Matthias K Gobbert

List of Publications by Year
in descending order

26 papers	128 citations	1478505 6 h-index	1281871 11 g-index
26 all docs	26 docs citations	26 times ranked	131 citing authors

#	Article	IF	Citations
1	A Galerkin Method for the Simulation of the Transient 2-D/2-D and 3-D/3-D Linear Boltzmann Equation. Journal of Scientific Computing, 2007, 30, 237-273.	2.3	22
2	A memory-efficient finite element method for systems of reaction–diffusion equations with non-smooth forcing. Journal of Computational and Applied Mathematics, 2004, 169, 431-458.	2.0	18
3	A dynamically load-balanced parallel p-adaptive implicit high-order flux reconstruction method for under-resolved turbulence simulation. Journal of Computational Physics, 2020, 417, 109581.	3.8	13
4	Finite element approximation for time-dependent diffusion with measure-valued source. Numerische Mathematik, 2012, 122, 709-723.	1.9	11
5	Merging Orthovoltage X-Ray Minibeams spare the proximal tissues while producing a solid beam at the target. Scientific Reports, 2019, 9, 1198.	3.3	11
6	Long-Time Simulations on High Resolution Meshes to Model Calcium Waves in a Heart Cell. SIAM Journal of Scientific Computing, 2008, 30, 2922-2947.	2.8	10
7	A memory–efficient finite volume method for advection–diffusion–reaction systems with nonsmooth sources. Numerical Methods for Partial Differential Equations, 2015, 31, 143-167.	3.6	6
8	Performance Benchmarking of Data Augmentation and Deep Learning for Tornado Prediction. , 2019, , .		5
9	Nuclear introns help unravel the diversification history of the Australo-Pacific Petroica robins. Molecular Phylogenetics and Evolution, 2019, 131, 48-54.	2.7	4
10	Examining the Effect of Introducing a Link From Electrical Excitation to Calcium Dynamics in a Cardiomyocyte. Spora: A Journal of Biomathematics, 2016, 2, .	0.1	4
11	Using Deep Learning to Enhance Compton Camera Based Prompt Gamma Image Reconstruction Data for Proton Radiotherapy. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	4
12	Time-stepping techniques to enable the simulation of bursting behavior in a physiologically realistic computational islet. Mathematical Biosciences, 2015, 263, 1-17.	1.9	3
13	Performance Benchmarking of Parallel Hyperparameter Tuning for Deep Learning Based Tornado Predictions. Big Data Research, 2021, 25, 100212.	4.2	3
14	Classification of Compton Camera Based Prompt Gamma Imaging for Proton Radiotherapy by Random Forests. , 2021, , .		3
15	On Unconditionally Positivity Preserving and Conservative Methods for Systems of Advection–Diffusion–Reaction Equations. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 965-966.	0.2	2
16	Insight into spontaneous recurrent calcium waves in a 3-D cardiac cell based on analysis of a 1-D deterministic model. International Journal of Computer Mathematics, 2015, 92, 591-607.	1.8	2
17	Examining the Electrical Excitation, Calcium Signaling, and Mechanical Contraction Cycle in a Heart Cell. Spora: A Journal of Biomathematics, 2017, 3, .	0.1	2
18	Maximum-likelihood estimation of the random-clumped multinomial model as a prototype problem for large-scale statistical computing. Journal of Statistical Computation and Simulation, 2013, 83, 2178-2194.	1.2	1

#	Article	IF	Citations
19	Long-time simulations with complex code using multiple nodes of Intel Xeon Phi Knights Landing. Journal of Computational and Applied Mathematics, 2018, 337, 18-36.	2.0	1
20	Parameter Identification for Calcium Release in a Heart Cell with Modified Patankarâ€"Rungeâ€"Kutta Schemes. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800197.	0.2	1
21	Challenges and opportunities for the simulation of calcium waves on modern multiâ€core and manyâ€core parallel computing platforms. International Journal for Numerical Methods in Biomedical Engineering, 2019, 37, e3244.	2.1	1
22	Linkages of calcium-induced calcium release in a cardiomyocyte simulated by a system of seven coupled partial differential equations. Involve, 2020, 13, 399-424.	0.2	1
23	Parallel Computing for Long-Time Simulations of Calcium Waves in a Heart Cell. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 637-638.	0.2	0
24	Parallelizing computation of expected values in recombinant binomial trees. Journal of Statistical Computation and Simulation, 2018, 88, 657-674.	1.2	0
25	Simulation of Calcium Waves in a Heart Cell on Modern Multiâ€Core Parallel Computing Platforms. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900295.	0.2	0
26	A Modified Minibatch Sampling Method for Parameter Estimation in Hidden Markov Models using Stochastic Variational Bayes. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0