2012**, 6, 85	3.5	7
133	A computationally effective alternating direction method for the space and time fractional Bloch–Torrey equation in 3-D. *Applied Mathematics and Computation*, **2012**, 219, 4082-4095	2.7	42
132	Numerical methods and analysis for a class of fractional advection–dispersion models. *Computers and Mathematics With Applications*, **2012**, 64, 2990-3007	2.7	146

131	Analytical solutions for the multi-term time-fractional diffusion-wave/diffusion equations in a finite domain. *Computers and Mathematics With Applications*, **2012**, 64, 3377-3388	2.7	114
130	Fast parallel Markov clustering in bioinformatics using massively parallel computing on GPU with CUDA and ELLPACK-R sparse format. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **2012**, 9, 679-92	3	30
129	Weak second order S-ROCK methods for Stratonovich stochastic differential equations. *Journal of Computational and Applied Mathematics*, **2012**, 236, 2895-2908	2.4	12
128	Low rank Runge Kutta methods, symplecticity and stochastic Hamiltonian problems with additive noise. *Journal of Computational and Applied Mathematics*, **2012**, 236, 3920-3930	2.4	31
127	Modeling ion channel dynamics through reflected stochastic differential equations. *Physical Review E*, **2012**, 85, 051907	2.4	35
126	A multiscale investigation of repolarization variability and its role in cardiac arrhythmogenesis. *Biophysical Journal*, **2011**, 101, 2892-902	2.9	84
125	Stochastic Simulation for Spatial Modelling of Dynamic Processes in a Living Cell **2011**, 43-62		18
124	Supplement: Efficient weak second order stochastic Runge Kutta methods for non-commutative Stratonovich stochastic differential equations. *Journal of Computational and Applied Mathematics*, **2011**, 235, 5326-5329	2.4	6
123	Comparison of continuous and discrete stochastic ion channel models. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 704-7	0.9	2
122	Novel techniques in parameter estimation for fractional dynamical models arising from biological systems. *Computers and Mathematics With Applications*, **2011**, 62, 822-833	2.7	83
121	Bayes-optimal chemotaxis. *Neural Computation*, **2011**, 23, 336-73	2.9	18
120	Stability and Convergence of Implicit Numerical Methods for a Class of Fractional Advection-Dispersion Models **2011**,		1
119	Look before you leap: a confidence-based method for selecting species criticality while avoiding negative populations in leaping. *Journal of Chemical Physics*, **2011**, 134, 084109	3.9	9
118	Determination of somatic and cancer stem cell self-renewing symmetric division rate using sphere assays. *PLoS ONE*, **2011**, 6, e15844	3.7	47
117	Stochastic Modelling of T Cell Homeostasis for Two Competing Clonotypes Via the Master Equation **2011**, 207-225		1
116	The systems biology approach to drug development: application to toxicity assessment of cardiac drugs. *Clinical Pharmacology and Therapeutics*, **2010**, 88, 130-4	6.1	50
115	Phenomenological modeling of cell-to-cell and beat-to-beat variability in isolated Guinea Pig ventricular myocytes. *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	0.9	6
114	Fast stochastic simulation of biochemical reaction systems by alternative formulations of the chemical Langevin equation. *Journal of Chemical Physics*, **2010**, 132, 164109	3.9	34

113	A Bayesian network model of proteinsSassociation with promyelocytic leukemia (PML) nuclear bodies. *Journal of Computational Biology*, **2010**, 17, 617-30	1.7	4
112	Exploring the parameter space of a rabbit ventricular action potential model to investigate the effect of variation on action potential and calcium transients. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 2662-5	0.9	1
111	Fast Parallel Markov Clustering in Bioinformatics Using Massively Parallel Graphics Processing Unit Computing **2010**,		4
110	Stochastic Modeling of Naïve T Cell Homeostasis for Competing Clonotypes via the Master Equation. *Multiscale Modeling and Simulation*, **2010**, 8, 1325-1347	1.8	6
109	A GPU Implementation of Fast Parallel Markov Clustering in Bioinformatics Using EllPACK-R Sparse Data Format **2010**,		2
108	High-throughput cardiac science on the Grid. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2010**, 368, 3907-23	3	8
107	Simulation methods with extended stability for stiff biochemical Kinetics. *BMC Systems Biology*, **2010**, 4, 110	3.5	12
106	Probability distributed time delays: integrating spatial effects into temporal models. *BMC Systems Biology*, **2010**, 4, 19	3.5	23
105	Optimizing chemotaxis by measuring unboundBound transitions. *Physica D: Nonlinear Phenomena*, **2010**, 239, 477-484	3.3	12
104	Computational Approaches for Modeling Intrinsic Noise and Delays in Genetic Regulatory Networks **2010**, 169-197		2
103	Bayesian model predicts the response of axons to molecular gradients. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 10296-301	11.5	116
102	Krylov and steady-state techniques for the solution of the chemical master equation for the mitogen-activated protein kinase cascade. *Numerical Algorithms*, **2009**, 51, 281-307	2.1	7
101	Opportunistic timing and manipulation in Australian Federal Elections. *European Journal of Operational Research*, **2009**, 192, 677-691	5.6	3
100	Numerical method and analytical technique of the modified anomalous subdiffusion equation with a nonlinear source term. *Journal of Computational and Applied Mathematics*, **2009**, 231, 160-176	2.4	159
99	Accurate Stationary Densities with Partitioned Numerical Methods for Stochastic Differential Equations. *SIAM Journal on Numerical Analysis*, **2009**, 47, 1601-1618	2.4	23
98	Using complex network metrics to predict the persistence of metapopulations with asymmetric connectivity patterns. *Ecological Modelling*, **2008**, 214, 201-209	3	48
97	Multiscale Modeling of Chemical Kinetics via the Master Equation. *Multiscale Modeling and Simulation*, **2008**, 6, 1146-1168	1.8	79
96	Stochastic chemical kinetics and the total quasi-steady-state assumption: application to the stochastic simulation algorithm and chemical master equation. *Journal of Chemical Physics*, **2008**, 129, 095105	3.9	70

95	Generalized binomial tau-leap method for biochemical kinetics incorporating both delay and intrinsic noise. *Journal of Chemical Physics*, **2008**, 128, 205107	3.9	41
94	Extremotaxis: computing with a bacterial-inspired algorithm. *BioSystems*, **2008**, 94, 47-54	1.9	4
93	Fast generalized cross validation using Krylov subspace methods. *Numerical Algorithms*, **2008**, 47, 109-131	1.1	3
92	Effects of intrinsic and extrinsic noise can accelerate juxtacrine pattern formation. *Bulletin of Mathematical Biology*, **2008**, 70, 971-91	2.1	10
91	Finite difference methods and a fourier analysis for the fractional reaction-subdiffusion equation. *Applied Mathematics and Computation*, **2008**, 198, 754-769	2.7	123
90	Stochastic simulation of chemical reactions in spatially complex media. *Computers and Mathematics With Applications*, **2008**, 55, 1007-1018	2.7	11
89	Sources of anomalous diffusion on cell membranes: a Monte Carlo study. *Biophysical Journal*, **2007**, 92, 1975-87	2.9	108
88	Stochastic delay differential equations for genetic regulatory networks. *Journal of Computational and Applied Mathematics*, **2007**, 205, 696-707	2.4	120
87	Stability and convergence of the difference methods for the space-time fractional advection-diffusion equation. *Applied Mathematics and Computation*, **2007**, 191, 12-20	2.7	384
86	Numerical methods for the chemical master equation and applications to stochastic models or receptor oligomerisation. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 2110001-2110002	0.2	
85	Binomial tau-leap spatial stochastic simulation algorithm for applications in chemical kinetics. *Journal of Chemical Physics*, **2007**, 127, 104101	3.9	66
84	Predicting disulfide connectivity from protein sequence using multiple sequence feature vectors and secondary structure. *Bioinformatics*, **2007**, 23, 3147-54	7.2	60
83	Modelling and simulation techniques for membrane biology. *Briefings in Bioinformatics*, **2007**, 8, 234-44	13.4	29
82	Simulated maximum likelihood method for estimating kinetic rates in gene expression. *Bioinformatics*, **2007**, 23, 84-91	7.2	77
81	Inexact Uniformization Method for Computing Transient Distributions of Markov Chains. *SIAM Journal of Scientific Computing*, **2007**, 29, 2562-2580	2.6	41
80	Numerical Methods for Second-Order Stochastic Differential Equations. *SIAM Journal of Scientific Computing*, **2007**, 29, 245-264	2.6	80
79	Stochastic Modelling and Simulation of Coupled Autoregulated Oscillators in a Multicellular Environment: The her1/her7 Genes. *Lecture Notes in Computer Science*, **2007**, 778-785	0.9	1
78	Exploring synonymous codon usage preferences of disulfide-bonded and non-disulfide bonded cysteines in the E. coli genome. *Journal of Theoretical Biology*, **2006**, 241, 390-401	2.3	0

77	Prediction of cis/trans isomerization in proteins using PSI-BLAST profiles and secondary structure information. *BMC Bioinformatics*, **2006**, 7, 124	3.6	68
76	Predicting residue-wise contact orders in proteins by support vector regression. *BMC Bioinformatics*, **2006**, 7, 425	3.6	47
75	Stochastic models for regulatory networks of the genetic toggle switch. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 8372-7	11.5	170
74	Identifying optimal lipid raft characteristics required to promote nanoscale protein-protein interactions on the plasma membrane. *Molecular and Cellular Biology*, **2006**, 26, 313-23	4.8	156
73	Comment on "Numerical methods for stochastic differential equations". *Physical Review E*, **2006**, 74, 068701	2.4	28
72	Advanced computing for systems biology. *Briefings in Bioinformatics*, **2006**, 7, 390-8	13.4	24
71	Oscillatory regulation of Hes1: Discrete stochastic delay modelling and simulation. *PLoS Computational Biology*, **2006**, 2, e117	5	193
70	Computing with motile bio-agents **2006**,		1
69	A note on the Balanced method. *BIT Numerical Mathematics*, **2006**, 46, 689-710	1.7	41
68	Evolving Noisy Oscillatory Dynamics in Genetic Regulatory Networks. *Lecture Notes in Computer Science*, **2006**, 290-299	0.9	13
67	A Mathematical Model for Genetic Regulation of the Lactose Operon. *Lecture Notes in Computer Science*, **2005**, 1245-1253	0.9	
66	Using the canonical modelling approach to simplify the simulation of function in functional-structural plant models. *New Phytologist*, **2005**, 166, 845-57	9.8	24
65	Oscillatory Regulation of Hes1: Discrete Stochastic Delay Modelling and Simulation. *PLoS Computational Biology*, **2005**, preprint, e117	5	2
64	A multi-scaled approach for simulating chemical reaction systems. *Progress in Biophysics and Molecular Biology*, **2004**, 85, 217-34	4.7	79
63	Implicit Stochastic Runge-Kutta Methods for Stochastic Differential Equations. *BIT Numerical Mathematics*, **2004**, 44, 21-39	1.7	30
62	On the Convergence of LMF-type Methods for SODEs. *Mediterranean Journal of Mathematics*, **2004**, 1, 297-313	0.9	3
61	Constructing the hallucinations of psychosis in Virtual Reality. *Journal of Network and Computer Applications*, **2004**, 27, 1-11	7.9	17
60	Protein contact prediction using patterns of correlation. *Proteins: Structure, Function and Bioinformatics*, **2004**, 56, 679-84	4.2	48

59	Bistability and switching in the lysis/lysogeny genetic regulatory network of bacteriophage lambda. *Journal of Theoretical Biology*, **2004**, 227, 229-37	2.3	75
58	Numerical simulation of stochastic ordinary differential equations in biomathematical modelling. *Mathematics and Computers in Simulation*, **2004**, 64, 271-277	3.3	48
57	A genetic estimation algorithm for parameters of stochastic ordinary differential equations. *Computational Statistics and Data Analysis*, **2004**, 47, 255-275	1.6	10
56	Stochastic approaches for modelling in vivo reactions. *Computational Biology and Chemistry*, **2004**, 28, 165-78	3.6	241
55	Adaptive stepsize based on control theory for stochastic differential equations. *Journal of Computational and Applied Mathematics*, **2004**, 170, 317-336	2.4	30
54	Binomial leap methods for simulating stochastic chemical kinetics. *Journal of Chemical Physics*, **2004**, 121, 10356-64	3.9	217
53	Convergence of the parallel chaotic waveform relaxation method for stiff systems. *Journal of Computational and Applied Mathematics*, **2003**, 151, 201-213	2.4	4
52	A Variable Stepsize Implementation for Stochastic Differential Equations. *SIAM Journal of Scientific Computing*, **2003**, 24, 848-864	2.6	49
51	A four-stage index 2 Diagonally Implicit Runge-Kutta method. *Applied Numerical Mathematics*, **2002**, 40, 415-432	2.5	19
50	Prediction of protein solvent accessibility using support vector machines. *Proteins: Structure, Function and Bioinformatics*, **2002**, 48, 566-70	4.2	93
49	New Multivalue Methods for Differential Algebraic Equations. *Numerical Algorithms*, **2002**, 31, 193-213	2.1	2
48	Predictor-Corrector Methods of Runge--Kutta Type for Stochastic Differential Equations. *SIAM Journal on Numerical Analysis*, **2002**, 40, 1516-1537	2.4	16
47	Implicit Taylor methods for stiff stochastic differential equations. *Applied Numerical Mathematics*, **2001**, 38, 167-185	2.5	69
46	The composite Euler method for stiff stochastic differential equations. *Journal of Computational and Applied Mathematics*, **2001**, 131, 407-426	2.4	39
45	Stiffly accurate Runge-Kutta methods for stiff stochastic differential equations. *Computer Physics Communications*, **2001**, 142, 186-190	4.2	14
44	Robust parameter settings of evolutionary algorithms for the optimisation of agricultural systems models. *Agricultural Systems*, **2001**, 69, 199-213	6.1	26
43	A new index 2 Runge-Kutta method for the simulation of batch and discontinuous processes. *Computers and Chemical Engineering*, **2000**, 24, 625-630	4	2
42	Parallel half-block methods for initial value problems. *Applied Numerical Mathematics*, **2000**, 32, 255-271	2.5	3

41	Numerical solutions of stochastic differential equations – Implementation and stability issues. *Journal of Computational and Applied Mathematics*, **2000**, 125, 171-182	2.4	62
40	ISIS, the intron information system, reveals the high frequency of alternative splicing in the human genome. *Nature Genetics*, **2000**, 24, 340-1	36.3	179
39	Order Conditions of Stochastic Runge--Kutta Methods by B-Series. *SIAM Journal on Numerical Analysis*, **2000**, 38, 1626-1646	2.4	99
38	Survival of the fittest: genetic algorithms versus evolution strategies in the optimization of systems models. *Agricultural Systems*, **1999**, 60, 113-122	6.1	20
37	On the performance of various adaptive preconditioned GMRES strategies. *Numerical Linear Algebra With Applications*, **1998**, 5, 101-121	1.6	37
36	10. Parallel Methods for Systems of Ordinary Differential Equations **1996**, 101-120		21
35	Use of advanced techniques to optimize a multi-dimensional dairy model. *Agricultural Systems*, **1996**, 50, 239-253	6.1	28
34	Restarted GMRES preconditioned by deflation. *Journal of Computational and Applied Mathematics*, **1996**, 69, 303-318	2.4	128
33	On the performance of parallel waveform relaxations for differential systems. *Applied Numerical Mathematics*, **1996**, 20, 39-55	2.5	18
32	Surface fitting using GCV smoothing splines on supercomputers **1995**,		4
31	A high accuracy defect-correction multigrid method for the steady incompressible Navier-Stokes equations. *Journal of Computational Physics*, **1994**, 114, 227-233	4.1	20
30	Parallel methods for initial value problems. *Applied Numerical Mathematics*, **1993**, 11, 5-25	2.5	47
29	On smoothing and order reduction effects for implicit Runge-Kutta formulae. *Journal of Computational and Applied Mathematics*, **1993**, 45, 17-27	2.4	9
28	Efficient block predictor-corrector methods with a small number of corrections. *Journal of Computational and Applied Mathematics*, **1993**, 45, 139-150	2.4	25
27	The search for the Holy Grail, or: predictor-corrector methods for solving OD3IVPs. *Applied Numerical Mathematics*, **1993**, 11, 125-141	2.5	13
26	The error behaviour of a general class of predictor–corrector methods. *Applied Numerical Mathematics*, **1991**, 8, 201-216	2.5	16
25	An adaptive numerical integration code for a chain of transputers. *Parallel Computing*, **1990**, 16, 305-312	1	4
24	Two-stage and Three-stage Diagonally Implicit Runge-Kutta Nyström Methods of Orders Three and Four. *IMA Journal of Numerical Analysis*, **1990**, 10, 489-504	1.8	28

23	On Order Reduction for Runge–Kutta Methods Applied to Differential/Algebraic Systems and to Stiff Systems of ODEs. *SIAM Journal on Numerical Analysis*, **1990**, 27, 447-456	2.4	18
22	The dichotomy of stiffness: pragmatism versus theory. *Applied Mathematics and Computation*, **1989**, 31, 92-111	2.7	6
21	Construction of A-Stable Diagonally Implicit Multivalue Methods. *SIAM Journal on Numerical Analysis*, **1989**, 26, 397-413	2.4	5
20	Order Properties of Implicit Multivalue Methods for Ordinary Differential Equations. *IMA Journal of Numerical Analysis*, **1988**, 8, 43-69	1.8	31
19	(k, l)-Algebraic Stability of Runge-Kutta Methods. *IMA Journal of Numerical Analysis*, **1988**, 8, 385-400	1.8	2
18	(k, l)-Algebraic Stability of Gauss Methods. *IMA Journal of Numerical Analysis*, **1987**, 7, 251-259	1.8	1
17	A study of B-convergence of Runge-Kutta methods. *Computing (Vienna/New York)*, **1986**, 36, 17-34	2.2	50
16	Order and stability properties of explicit multivalue methods. *Applied Numerical Mathematics*, **1985**, 1, 363-379	2.5	6
15	Efficiently Implementable Algebraically Stable Runge–Kutta Methods. *SIAM Journal on Numerical Analysis*, **1982**, 19, 245-258	2.4	29
14	An implementation of singly-implicit Runge-Kutta methods. *BIT Numerical Mathematics*, **1980**, 20, 326-340	1.7	95
13	Non-linear stability of a general class of differential equation methods. *BIT Numerical Mathematics*, **1980**, 20, 185-203	1.7	182
12	Simplifying assumptions for the order of partitioned multivalue methods. *BIT Numerical Mathematics*, **1980**, 20, 452-465	1.7	19
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