Susan M Mniszewski

List of Publications by Year
in descending order

38 papers	812 citations	759233 12 h-index	610901 24 g-index
40 all docs	40 docs citations	40 times ranked	851 citing authors

#	Article	IF	Citations
1	Graph Partitioning using Quantum Annealing on the D-Wave System. , 2017, , .		99
2	Real-world hydrologic assessment of a fully-distributed hydrological model in a parallel computing environment. Journal of Hydrology, 2011, 409, 483-496.	5.4	95
3	The Gene Ontology Categorizer. Bioinformatics, 2004, 20, i169-i177.	4.1	64
4	A categorization approach to automated ontological function annotation. Protein Science, 2006, 15, 1544-1549.	7.6	59
5	Semi-empirical power-law scaling of new infection rate to model epidemic dynamics with inhomogeneous mixing. Mathematical Biosciences, 2006, 203, 301-318.	1.9	49
6	Revisiting wavelet compression for large-scale climate data using JPEG 2000 and ensuring data precision. , 2011, , .		43
7	Detecting multiple communities using quantum annealing on the D-Wave system. PLoS ONE, 2020, 15, e0227538.	2.5	40
8	A Hybrid Approach for Solving Optimization Problems on Small Quantum Computers. Computer, 2019, 52, 18-26.	1.1	38
9	Multilevel Combinatorial Optimization across Quantum Architectures. ACM Transactions on Quantum Computing, 2021, 2, 1-29.	4.3	30
10	Graph-based linear scaling electronic structure theory. Journal of Chemical Physics, 2016, 144, 234101.	3.0	29
11	Pandemic simulation of antiviralsâ€‰+â€‰school closures: buying time until strain-specific vaccine is available. Computational and Mathematical Organization Theory, 2008, 14, 209-221.	2.0	27
12	Recursive Factorization of the Inverse Overlap Matrix in Linear-Scaling Quantum Molecular Dynamics Simulations. Journal of Chemical Theory and Computation, 2016, 12, 3063-3073.	5.3	19
13	Understanding the Impact of Face Mask Usage Through Epidemic Simulation of Large Social Networks. Intelligent Systems Reference Library, 2014, , 97-115.	1.2	17
14	Computing molecular excited states on a D-Wave quantum annealer. Scientific Reports, 2021, 11, 18796.	3.3	16
15	Integrating predictive analytics into a spatiotemporal epidemic simulation. , 2015, , .		15
16	Enabling particle applications for exascale computing platforms. International Journal of High Performance Computing Applications, 2021, 35, 572-597.	3.7	15
17	Designing systems for large-scale, discrete-event simulations: Experiences with the FastTrans parallel microsimulator. , 2009, , .		13
18	TADSim. ACM Transactions on Modeling and Computer Simulation, 2015, 25, 1-26.	0.8	12

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19	The basic matrix library (BML) for quantum chemistry. Journal of Supercomputing, 2018, 74, 6201-6219.	3.6	12
20	Quantum-Based Molecular Dynamics Simulations Using Tensor Cores. Journal of Chemical Theory and Computation, 2021, 17, 6180-6192.	5.3	12
21	Discrete event performance prediction of speculatively parallel temperature-accelerated dynamics. Simulation, 2016, 92, 1065-1086.	1.8	11
22	Reduction of the molecular hamiltonian matrix using quantum community detection. Scientific Reports, 2021, 11, 4099.	3.3	11
23	Quantum isomer search. PLoS ONE, 2020, 15, e0226787.	2.5	10
24	Graph Partitioning as Quadratic Unconstrained Binary Optimization (QUBO) on Spiking Neuromorphic Hardware. , 2019, , .		10
25	Mixed Precision Fermi-Operator Expansion on Tensor Cores from a Machine Learning Perspective. Journal of Chemical Theory and Computation, 2021, 17, 2256-2265.	5.3	9
26	Optimizing human activity patterns using global sensitivity analysis. Computational and Mathematical Organization Theory, 2014, 20, 394-416.	2.0	8
27	An Evaluation of Threaded Models for a Classical MD Proxy Application. , 2014, , .		7
28	Using Graph Partitioning for Scalable Distributed Quantum Molecular Dynamics. Algorithms, 2019, 12, 187.	2.1	7
29	Cabana: A Performance Portable Library for Particle-Based Simulations. Journal of Open Source Software, 2022, 7, 4115.	4.6	7
30	Quantum Perturbation Theory Using Tensor Cores and a Deep Neural Network. Journal of Chemical Theory and Computation, 2022, 18, 4255-4268.	5.3	7
31	Linear Scaling Pseudo Fermi-Operator Expansion for Fractional Occupation. Journal of Chemical Theory and Computation, 2019, 15, 190-200.	5.3	5
32	Sampling electronic structure quadratic unconstrained binary optimization problems (QUBOs) with Ocean and Mukai solvers. PLoS ONE, 2022, 17, e0263849.	2.5	5
33	Controlled precision QUBO-based algorithm to compute eigenvectors of symmetric matrices. PLoS ONE, 2022, 17, e0267954.	2.5	3
34	Self-consistent tight-binding molecular dynamics simulations of shock-induced reactions in hydrocarbons. , 2012, , .		2
35	Subband coding for large-scale scientific simulation data using JPEG 2000. , 2012, , .		2
36	Toward a QUBO-Based Density Matrix Electronic Structure Method. Journal of Chemical Theory and Computation, 2022, 18, 4177-4185.	5.3	2

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37	A QUBO formulation for top-Ï„ eigencentrality nodes. PLoS ONE, 2022, 17, e0271292.	2.5	2
38	Molecular dynamics simulations of detonation on the roadrunner supercomputer. , 2012, , .		0