George Bosilca

List of Publications by Year in descending order

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45 papers	2,336 citations	623734 14 h-index	580821 25 g-index
45 all docs	45 docs citations	45 times ranked	1441 citing authors

#	Article	IF	Citations
1	Accelerating Geostatistical Modeling and Prediction With Mixed-Precision Computations: A High-Productivity Approach With PaRSEC. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 964-976.	5.6	14
2	Evaluating Data Redistribution in PaRSEC. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 1856-1872.	5.6	2
3	Using long vector extensions for MPI reductions. Parallel Computing, 2022, 109, 102871.	2.1	5
4	A Framework to Exploit Data Sparsity in Tile Low-Rank Cholesky Factorization. , 2022, , .		5
5	Callback-based completion notification using MPI Continuations. Parallel Computing, 2021, 106, 102793.	2.1	6
6	An international survey on MPI users. Parallel Computing, 2021, 108, 102853.	2.1	4
7	A survey of MPI usage in the US exascale computing project. Concurrency Computation Practice and Experience, 2020, 32, e4851.	2.2	49
8	Using Arm Scalable Vector Extension to Optimize OPEN MPI. , 2020, , .		5
9	Fault tolerance of MPI applications in exascale systems: The ULFM solution. Future Generation Computer Systems, 2020, 106, 467-481.	7.5	33
10	Task Bench: A Parameterized Benchmark for Evaluating Parallel Runtime Performance. , 2020, , .		22
11	Extreme-Scale Task-Based Cholesky Factorization Toward Climate and Weather Prediction Applications. , 2020, , .		24
12	Flexible Data Redistribution in a Task-Based Runtime System. , 2020, , .		3
13	Runtime level failure detection and propagation in HPC systems. , 2019, , .		9
14	Comparing the performance of rigid, moldable and grid-shaped applications on failure-prone HPC platforms. Parallel Computing, 2019, 85, 1-12.	2.1	8
15	Asynchronous Receiver-Driven Replay for Local Rollback of MPI Applications. , 2019, , .		2
16	Performance Analysis of Tile Low-Rank Cholesky Factorization Using PaRSEC Instrumentation Tools. , 2019, , .		12
17	Multirate: A Flexible MPI Benchmark for Fast Assessment of Multithreaded Communication Performance. , 2019, , .		1
18	Generic Matrix Multiplication for Multi-GPU Accelerated Distributed-Memory Platforms over PaRSEC. , 2019, , .		14

#	Article	IF	Citations
19	Give MPI Threading a Fair Chance: A Study of Multithreaded MPI Designs. , 2019, , .		13
20	Local rollback for resilient MPI applications with application-level checkpointing and message logging. Future Generation Computer Systems, 2019, 91, 450-464.	7.5	19
21	Argobots: A Lightweight Low-Level Threading and Tasking Framework. IEEE Transactions on Parallel and Distributed Systems, 2018, 29, 512-526.	5.6	69
22	A failure detector for HPC platforms. International Journal of High Performance Computing Applications, 2018, 32, 139-158.	3.7	12
23	Dynamic task discovery in PaRSEC. , 2017, , .		43
24	Failure Detection and Propagation in HPC systems. , 2016, , .		12
25	Assessing the cost of redistribution followed by a computational kernel: Complexity and performance results. Parallel Computing, 2016, 52, 22-41.	2.1	6
26	Accelerating NWChem Coupled Cluster Through Dataflow-Based Execution. Lecture Notes in Computer Science, 2016, , 366-376.	1.3	5
27	Practical scalable consensus for pseudo-synchronous distributed systems. , 2015, , .		12
28	Plan B. , 2015, , .		7
29	PaRSEC in Practice: Optimizing a Legacy Chemistry Application through Distributed Task-Based Execution. , 2015, , .		15
30	PTG: An Abstraction for Unhindered Parallelism. , 2014, , .		31
31	Unified model for assessing checkpointing protocols at extremeâ€scale. Concurrency Computation Practice and Experience, 2014, 26, 2772-2791.	2.2	40
32	Power profiling of Cholesky and QR factorizations on distributed memory systems. Computer Science - Research and Development, 2014, 29, 139-147.	2.7	11
33	An efficient distributed randomized algorithm for solving large dense symmetric indefinite linear systems. Parallel Computing, 2014, 40, 213-223.	2.1	12
34	Taking Advantage of Hybrid Systems for Sparse Direct Solvers via Task-Based Runtimes. , 2014, , .		28
35	An evaluation of User-Level Failure Mitigation support in MPI. Computing (Vienna/New York), 2013, 95, 1171-1184.	4.8	26
36	Post-failure recovery of MPI communication capability. International Journal of High Performance Computing Applications, 2013, 27, 244-254.	3.7	136

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37	PaRSEC: Exploiting Heterogeneity to Enhance Scalability. Computing in Science and Engineering, 2013, 15, 36-45.	1.2	192
38	Algorithm-based fault tolerance for dense matrix factorizations. , 2012, , .		67
39	DAGuE: A generic distributed DAG engine for High Performance Computing. Parallel Computing, 2012, 38, 37-51.	2.1	196
40	A Checkpoint-on-Failure Protocol for Algorithm-Based Recovery in Standard MPI. Lecture Notes in Computer Science, 2012, , 477-488.	1.3	18
41	An Evaluation of User-Level Failure Mitigation Support in MPI. Lecture Notes in Computer Science, 2012, , 193-203.	1.3	64
42	Flexible Development of Dense Linear Algebra Algorithms on Massively Parallel Architectures with DPLASMA. , 2011, , .		95
43	Redesigning the message logging model for high performance. Concurrency Computation Practice and Experience, 2010, 22, 2196-2211.	2.2	31
44	Algorithm-based fault tolerance applied to high performance computing. Journal of Parallel and Distributed Computing, 2009, 69, 410-416.	4.1	172
45	Open MPI: Goals, Concept, and Design of a Next Generation MPI Implementation. Lecture Notes in Computer Science, 2004, , 97-104.	1.3	786