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List of Publications by Year
in descending order

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84 papers	542 citations	932766 10 h-index	940134 16 g-index
91 all docs	91 docs citations	91 times ranked	458 citing authors

#	Article	IF	Citations
1	On Bernoulli matrix polynomials and matrix exponential approximation. Journal of Computational and Applied Mathematics, 2022, 404, 113207.	1.1	8
2	On Bernoulli series approximation for the matrix cosine. Mathematical Methods in the Applied Sciences, 2022, 45, 3239-3253.	1.2	1
3	Parallel signal detection for generalized spatial modulation MIMO systems. Journal of Supercomputing, 2022, 78, 7059.	2.4	1
4	Parallel border tracking in binary images using GPUs. Journal of Supercomputing, 2022, 78, 9817-9839.	2.4	6
5	Two Taylor Algorithms for Computing the Action of the Matrix Exponential on a Vector. Algorithms, 2022, 15, 48.	1.2	2
6	New Hermite series expansion for computing the matrix hyperbolic cosine. Journal of Computational and Applied Mathematics, 2022, 408, 114084.	1.1	1
7	Efficient update of determinants for many-electron wave function overlaps. Computer Physics Communications, 2021, 258, 107521.	3.0	1
8	Late Neanderthal subsistence strategies and cultural traditions in the northern Iberia Peninsula: Insights from Prado Vargas, Burgos, Spain. Quaternary Science Reviews, 2021, 254, 106795.	1.4	14
9	Low precision matrix multiplication for efficient deep learning in NVIDIA Carmel processors. Journal of Supercomputing, 2021, 77, 11257-11269.	2.4	1
10	Advances in the Approximation of the Matrix Hyperbolic Tangent. Mathematics, 2021, 9, 1219.	1.1	7
11	A pipeline for the QR update in digital signal processing. Computational and Mathematical Methods, 2020, 2, e1022.	0.3	0
12	Green and facile solâ€“gel synthesis of the mesoporous SiO₂â€“TiO₂ catalyst by four different activation modes. RSC Advances, 2020, 10, 39580-39588.	1.7	9
13	Performance modeling of the sparse matrixâ€“vector product via convolutional neural networks. Journal of Supercomputing, 2020, 76, 8883-8900.	2.4	7
14	High Performance and Portable Convolution Operators for Multicore Processors. , 2020, , .		14
15	Online scoreâ€informed source separation in polyphonic mixtures using instrument spectral patterns. Computational and Mathematical Methods, 2019, 1, e1040.	0.3	2
16	Alternative mass spectrometry techniques for the validation of the fragmentation pattern of capsaicin and dihydrocapsaicin. Rapid Communications in Mass Spectrometry, 2019, 33, 635-640.	0.7	8
17	Generalization of the K-SVD algorithm for minimization of Î²-divergence. , 2019, 92, 47-53.		0
18	An efficient and accurate algorithm for computing the matrix cosine based on new Hermite approximations. Journal of Computational and Applied Mathematics, 2019, 348, 1-13.	1.1	5

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19	Real-time Soundprism. Journal of Supercomputing, 2019, 75, 1594-1609.	2.4	2
20	A pipeline structure for the block QR update in digital signal processing. Journal of Supercomputing, 2019, 75, 1470-1482.	2.4	1
21	Fast Taylor polynomial evaluation for the computation of the matrix cosine. Journal of Computational and Applied Mathematics, 2019, 354, 641-650.	1.1	7
22	Fast block QR update in digital signal processing. Journal of Supercomputing, 2019, 75, 1051-1064.	2.4	1
23	Exploring hybrid parallel systems for probabilistic record linkage. Journal of Supercomputing, 2019, 75, 1137-1149.	2.4	5
24	Computing matrix trigonometric functions with GPUs through Matlab. Journal of Supercomputing, 2019, 75, 1227-1240.	2.4	4
25	HReMAS: hybrid real-time musical alignment system. Journal of Supercomputing, 2019, 75, 1001-1013.	2.4	3
26	Energy aware ultrascale systems. , 2019, , 127-188.		0
27	Two-sided orthogonal reductions to condensed forms on asymmetric multicore processors. Parallel Computing, 2018, 78, 85-100.	1.3	0
28	A new efficient and accurate spline algorithm for the matrix exponential computation. Journal of Computational and Applied Mathematics, 2018, 337, 354-365.	1.1	6
29	Exploring the Effectiveness of Video-Vignettes to Develop Mathematics Student Teachersâ€™ Feedback Competence. Eurasia Journal of Mathematics, Science and Technology Education, 2018, 14, .	0.7	9
30	Accelerating multi-channel filtering of audio signal on ARM processors. Journal of Supercomputing, 2017, 73, 203-214.	2.4	4
31	Automatic tuning to performance modelling of matrix polynomials on multicore and multi-GPU systems. Journal of Supercomputing, 2017, 73, 227-239.	2.4	2
32	Parallel online time warping for real-time audio-to-score alignment in multi-core systems. Journal of Supercomputing, 2017, 73, 126-138.	2.4	14
33	Efficient and accurate algorithms for computing matrix trigonometric functions. Journal of Computational and Applied Mathematics, 2017, 309, 325-332.	1.1	10
34	High-performance computing: the essential tool and the essential challenge. Journal of Supercomputing, 2017, 73, 1-3.	2.4	66
35	Two algorithms for computing the matrix cosine function. Applied Mathematics and Computation, 2017, 312, 66-77.	1.4	11
36	An efficient musical accompaniment parallel system for mobile devices. Journal of Supercomputing, 2017, 73, 343-353.	2.4	8

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37	Reduction to Tridiagonal Form for Symmetric Eigenproblems on Asymmetric Multicore Processors. , 2017, , .		1
38	A fast bandâ€“Krylov eigensolver for macromolecular functional motion simulation on multicore architectures and graphics processors. Journal of Computational Physics, 2016, 309, 314-323.	1.9	3
39	Implementation of the Beamformer Algorithm for the NVIDIA Jetson. Lecture Notes in Computer Science, 2016, , 201-211.	1.0	2
40	Time and energy modeling of highâ€“performance Level-3 BLAS on x86 architectures. Simulation Modelling Practice and Theory, 2015, 55, 77-94.	2.2	2
41	Enhancing performance and energy consumption of runtime schedulers for dense linear algebra. Concurrency Computation Practice and Experience, 2014, 26, 2591-2611.	1.4	2
42	Modeling power and energy consumption of dense matrix factorizations on multicore processors. Concurrency Computation Practice and Experience, 2014, 26, 2743-2757.	1.4	3
43	Modeling power and energy of the task-parallel Cholesky factorization on multicore processors. Computer Science - Research and Development, 2014, 29, 105-112.	2.7	12
44	Solving time-invariant differential matrix Riccati equations using GPGPU computing. Journal of Supercomputing, 2014, 70, 623-636.	2.4	1
45	Automatic routine tuning to represent landform attributes on multicore and multi-GPU systems. Journal of Supercomputing, 2014, 70, 733-745.	2.4	1
46	Block pivoting implementation of a symmetric Toeplitz solver. Journal of Parallel and Distributed Computing, 2014, 74, 2392-2399.	2.7	1
47	Assessing Power Monitoring Approaches for Energy and Power Analysis of Computers. Sustainable Computing: Informatics and Systems, 2014, 4, 68-82.	1.6	15
48	A multicore solution to Blockâ€“Toeplitz linear systems of equations. Journal of Supercomputing, 2013, 65, 999-1009.	2.4	2
49	Energy-efficient execution of dense linear algebra algorithms on multi-core processors. Cluster Computing, 2013, 16, 497-509.	3.5	6
50	Auto-tuning methodology to represent landform attributes on multicore and multi-GPU systems. , 2013, , .		3
51	Solving Some Mysteries in Power Monitoring of Servers: Take Care of Your Wattmeters!. Lecture Notes in Computer Science, 2013, , 3-18.	1.0	12
52	Runtime Scheduling of the LU Factorization: Performance and Energy. Lecture Notes in Computer Science, 2013, , 153-167.	1.0	1
53	Tools for Power-Energy Modelling and Analysis of Parallel Scientific Applications. , 2012, , .		46
54	Saving Energy in the LU Factorization with Partial Pivoting on Multi-core Processors. , 2012, , .		7

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55	Auto-Tuning Methodology to Represent Landform Attributes on Multicore and Multi-GPU Systems. , 2012, , .		1
56	DVFS-control techniques for dense linear algebra operations on multi-core processors. Computer Science - Research and Development, 2012, 27, 289-298.	2.7	12
57	Heterogeneous Computational Model for Landform Attributes Representation on Multicore and Multi-GPU Systems. Procedia Computer Science, 2012, 9, 47-56.	1.2	4
58	Reducing Energy Consumption of Dense Linear Algebra Operations on Hybrid CPU-GPU Platforms. , 2012, , .		12
59	Solving systems of symmetric Toeplitz tridiagonal equations: Rojoâ€™s algorithm revisited. Applied Mathematics and Computation, 2012, 219, 1874-1889.	1.4	4
60	Parallel Algorithm for Landform Attributes Representation on Multicore and Multi-GPU Systems. Lecture Notes in Computer Science, 2012, , 29-43.	1.0	1
61	Improving power efficiency of dense linear algebra algorithms on multi-core processors via slack control. , 2011, , .		12
62	Implementation and tuning of a parallel symmetric Toeplitz eigensolver. Journal of Parallel and Distributed Computing, 2011, 71, 485-494.	2.7	1
63	Experimental Study of Six Different Implementations of Parallel Matrix Multiplication on Heterogeneous Computational Clusters of Multicore Processors. , 2010, , .		9
64	Self-organization of ultrasound in viscous fluids. Europhysics Letters, 2010, 92, 10003.	0.7	2
65	A GPU Approach to the Simulation of Spatioâ€“temporal Dynamics in Ultrasonic Resonators. Lecture Notes in Computer Science, 2010, , 379-386.	1.0	0
66	Parallel solvers for dense linear systems for heterogeneous computational clusters. , 2009, , .		3
67	A multilevel parallel algorithm to solve symmetric Toeplitz linear systems. Journal of Supercomputing, 2008, 44, 237-256.	2.4	3
68	Parallel computation of the eigenvalues of symmetric Toeplitz matrices through iterative methods. Journal of Parallel and Distributed Computing, 2008, 68, 1113-1121.	2.7	6
69	Scalable Dense Factorizations for Heterogeneous Computational Clusters. , 2008, , .		0
70	A Threaded Divide and Conquer Symmetric Tridiagonal Eigensolver on Multicore Systems. , 2008, , .		1
71	Heterogeneous PBLAS: Optimization of PBLAS for Heterogeneous Computational Clusters. , 2008, , .		2
72	A Pipelined Parallel Algorithm for OSIC Decoding. , 2008, , 419-428.		0

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73	A Parallel Algorithm for the Solution of the Deconvolution Problem on Heterogeneous Networks. , 2006, , .		1
74	Solving the block-Toeplitz least-squares problem in parallel. Concurrency Computation Practice and Experience, 2005, 17, 49-67.	1.4	7
75	An Efficient Parallel Algorithm to Solve Block?Toeplitz Systems. Journal of Supercomputing, 2005, 32, 251-278.	2.4	10
76	An Efficient and Stable Parallel Solution for Non-symmetric Toeplitz Linear Systems. Lecture Notes in Computer Science, 2005, , 685-698.	1.0	6
77	Parallel Algorithms for the Solution of Toeplitz Systems of Linear Equations. Lecture Notes in Computer Science, 2004, , 969-976.	1.0	7
78	Designing polylibraries to speed up linear algebra computations. International Journal of High Performance Computing and Networking, 2004, 1, 75.	0.4	9
79	A study of the performance of Neville elimination using two kinds of partitioning techniques. Linear Algebra and Its Applications, 2001, 332-334, 111-117.	0.4	7
80	A Parallel Algorithm for Solving the Toeplitz Least Squares Problem. Lecture Notes in Computer Science, 2001, , 316-329.	1.0	0
81	Development of block and partitioned Neville elimination. Comptes Rendus Mathematique, 1999, 329, 1091-1096.	0.5	4
82	Backward error analysis of Neville elimination. Applied Numerical Mathematics, 1997, 23, 193-204.	1.2	30
83	Parallel Neville elimination: A simple cost-optimal algorithm. , 0, , .		0
84	Developing and validating a competence framework for secondary mathematics student teachers through a Delphi method. Journal of Education for Teaching, 0, , 1-17.	1.1	17