

Christopher D Carothers

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,135
citations

933447

10
h-index

996975

15
g-index

50
all docs

50
docs citations

50
times ranked

643
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient optimistic parallel simulations using reverse computation. ACM Transactions on Modeling and Computer Simulation, 1999, 9, 224-253.	0.8	188
2	ROSS: A high-performance, low-memory, modular Time Warp system. Journal of Parallel and Distributed Computing, 2002, 62, 1648-1669.	4.1	121
3	The future of scientific workflows. International Journal of High Performance Computing Applications, 2018, 32, 159-175.	3.7	104
4	Warp speed. , 2013, , .		89
5	Enabling Parallel Simulation of Large-Scale HPC Network Systems. IEEE Transactions on Parallel and Distributed Systems, 2017, 28, 87-100.	5.6	67
6	Scalable Time Warp on Blue Gene Supercomputers. , 2009, , .		66
7	An analysis of clustered failures on large supercomputing systems. Journal of Parallel and Distributed Computing, 2009, 69, 652-665.	4.1	53
8	Modeling a Million-Node Dragonfly Network Using Massively Parallel Discrete-Event Simulation. , 2012, , .		49
9	Large-scale network simulation techniques. Computer Communication Review, 2003, 33, 27-41.	1.8	45
10	Strong Scaling Analysis of a Parallel, Unstructured, Implicit Solver and the Influence of the Operating System Interference. Scientific Programming, 2009, 17, 261-274.	0.7	27
11	A case study in using massively parallel simulation for extreme-scale torus network codesign. , 2014, , .		27
12	Modeling Billion-Node Torus Networks Using Massively Parallel Discrete-Event Simulation. , 2011, , .		26
13	On deciding between conservative and optimistic approaches on massively parallel platforms. , 2010, , .		24
14	Quantifying I/O and Communication Traffic Interference on Dragonfly Networks Equipped with Burst Buffers. , 2017, , .		22
15	A visual analytics system for optimizing the performance of large-scale networks in supercomputing systems. Visual Informatics, 2018, 2, 98-110.	4.4	22
16	Preliminary Evaluation of a Parallel Trace Replay Tool for HPC Network Simulations. Lecture Notes in Computer Science, 2015, , 417-429.	1.3	18
17	LORAIN. , 2014, , .		14
18	The effect of state-saving in optimistic simulation on a cache-coherent non-uniform memory access architecture. , 1999, , .		13

#	ARTICLE	IF	CITATIONS
19	Towards PDES in a Message-Driven Paradigm. , 2016, , .		12
20	Efficient Classification of Supercomputer Failures Using Neuromorphic Computing. , 2018, , .		12
21	Adjacency-Based Data Reordering Algorithm for Acceleration of Finite Element Computations. Scientific Programming, 2010, 18, 107-123.	0.7	11
22	Parallel I/O Performance for Application-Level Checkpointing on the Blue Gene/P System. , 2011, , .		11
23	Design Index for Deep Neural Networks. Procedia Computer Science, 2016, 88, 131-138.	2.0	10
24	Preliminary Performance Analysis of Multi-rail Fat-Tree Networks. , 2017, , .		10
25	MASSIVELY PARALLEL I/O FOR PARTITIONED SOLVER SYSTEMS. Parallel Processing Letters, 2010, 20, 377-395.	0.6	8
26	Visual Analytics Techniques for Exploring the Design Space of Large-Scale High-Radix Networks. , 2017, , .		8
27	Evaluation of Topology-Aware Broadcast Algorithms for Dragonfly Networks. , 2016, , .		7
28	A Visual Analytics Framework for Analyzing Parallel and Distributed Computing Applications. , 2019, , .		7
29	A Visual Analytics Framework for Reviewing Streaming Performance Data. , 2020, , .		7
30	Exploration of Congestion Control Techniques on Dragonfly-class HPC Networks Through Simulation. , 2021, , .		7
31	Scalable RF propagation modeling on the IBM Blue Gene/L and Cray XT5 supercomputers. , 2009, , .		6
32	Scalable parallel I/O alternatives for massively parallel partitioned solver systems. , 2010, , .		6
33	Using massively parallel simulation for mpi collective communication modeling in extreme-scale networks. , 2014, , .		6
34	Using Scientific Visualization Techniques to Visualize Parallel Network Simulations. , 2019, , .		6
35	Modeling Large-Scale Slim Fly Networks Using Parallel Discrete-Event Simulation. ACM Transactions on Modeling and Computer Simulation, 2018, 28, 1-25.	0.8	5
36	A case study in simulating PCS networks using Time Warp. ACM SIGSIM Simulation Digest, 1995, 25, 87-94.	0.1	4

#	ARTICLE	IF	CITATIONS
37	A market mechanism for participatory global query: A first step of enterprise resources self-allocation. Information Technology and Management, 2006, 7, 71-89.	2.4	3
38	Visual Data-Analytics of Large-Scale Parallel Discrete-Event Simulations. , 2016, , .		3
39	Evaluating the Impact of Spiking Neural Network Traffic on Extreme-Scale Hybrid Systems. , 2018, , .		3
40	Toward reliable validation of HPC network simulation models. , 2017, , .		2
41	Prototype for a large-scale static timing analyzer running on an IBM Blue Gene. , 2010, , .		1
42	Time Warp state restoration via delta encoding. , 2015, , .		1
43	LEVERAGING SHARED MEMORY IN THE ROSS TIME WARP SIMULATOR FOR COMPLEX NETWORK SIMULATIONS. , 2018, , .		1
44	Fit Fly. , 2019, , .		1
45	Evaluation of Link Failure Resilience in Multirail Dragonfly-Class Networks through Simulation. , 2020, , .		1
46	Toward Unbiased Deterministic Total Orderings Of Parallel Simulations With Simultaneous Events. , 2021, , .		1
47	Eliminating Remote Message Passing in Optimistic Simulation. , 2006, , .		0
48	Investigating the memory characteristics of a massively parallel Time Warp kernel. , 2011, , .		0
49	A Case Study in Using Discrete-Event Simulation to Improve the Scalability of MG-RAST. , 2016, , .		0
50	Training Deep Neural Networks with Constrained Learning Parameters. , 2020, , .		0