Rio Yokota

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1232245/publications.pdf

Version: 2024-02-01

40 papers	749 citations	687363 13 h-index	610901 24 g-index
42 all docs	42 docs citations	42 times ranked	605 citing authors

#	Article	IF	Citations
1	Scalable and Practical Natural Gradient for Large-Scale Deep Learning. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 404-415.	13.9	15
2	Parallel QR Factorization of Block Low-rank Matrices. ACM Transactions on Mathematical Software, 2022, 48, 1-28.	2.9	2
3	Recovering single precision accuracy from Tensor Cores while surpassing the FP32 theoretical peak performance. International Journal of High Performance Computing Applications, 2022, 36, 475-491.	3.7	9
4	ExaFMM: a high-performance fast multipole method library with C++ and Python interfaces. Journal of Open Source Software, 2021, 6, 3145.	4.6	12
5	Performance Optimizations and Analysis of Distributed Deep Learning with Approximated Second-Order Optimization Method. , 2019, , .		3
6	Exhaustive Study of Hierarchical AllReduce Patterns for Large Messages Between GPUs. , 2019, , .		19
7	Distributed-memory lattice H-matrix factorization. International Journal of High Performance Computing Applications, 2019, 33, 1046-1063.	3.7	13
8	Extreme Scale FMM-Accelerated Boundary Integral Equation Solver for Wave Scattering. SIAM Journal of Scientific Computing, 2019, 41, C245-C268.	2.8	15
9	Large-Scale Distributed Second-Order Optimization Using Kronecker-Factored Approximate Curvature for Deep Convolutional Neural Networks. , 2019, , .		35
10	Highly Productive, High-Performance Application Frameworks for Post-Petascale Computing. , 2019, , 77-98.		0
11	QR Factorization of Block Low-rank Matrices with Weak Admissibility Condition. Journal of Information Processing, 2019, 27, 831-839.	0.4	5
12	Fast multipole preconditioners for sparse matrices arising from elliptic equations. Computing and Visualization in Science, 2018, 18, 213-229.	1.2	10
13	Performance Evaluation of Computation and Communication Kernels of the Fast Multipole Method on Intel Manycore Architecture. Lecture Notes in Computer Science, 2017, , 553-564.	1.3	5
14	Communication Reducing Algorithms for Distributed Hierarchical N-Body Problems with Boundary Distributions. Lecture Notes in Computer Science, 2017, , 79-96.	1.3	6
15	Fast Multipole Method as a Matrix-Free Hierarchical Low-Rank Approximation. Lecture Notes in Computational Science and Engineering, 2017, , 267-286.	0.3	3
16	Tapas: An Implicitly Parallel Programming Framework for Hierarchical N-Body Algorithms. , 2016, , .		3
17	Multi-level restricted maximum likelihood covariance estimation and kriging for large non-gridded spatial datasets. Spatial Statistics, 2016, 18, 105-124.	1.9	11
18	A performance model for the communication in fast multipole methods on high-performance computing platforms. International Journal of High Performance Computing Applications, 2016, 30, 423-437.	3.7	7

#	Article	IF	Citations
19	N-Body Methods. , 2015, , 175-183.		3
20	Data-driven execution of fast multipole methods. Concurrency Computation Practice and Experience, 2014, 26, 1935-1946.	2.2	10
21	Scalable Fast Multipole Accelerated Vortex Methods. , 2014, , .		3
22	Petascale molecular dynamics simulation using the fast multipole method on K computer. Computer Physics Communications, 2014, 185, 2575-2585.	7.5	22
23	Communication Complexity of the Fast Multipole Method and its Algebraic Variants. Supercomputing Frontiers and Innovations, 2014, 1, .	0.4	3
24	FMM-based vortex method for simulation of isotropic turbulence on GPUs, compared with a spectral method. Computers and Fluids, 2013, 80, 17-27.	2.5	23
25	Petascale turbulence simulation using a highly parallel fast multipole method on GPUs. Computer Physics Communications, 2013, 184, 445-455.	7.5	51
26	An FMM Based on Dual Tree Traversal for Many-Core Architectures. Journal of Algorithms and Computational Technology, 2013, 7, 301-324.	0.7	32
27	Fork-Join and Data-Driven Execution Models on Multi-core Architectures: Case Study of the FMM. Lecture Notes in Computer Science, 2013, , 255-266.	1.3	15
28	A Task Parallel Implementation of Fast Multipole Methods. , 2012, , .		11
29	A tuned and scalable fast multipole method as a preeminent algorithm for exascale systems. International Journal of High Performance Computing Applications, 2012, 26, 337-346.	3.7	50
30	Scalable Force Directed Graph Layout Algorithms Using Fast Multipole Methods. , 2012, , .		10
31	Hierarchical N-body Simulations with Autotuning for Heterogeneous Systems. Computing in Science and Engineering, 2012, 14, 30-39.	1.2	28
32	Treecode and Fast Multipole Method for N-Body Simulation with CUDA. , 2011, , 113-132.		29
33	Vortex Methods for the Simulation of Turbulent Flows: Review. Journal of Fluid Science and Technology, 2011, 6, 14-29.	0.6	12
34	Comparing the treecode with FMM on GPUs for vortex particle simulations of a leapfrogging vortex ring. Computers and Fluids, 2011, 45, 155-161.	2.5	11
35	Biomolecular electrostatics using a fast multipole BEM on up to 512 gpus and a billion unknowns. Computer Physics Communications, 2011, 182, 1272-1283.	7.5	73
36	Comparing vortex methods and finite difference methods in a homogeneous turbulent shear flow. International Journal for Numerical Methods in Fluids, 2010, 63, 828-846.	1.6	1

#	Article	IF	Citations
37	PetRBF â€" A parallel O(N) algorithm for radial basis function interpolation with Gaussians. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1793-1804.	6.6	52
38	42 TFlops hierarchical N -body simulations on GPUs with applications in both astrophysics and turbulence. , 2009, , .		65
39	Fast multipole methods on a cluster of GPUs for the meshless simulation of turbulence. Computer Physics Communications, 2009, 180, 2066-2078.	7.5	44
40	Calculation of isotropic turbulence using a pure Lagrangian vortex method. Journal of Computational Physics, 2007, 226, 1589-1606.	3.8	24