

Jack Dongarra

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/8735190/jack-dongarra-publications-by-year.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

522
papers

15,969
citations

53
h-index

112
g-index

576
ext. papers

19,023
ext. citations

2
avg, IF

6.59
L-index

#	Paper	IF	Citations
522	Comparing Distributed Termination Detection Algorithms for Modern HPC Platforms. <i>International Journal of Networking and Computing</i> , 2022 , 12, 26-46	0.2	
521	Evaluating Data Redistribution in PaRSEC. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2022 , 33, 1856-1872	3.7	1
520	Using long vector extensions for MPI reductions. <i>Parallel Computing</i> , 2022 , 109, 102871	1	0
519	Batch QR Factorization on GPUs: Design, Optimization, and Tuning. <i>Lecture Notes in Computer Science</i> , 2022 , 60-74	0.9	0
518	A survey of numerical linear algebra methods utilizing mixed-precision arithmetic. <i>International Journal of High Performance Computing Applications</i> , 2021 , 35, 344-369	1.8	13
517	Translational process: Mathematical software perspective. <i>Journal of Computational Science</i> , 2021 , 52, 101216	3.4	1
516	A Set of Batched Basic Linear Algebra Subprograms and LAPACK Routines. <i>ACM Transactions on Mathematical Software</i> , 2021 , 47, 1-23	2.3	3
515	Exploiting Block Structures of KKT Matrices for Efficient Solution of Convex Optimization Problems. <i>IEEE Access</i> , 2021 , 9, 116604-116611	3.5	
514	Accelerating Restarted GMRES With Mixed Precision Arithmetic. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2021 , 1-1	3.7	1
513	Accelerating Geostatistical Modeling and Prediction With Mixed-Precision Computations: A High-Productivity Approach with PaRSEC. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2021 , 1-1	3.7	1
512	Reducing the amount of out-of-core data access for GPU-accelerated randomized SVD. <i>Concurrency Computation Practice and Experience</i> , 2020 , 32, e5754	1.4	1
511	Numerical algorithms for high-performance computational science. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190066	3	6
510	Design, Optimization, and Benchmarking of Dense Linear Algebra Algorithms on AMD GPUs 2020 ,		3
509	Load-balancing Sparse Matrix Vector Product Kernels on GPUs. <i>ACM Transactions on Parallel Computing</i> , 2020 , 7, 1-26	1.4	10
508	Extreme-Scale Task-Based Cholesky Factorization Toward Climate and Weather Prediction Applications 2020 ,		8
507	Using Advanced Vector Extensions AVX-512 for MPI Reductions 2020 ,		1
506	Improving the Performance of the GMRES Method Using Mixed-Precision Techniques. <i>Communications in Computer and Information Science</i> , 2020 , 51-66	0.3	3

505	Integrating Deep Learning in Domain Sciences at Exascale. <i>Communications in Computer and Information Science</i> , 2020 , 35-50	0.3	1
504	Flexible Data Redistribution in a Task-Based Runtime System 2020 ,		2
503	HAN: a Hierarchical Autotuned Collective Communication Framework 2020 ,		2
502	Investigating the Benefit of FP16-Enabled Mixed-Precision Solvers for Symmetric Positive Definite Matrices Using GPUs. <i>Lecture Notes in Computer Science</i> , 2020 , 237-250	0.9	2
501	Mixed-precision iterative refinement using tensor cores on GPUs to accelerate solution of linear systems. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020 , 476, 20200110	2.4	10
500	Matrix multiplication on batches of small matrices in half and half-complex precisions. <i>Journal of Parallel and Distributed Computing</i> , 2020 , 145, 188-201	4.4	2
499	MAGMA templates for scalable linear algebra on emerging architectures. <i>International Journal of High Performance Computing Applications</i> , 2020 , 34, 645-658	1.8	1
498	Distributed-memory lattice H-matrix factorization. <i>International Journal of High Performance Computing Applications</i> , 2019 , 33, 1046-1063	1.8	7
497	Massively Parallel Automated Software Tuning 2019 ,		2
496	Guest editorsNote: Special issue on clusters, clouds, and data for scientific computing. <i>International Journal of High Performance Computing Applications</i> , 2019 , 33, 1067-1068	1.8	
495	Performance of asynchronous optimized Schwarz with one-sided communication. <i>Parallel Computing</i> , 2019 , 86, 66-81	1	8
494	PAPI software-defined events for in-depth performance analysis. <i>International Journal of High Performance Computing Applications</i> , 2019 , 33, 1113-1127	1.8	5
493	Comparing the performance of rigid, moldable and grid-shaped applications on failure-prone HPC platforms. <i>Parallel Computing</i> , 2019 , 85, 1-12	1	7
492	. <i>Computing in Science and Engineering</i> , 2019 , 21, 4-5	1.5	21
491	Least squares solvers for distributed-memory machines with GPU accelerators 2019 ,		1
490	ParILUT - A Parallel Threshold ILU for GPUs 2019 ,		4
489	SLATE 2019 ,		12
488	Do Moldable Applications Perform Better on Failure-Prone HPC Platforms?. <i>Lecture Notes in Computer Science</i> , 2019 , 787-799	0.9	

487	Linear Systems Solvers for Distributed-Memory Machines with GPU Accelerators. <i>Lecture Notes in Computer Science</i> , 2019 , 495-506	0.9	2
486	MagmaDNN: Towards High-Performance Data Analytics and Machine Learning for Data-Driven Scientific Computing. <i>Lecture Notes in Computer Science</i> , 2019 , 490-503	0.9	4
485	Counter Inspection Toolkit: Making Sense Out of Hardware Performance Events 2019 , 17-37		1
484	Hands-On Research and Training in High Performance Data Sciences, Data Analytics, and Machine Learning for Emerging Environments. <i>Lecture Notes in Computer Science</i> , 2019 , 643-655	0.9	1
483	Checkpointing Strategies for Shared High-Performance Computing Platforms. <i>International Journal of Networking and Computing</i> , 2019 , 9, 28-52	0.2	2
482	Impacts of Multi-GPU MPI Collective Communications on Large FFT Computation 2019 ,		5
481	Performance Analysis of Tile Low-Rank Cholesky Factorization Using PaRSEC Instrumentation Tools 2019 ,		6
480	Towards Half-Precision Computation for Complex Matrices: A Case Study for Mixed Precision Solvers on GPUs 2019 ,		1
479	Generic Matrix Multiplication for Multi-GPU Accelerated Distributed-Memory Platforms over PaRSEC 2019 ,		7
478	Fast Batched Matrix Multiplication for Small Sizes Using Half-Precision Arithmetic on GPUs 2019 ,		8
477	Increasing Accuracy of Iterative Refinement in Limited Floating-Point Arithmetic on Half-Precision Accelerators 2019 ,		2
476	Progressive Optimization of Batched LU Factorization on GPUs 2019 ,		1
475	. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2019 , 30, 1158-1169	3.7	5
474	Variable-size batched Gauss-Jordan elimination for block-Jacobi preconditioning on graphics processors. <i>Parallel Computing</i> , 2019 , 81, 131-146	1	5
473	Investigating power capping toward energy-efficient scientific applications. <i>Concurrency Computation Practice and Experience</i> , 2019 , 31, e4485	1.4	18
472	Adaptive precision in block-Jacobi preconditioning for iterative sparse linear system solvers. <i>Concurrency Computation Practice and Experience</i> , 2019 , 31, e4460	1.4	23
471	Fine-grained bit-flip protection for relaxation methods. <i>Journal of Computational Science</i> , 2019 , 36, 100583	3.4	2
470	Batched one-sided factorizations of tiny matrices using GPUs: Challenges and countermeasures. <i>Journal of Computational Science</i> , 2018 , 26, 226-236	3.4	5

469	. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2018 , 29, 1879-1892	3.7	3
468	Accelerating the SVD bi-diagonalization of a batch of small matrices using GPUs. <i>Journal of Computational Science</i> , 2018 , 26, 237-245	3.4	6
467	Evaluation of dataflow programming models for electronic structure theory. <i>Concurrency Computation Practice and Experience</i> , 2018 , 30, e4490	1.4	0
466	Guest editorsNote: Special issue on clusters, clouds and data for scientific computing. <i>International Journal of High Performance Computing Applications</i> , 2018 , 32, 3-3	1.8	
465	Optimization and performance evaluation of the IDR iterative Krylov solver on GPUs. <i>International Journal of High Performance Computing Applications</i> , 2018 , 32, 220-230	1.8	3
464	Incomplete Sparse Approximate Inverses for Parallel Preconditioning. <i>Parallel Computing</i> , 2018 , 71, 1-221		23
463	Accelerating NWChem Coupled Cluster through dataflow-based execution. <i>International Journal of High Performance Computing Applications</i> , 2018 , 32, 540-551	1.8	2
462	A failure detector for HPC platforms. <i>International Journal of High Performance Computing Applications</i> , 2018 , 32, 139-158	1.8	6
461	. <i>Proceedings of the IEEE</i> , 2018 , 106, 2068-2083	14.3	37
460	Big data and extreme-scale computing: Pathways to Convergence-Toward a shaping strategy for a future software and data ecosystem for scientific inquiry. <i>International Journal of High Performance Computing Applications</i> , 2018 , 32, 435-479	1.8	62
459	Performance of Hierarchical-matrix BiCGStab Solver on GPU Clusters 2018 ,		3
458	The Design of Fast and Energy-Efficient Linear Solvers: On the Potential of Half-Precision Arithmetic and Iterative Refinement Techniques. <i>Lecture Notes in Computer Science</i> , 2018 , 586-600	0.9	16
457	Analysis and Design Techniques towards High-Performance and Energy-Efficient Dense Linear Solvers on GPUs. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2018 , 29, 2700-2712	3.7	3
456	. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2018 , 29, 973-984	3.7	12
455	Accelerating the SVD two stage bidiagonal reduction and divide and conquer using GPUs. <i>Parallel Computing</i> , 2018 , 74, 3-18	1	8
454	Task based Cholesky decomposition on Xeon Phi architectures using OpenMP. <i>International Journal of Computational Science and Engineering</i> , 2018 , 17, 310	0.4	
453	Harnessing GPU Tensor Cores for Fast FP16 Arithmetic to Speed up Mixed-Precision Iterative Refinement Solvers 2018 ,		54
452	ADAPT 2018 ,		13

451	The Singular Value Decomposition: Anatomy of Optimizing an Algorithm for Extreme Scale. <i>SIAM Review</i> , 2018 , 60, 808-865	7.4	27
450	Computational Benefit of GPU Optimization for the Atmospheric Chemistry Modeling. <i>Journal of Advances in Modeling Earth Systems</i> , 2018 , 10, 1952-1969	7.1	4
449	. <i>Proceedings of the IEEE</i> , 2018 , 106, 2040-2055	14.3	5
448	ParILUT---A New Parallel Threshold ILU Factorization. <i>SIAM Journal of Scientific Computing</i> , 2018 , 40, C503-C519	2.6	9
447	Using Jacobi iterations and blocking for solving sparse triangular systems in incomplete factorization preconditioning. <i>Journal of Parallel and Distributed Computing</i> , 2018 , 119, 219-230	4.4	19
446	Porting the PLASMA Numerical Library to the OpenMP Standard. <i>International Journal of Parallel Programming</i> , 2017 , 45, 612-633	1.5	17
445	Fast Cholesky factorization on GPUs for batch and native modes in MAGMA. <i>Journal of Computational Science</i> , 2017 , 20, 85-93	3.4	9
444	Solving dense symmetric indefinite systems using GPUs. <i>Concurrency Computation Practice and Experience</i> , 2017 , 29, e4055	1.4	1
443	Batched Gauss-Jordan Elimination for Block-Jacobi Preconditioner Generation on GPUs 2017 ,		10
442	Structure-Aware Linear Solver for Realtime Convex Optimization for Embedded Systems. <i>IEEE Embedded Systems Letters</i> , 2017 , 9, 61-64	1	1
441	With Extreme Computing, the Rules Have Changed. <i>Computing in Science and Engineering</i> , 2017 , 19, 52-62.5		11
440	Factorization and Inversion of a Million Matrices using GPUs: Challenges and Countermeasures. <i>Procedia Computer Science</i> , 2017 , 108, 606-615	1.6	9
439	Preconditioned Krylov solvers on GPUs. <i>Parallel Computing</i> , 2017 , 68, 32-44	1	20
438	The Design and Performance of Batched BLAS on Modern High-Performance Computing Systems. <i>Procedia Computer Science</i> , 2017 , 108, 495-504	1.6	32
437	High-performance Cholesky factorization for GPU-only execution 2017 ,		6
436	Optimized Batched Linear Algebra for Modern Architectures. <i>Lecture Notes in Computer Science</i> , 2017 , 511-522	0.9	3
435	Variable-Size Batched LU for Small Matrices and Its Integration into Block-Jacobi Preconditioning 2017 ,		3
434	Variable-Size Batched Gauss-Huard for Block-Jacobi Preconditioning. <i>Procedia Computer Science</i> , 2017 , 108, 1783-1792	1.6	3

433	Optimizing the SVD Bidiagonalization Process for a Batch of Small Matrices. <i>Procedia Computer Science</i> , 2017 , 108, 1008-1018	1.6	4
432	Flexible batched sparse matrix-vector product on GPUs 2017 ,		2
431	A look back on 30 years of the Gordon Bell Prize. <i>International Journal of High Performance Computing Applications</i> , 2017 , 31, 469-484	1.8	7
430	Improving Performance of GMRES by Reducing Communication and Pipelining Global Collectives 2017 ,		6
429	On the performance and energy efficiency of sparse linear algebra on GPUs. <i>International Journal of High Performance Computing Applications</i> , 2017 , 31, 375-390	1.8	5
428	Non-GPU-resident symmetric indefinite factorization. <i>Concurrency Computation Practice and Experience</i> , 2017 , 29, e4012	1.4	5
427	Power-aware computing: Measurement, control, and performance analysis for Intel Xeon Phi 2017 ,		10
426	Novel HPC techniques to batch execution of many variable size BLAS computations on GPUs 2017 ,		8
425	Dynamic task discovery in PaRSEC 2017 ,		21
424	Towards numerical benchmark for half-precision floating point arithmetic 2017 ,		3
423	Investigating half precision arithmetic to accelerate dense linear system solvers 2017 ,		22
422	Autotuning batch Cholesky factorization in CUDA with interleaved layout of matrices 2017 ,		2
421	Sampling algorithms to update truncated SVD 2017 ,		1
420	2017 ,		5
419	Accelerating the Conjugate Gradient Algorithm with GPUs in CFD Simulations. <i>Lecture Notes in Computer Science</i> , 2017 , 35-43	0.9	1
418	A Framework for Out of Memory SVD Algorithms. <i>Lecture Notes in Computer Science</i> , 2017 , 158-178	0.9	7
417	High-performance conjugate-gradient benchmark: A new metric for ranking high-performance computing systems. <i>International Journal of High Performance Computing Applications</i> , 2016 , 30, 3-10	1.8	49
416	Sunway TaihuLight supercomputer makes its appearance. <i>National Science Review</i> , 2016 , 3, 265-266	10.8	17

415	Task-Based Cholesky Decomposition on Knights Corner Using OpenMP. <i>Lecture Notes in Computer Science</i> , 2016 , 544-562	0.9	2
414	Heterogeneous Streaming 2016 ,		8
413	Search Space Generation and Pruning System for Autotuners 2016 ,		6
412	A new metric for ranking high-performance computing systems. <i>National Science Review</i> , 2016 , 3, 30-35	10.8	12
411	Updating incomplete factorization preconditioners for model order reduction. <i>Numerical Algorithms</i> , 2016 , 73, 611-630	2.1	11
410	Assessing the cost of redistribution followed by a computational kernel: Complexity and performance results. <i>Parallel Computing</i> , 2016 , 52, 22-41	1	3
409	Implementation and Tuning of Batched Cholesky Factorization and Solve for NVIDIA GPUs. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2016 , 27, 2036-2048	3.7	24
408	Accelerating NWChem Coupled Cluster Through Dataflow-Based Execution. <i>Lecture Notes in Computer Science</i> , 2016 , 366-376	0.9	3
407	Dense Symmetric Indefinite Factorization on GPU Accelerated Architectures. <i>Lecture Notes in Computer Science</i> , 2016 , 86-95	0.9	3
406	Power Management and Event Verification in PAPI 2016 , 41-51		8
405	Domain Overlap for Iterative Sparse Triangular Solves on GPUs. <i>Lecture Notes in Computational Science and Engineering</i> , 2016 , 527-545	0.3	5
404	Performance, Design, and Autotuning of Batched GEMM for GPUs. <i>Lecture Notes in Computer Science</i> , 2016 , 21-38	0.9	45
403	Performance optimization of Sparse Matrix-Vector Multiplication for multi-component PDE-based applications using GPUs. <i>Concurrency Computation Practice and Experience</i> , 2016 , 28, 3447-3465	1.4	4
402	Stability and Performance of Various Singular Value QR Implementations on Multicore CPU with a GPU. <i>ACM Transactions on Mathematical Software</i> , 2016 , 43, 1-18	2.3	6
401	Performance-Portable Autotuning of OpenCL Kernels for Convolutional Layers of Deep Neural Networks 2016 ,		4
400	Efficiency of General Krylov Methods on GPUs -- An Experimental Study 2016 ,		7
399	Towards Achieving Performance Portability Using Directives for Accelerators 2016 ,		15
398	Failure Detection and Propagation in HPC systems 2016 ,		9

397	Techniques for Solving Large-Scale Graph Problems on Heterogeneous Platforms. <i>Communications in Computer and Information Science</i> , 2016 , 318-332	0.3	
396	LU, QR, and Cholesky factorizations: Programming model, performance analysis and optimization techniques for the Intel Knights Landing Xeon Phi 2016 ,		5
395	Linear algebra software for large-scale accelerated multicore computing*. <i>Acta Numerica</i> , 2016 , 25, 1-160	5.1	5
394	Batched Generation of Incomplete Sparse Approximate Inverses on GPUs 2016 ,		4
393	Why is it Hard to Describe Properties of Algorithms?. <i>Procedia Computer Science</i> , 2016 , 101, 4-7	1.6	6
392	Performance analysis and acceleration of explicit integration for large kinetic networks using batched GPU computations 2016 ,		1
391	On the Development of Variable Size Batched Computation for Heterogeneous Parallel Architectures 2016 ,		3
390	Performance Tuning and Optimization Techniques of Fixed and Variable Size Batched Cholesky Factorization on GPUs. <i>Procedia Computer Science</i> , 2016 , 80, 119-130	1.6	6
389	Data through the Computational Lens, Preface for ICCS 2016. <i>Procedia Computer Science</i> , 2016 , 80, 1-7	1.6	4
388	Optimization for performance and energy for batched matrix computations on GPUs 2015 ,		6
387	Energy efficiency and performance frontiers for sparse computations on GPU supercomputers 2015 ,		8
386	Asynchronous Iterative Algorithm for Computing Incomplete Factorizations on GPUs. <i>Lecture Notes in Computer Science</i> , 2015 , 1-16	0.9	15
385	On the Design, Development, and Analysis of Optimized Matrix-Vector Multiplication Routines for Coprocessors. <i>Lecture Notes in Computer Science</i> , 2015 , 58-73	0.9	3
384	Acceleration of GPU-based Krylov solvers via data transfer reduction. <i>International Journal of High Performance Computing Applications</i> , 2015 , 29, 366-383	1.8	12
383	Towards batched linear solvers on accelerated hardware platforms 2015 ,		10
382	Exascale computing and big data. <i>Communications of the ACM</i> , 2015 , 58, 56-68	2.5	236
381	Hierarchical DAG Scheduling for Hybrid Distributed Systems 2015 ,		20
380	Design for a Soft Error Resilient Dynamic Task-Based Runtime 2015 ,		13

379	Algorithm-Based Fault Tolerance for Dense Matrix Factorizations, Multiple Failures and Accuracy. <i>ACM Transactions on Parallel Computing</i> , 2015 , 1, 1-28	1.4	11
378	Mixing LU and QR factorization algorithms to design high-performance dense linear algebra solvers. <i>Journal of Parallel and Distributed Computing</i> , 2015 , 85, 32-46	4.4	3
377	Fault Tolerance Techniques for High-Performance Computing. <i>Computer Communications and Networks</i> , 2015 , 3-85	0.5	14
376	Iterative Sparse Triangular Solves for Preconditioning. <i>Lecture Notes in Computer Science</i> , 2015 , 650-661	0.9	31
375	Practical scalable consensus for pseudo-synchronous distributed systems 2015 ,		8
374	Efficient implementation of quantum materials simulations on distributed CPU-GPU systems 2015 ,		8
373	GPU-accelerated co-design of induced dimension reduction 2015 ,		2
372	HPC Programming on Intel Many-Integrated-Core Hardware with MAGMA Port to Xeon Phi. <i>Scientific Programming</i> , 2015 , 2015, 1-11	1.4	7
371	Strengthening compute and data intensive capacities of Armenia 2015 ,		8
370	Performance Analysis and Optimisation of Two-sided Factorization Algorithms for Heterogeneous Platform. <i>Procedia Computer Science</i> , 2015 , 51, 180-190	1.6	1
369	Towards batched linear solvers on accelerated hardware platforms. <i>ACM SIGPLAN Notices</i> , 2015 , 50, 261-262	2.2	3
368	Guest Editors Note: Special Issue on Clusters, Clouds and Data for Scientific Computing. <i>Parallel Processing Letters</i> , 2015 , 25, 1502002	0.3	
367	A survey of recent developments in parallel implementations of Gaussian elimination. <i>Concurrency Computation Practice and Experience</i> , 2015 , 27, 1292-1309	1.4	13
366	A scalable approach to solving dense linear algebra problems on hybrid CPU-GPU systems. <i>Concurrency Computation Practice and Experience</i> , 2015 , 27, 3702-3723	1.4	7
365	Experiences in autotuning matrix multiplication for energy minimization on GPUs. <i>Concurrency Computation Practice and Experience</i> , 2015 , 27, 5096-5113	1.4	11
364	Computing Low-Rank Approximation of a Dense Matrix on Multicore CPUs with a GPU and Its Application to Solving a Hierarchically Semiseparable Linear System of Equations. <i>Scientific Programming</i> , 2015 , 2015, 1-17	1.4	
363	Batched matrix computations on hardware accelerators based on GPUs. <i>International Journal of High Performance Computing Applications</i> , 2015 , 29, 193-208	1.8	33
362	Mixed-Precision Cholesky QR Factorization and Its Case Studies on Multicore CPU with Multiple GPUs. <i>SIAM Journal of Scientific Computing</i> , 2015 , 37, C307-C330	2.6	29

361	Weighted dynamic scheduling with many parallelism grains for offloading of numerical workloads to multiple varied accelerators 2015 ,		2
360	. <i>Computer</i> , 2015 , 48, 42-49	1.6	18
359	Adaptive precision solvers for sparse linear systems 2015 ,		6
358	Tuning stationary iterative solvers for fault resilience 2015 ,		5
357	PaRSEC in Practice: Optimizing a Legacy Chemistry Application through Distributed Task-Based Execution 2015 ,		12
356	Mixed-precision block gram Schmidt orthogonalization 2015 ,		4
355	Accelerating collaborative filtering using concepts from high performance computing 2015 ,		20
354	MAGMA embedded: Towards a dense linear algebra library for energy efficient extreme computing 2015 ,		8
353	Randomized algorithms to update partial singular value decomposition on a hybrid CPU/GPU cluster 2015 ,		7
352	Performance of random sampling for computing low-rank approximations of a dense matrix on GPUs 2015 ,		4
351	Composing resilience techniques: ABFT, periodic and incremental checkpointing. <i>International Journal of Networking and Computing</i> , 2015 , 5, 2-25	0.2	14
350	Accelerating Computation of Eigenvectors in the Dense Nonsymmetric Eigenvalue Problem. <i>Lecture Notes in Computer Science</i> , 2015 , 182-191	0.9	2
349	Mixed-Precision Orthogonalization Scheme and Adaptive Step Size for Improving the Stability and Performance of CA-GMRES on GPUs. <i>Lecture Notes in Computer Science</i> , 2015 , 17-30	0.9	3
348	A Framework for Batched and GPU-Resident Factorization Algorithms Applied to Block Householder Transformations. <i>Lecture Notes in Computer Science</i> , 2015 , 31-47	0.9	13
347	Self-adaptive Multiprecision Preconditioners on Multicore and Manycore Architectures. <i>Lecture Notes in Computer Science</i> , 2015 , 115-123	0.9	
346	Unified Development for Mixed Multi-GPU and Multi-coprocessor Environments Using a Lightweight Runtime Environment 2014 ,		16
345	Tridiagonalization of a dense symmetric matrix on multiple GPUs and its application to symmetric eigenvalue problems. <i>Concurrency Computation Practice and Experience</i> , 2014 , 26, 2652-2666	1.4	20
344	Communication-Avoiding Symmetric-Indefinite Factorization. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2014 , 35, 1364-1406	1.5	8

343	MIAMI: A framework for application performance diagnosis 2014,		5
342	An efficient distributed randomized algorithm for solving large dense symmetric indefinite linear systems. <i>Parallel Computing</i> , 2014 , 40, 213-223	1	9
341	Looking back at dense linear algebra software. <i>Journal of Parallel and Distributed Computing</i> , 2014 , 74, 2548-2560	4.4	7
340	clMAGMA 2014,		7
339	Performance and reliability trade-offs for the double checkpointing algorithm. <i>International Journal of Networking and Computing</i> , 2014 , 4, 23-41	0.2	3
338	Design and Implementation of a Large Scale Tree-Based QR Decomposition Using a 3D Virtual Systolic Array and a Lightweight Runtime. <i>Parallel Processing Letters</i> , 2014 , 24, 1442004	0.3	
337	Assessing the Impact of ABFT and Checkpoint Composite Strategies 2014,		8
336	POSTER: Utilizing dataflow-based execution for coupled cluster methods 2014,		3
335	Optimizing Krylov Subspace Solvers on Graphics Processing Units 2014,		10
334	PTG: An Abstraction for Unhindered Parallelism 2014,		16
333	Dynamically Balanced Synchronization-Avoiding LU Factorization with Multicore and GPUs 2014,		4
332	Access-averse framework for computing low-rank matrix approximations 2014,		2
331	Scaling up matrix computations on shared-memory manycore systems with 1000 CPU cores 2014,		6
330	Hybrid Multi-elimination ILU Preconditioners on GPUs 2014,		1
329	Performance and Portability with OpenCL for Throughput-Oriented HPC Workloads across Accelerators, Coprocessors, and Multicore Processors 2014,		3
328	LU Factorization of Small Matrices: Accelerating Batched DGETRF on the GPU 2014,		23
327	Deflation Strategies to Improve the Convergence of Communication-Avoiding GMRES 2014,		1
326	Designing LU-QR Hybrid Solvers for Performance and Stability 2014,		2

325	Improving the Performance of CA-GMRES on Multicores with Multiple GPUs 2014 ,		27
324	A Step towards Energy Efficient Computing: Redesigning a Hydrodynamic Application on CPU-GPU 2014 ,		26
323	Unified model for assessing checkpointing protocols at extreme-scale. <i>Concurrency Computation Practice and Experience</i> , 2014 , 26, 2772-2791	1.4	32
322	Parallel Simulation of Superscalar Scheduling 2014 ,		1
321	A Fast Batched Cholesky Factorization on a GPU 2014 ,		16
320	Achieving numerical accuracy and high performance using recursive tile LU factorization with partial pivoting. <i>Concurrency Computation Practice and Experience</i> , 2014 , 26, 1408-1431	1.4	16
319	Power monitoring with PAPI for extreme scale architectures and dataflow-based programming models 2014 ,		12
318	Portable HPC Programming on Intel Many-Integrated-Core Hardware with MAGMA Port to Xeon Phi. <i>Lecture Notes in Computer Science</i> , 2014 , 571-581	0.9	10
317	BlackjackBench: Portable Hardware Characterization with Automated Results' Analysis. <i>Computer Journal</i> , 2014 , 57, 1002-1016	1.3	3
316	A novel hybrid CPU-GPU generalized eigensolver for electronic structure calculations based on fine-grained memory aware tasks. <i>International Journal of High Performance Computing Applications</i> , 2014 , 28, 196-209	1.8	16
315	Power profiling of Cholesky and QR factorizations on distributed memory systems. <i>Computer Science - Research and Development</i> , 2014 , 29, 139-147		8
314	Accelerating Numerical Dense Linear Algebra Calculations with GPUs 2014 , 3-28		32
313	Optimal Checkpointing Period: Time vs. Energy. <i>Lecture Notes in Computer Science</i> , 2014 , 203-214	0.9	5
312	Implementing a Systolic Algorithm for QR Factorization on Multicore Clusters with PaRSEC. <i>Lecture Notes in Computer Science</i> , 2014 , 657-667	0.9	0
311	A block-asynchronous relaxation method for graphics processing units. <i>Journal of Parallel and Distributed Computing</i> , 2013 , 73, 1613-1626	4.4	17
310	Enabling workflows in GridSolve: request sequencing and service trading. <i>Journal of Supercomputing</i> , 2013 , 64, 1133-1152	2.5	
309	An evaluation of User-Level Failure Mitigation support in MPI. <i>Computing (Vienna/New York)</i> , 2013 , 95, 1171-1184	2.2	20
308	Accelerating Linear System Solutions Using Randomization Techniques. <i>ACM Transactions on Mathematical Software</i> , 2013 , 39, 1-13	2.3	18

307	Post-failure recovery of MPI communication capability: Design and rationale. <i>International Journal of High Performance Computing Applications</i> , 2013 , 27, 244-254	1.8	91
306	Virtual Systolic Array for QR Decomposition 2013 ,		2
305	Revisiting the Double Checkpointing Algorithm 2013 ,		7
304	2013 ,		4
303	Tridiagonalization of a Symmetric Dense Matrix on a GPU Cluster 2013 ,		2
302	Hierarchical QR factorization algorithms for multi-core clusters. <i>Parallel Computing</i> , 2013 , 39, 212-232	1	17
301	Standards for graph algorithm primitives 2013 ,		41
300	Kernel-assisted and topology-aware MPI collective communications on multicore/many-core platforms. <i>Journal of Parallel and Distributed Computing</i> , 2013 , 73, 1000-1010	4.4	11
299	A Parallel Solver for Incompressible Fluid Flows. <i>Procedia Computer Science</i> , 2013 , 18, 439-448	1.6	9
298	Soft error resilient QR factorization for hybrid system with GPGPU. <i>Journal of Computational Science</i> , 2013 , 4, 457-464	3.4	13
297	Toward a scalable multi-GPU eigensolver via compute-intensive kernels and efficient communication 2013 ,		3
296	Introduction for August Special Issue CCDSC. <i>International Journal of High Performance Computing Applications</i> , 2013 , 27, 231-231	1.8	
295	PaRSEC: Exploiting Heterogeneity to Enhance Scalability. <i>Computing in Science and Engineering</i> , 2013 , 15, 36-45	1.5	107
294	GUEST EDITORS' NOTE: SPECIAL ISSUE ON CLUSTERS, CLOUDS, AND DATA FOR SCIENTIFIC COMPUTING. <i>Parallel Processing Letters</i> , 2013 , 23, 1302001	0.3	
293	High-performance bidiagonal reduction using tile algorithms on homogeneous multicore architectures. <i>ACM Transactions on Mathematical Software</i> , 2013 , 39, 1-22	2.3	59
292	Toward a new metric for ranking high performance computing systems. 2013 ,		40
291	Optimizing Memory-Bound SYMV Kernel on GPU Hardware Accelerators. <i>Lecture Notes in Computer Science</i> , 2013 , 72-79	0.9	5
290	Beyond the CPU: Hardware Performance Counter Monitoring on Blue Gene/Q. <i>Lecture Notes in Computer Science</i> , 2013 , 213-225	0.9	7

289	Leading Edge Hybrid Multi-GPU Algorithms for Generalized Eigenproblems in Electronic Structure Calculations. <i>Lecture Notes in Computer Science</i> , 2013 , 67-80	0.9	10
288	Weighted Block-Asynchronous Iteration on GPU-Accelerated Systems. <i>Lecture Notes in Computer Science</i> , 2013 , 145-154	0.9	1
287	Multi-criteria Checkpointing Strategies: Response-Time versus Resource Utilization. <i>Lecture Notes in Computer Science</i> , 2013 , 420-431	0.9	3
286	Programming the LU Factorization for a Multicore System with Accelerators. <i>Lecture Notes in Computer Science</i> , 2013 , 28-35	0.9	
285	BLAS. <i>Discrete Mathematics and Its Applications</i> , 2013 , 1697-1704		
284	DAGuE: A generic distributed DAG engine for High Performance Computing. <i>Parallel Computing</i> , 2012 , 38, 37-51	1	139
283	Analysis of dynamically scheduled tile algorithms for dense linear algebra on multicore architectures. <i>Concurrency Computation Practice and Experience</i> , 2012 , 24, 305-321	1.4	14
282	Profiling high performance dense linear algebra algorithms on multicore architectures for power and energy efficiency. <i>Computer Science - Research and Development</i> , 2012 , 27, 277-287		18
281	Toward a High Performance Tile Divide and Conquer Algorithm for the Dense Symmetric Eigenvalue Problem. <i>SIAM Journal of Scientific Computing</i> , 2012 , 34, C249-C274	2.6	10
280	Divide and Conquer on Hybrid GPU-Accelerated Multicore Systems. <i>SIAM Journal of Scientific Computing</i> , 2012 , 34, C70-C82	2.6	19
279	High Performance Dense Linear System Solver with Resilience to Multiple Soft Errors. <i>Procedia Computer Science</i> , 2012 , 9, 216-225	1.6	10
278	A Class of Communication-avoiding Algorithms for Solving General Dense Linear Systems on CPU/GPU Parallel Machines. <i>Procedia Computer Science</i> , 2012 , 9, 17-26	1.6	9
277	One-sided Dense Matrix Factorizations on a Multicore with Multiple GPU Accelerators*. <i>Procedia Computer Science</i> , 2012 , 9, 37-46	1.6	16
276	Block-asynchronous Multigrid Smoothers for GPU-accelerated Systems. <i>Procedia Computer Science</i> , 2012 , 9, 7-16	1.6	12
275	2012 ,		1
274	A Parallel Tiled Solver for Dense Symmetric Indefinite Systems on Multicore Architectures 2012 ,		11
273	Anatomy of a globally recursive embedded LINPACK benchmark 2012 ,		7
272	A Comprehensive Study of Task Coalescing for Selecting Parallelism Granularity in a Two-Stage Bidiagonal Reduction 2012 ,		10

271	From CUDA to OpenCL: Towards a performance-portable solution for multi-platform GPU programming. <i>Parallel Computing</i> , 2012 , 38, 391-407	1	145
270	Reducing the Amount of Pivoting in Symmetric Indefinite Systems. <i>Lecture Notes in Computer Science</i> , 2012 , 133-142	0.9	7
269	Multi-GPU Implementation of LU Factorization. <i>Procedia Computer Science</i> , 2012 , 9, 106-115	1.6	6
268	From Serial Loops to Parallel Execution on Distributed Systems. <i>Lecture Notes in Computer Science</i> , 2012 , 246-257	0.9	3
267	Hierarchical QR Factorization Algorithms for Multi-core Cluster Systems 2012 ,		5
266	Algorithm-based fault tolerance for dense matrix factorizations 2012 ,		48
265	High-performance computing systems: Status and outlook*. <i>Acta Numerica</i> , 2012 , 21, 379-474	15.1	33
264	BlackjackBench. <i>Performance Evaluation Review</i> , 2012 , 40, 74-79	0.4	2
263	A scalable framework for heterogeneous GPU-based clusters 2012 ,		25
262	Enabling and scaling matrix computations on heterogeneous multi-core and multi-GPU systems 2012 ,		51
261	HierKNEM: An Adaptive Framework for Kernel-Assisted and Topology-Aware Collective Communications on Many-core Clusters 2012 ,		18
260	A Hybridization Methodology for High-Performance Linear Algebra Software for GPUs 2012 , 473-484		6
259	. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2012 , 23, 2045-2057	3.7	59
258	An Implementation of the Tile QR Factorization for a GPU and Multiple CPUs. <i>Lecture Notes in Computer Science</i> , 2012 , 248-257	0.9	6
257	Energy Footprint of Advanced Dense Numerical Linear Algebra Using Tile Algorithms on Multicore Architectures 2012 ,		27
256	Algorithm-based fault tolerance for dense matrix factorizations. <i>ACM SIGPLAN Notices</i> , 2012 , 47, 225-234	0.2	27
255	Evaluation of the HPC Challenge Benchmarks in Virtualized Environments. <i>Lecture Notes in Computer Science</i> , 2012 , 436-445	0.9	10
254	Enhancing Parallelism of Tile Bidiagonal Transformation on Multicore Architectures Using Tree Reduction. <i>Lecture Notes in Computer Science</i> , 2012 , 661-670	0.9	6

253	A Checkpoint-on-Failure Protocol for Algorithm-Based Recovery in Standard MPI. <i>Lecture Notes in Computer Science</i> , 2012 , 477-488	0.9	15
252	GPU-Accelerated Asynchronous Error Correction for Mixed Precision Iterative Refinement. <i>Lecture Notes in Computer Science</i> , 2012 , 908-919	0.9	3
251	Reducing the Time to Tune Parallel Dense Linear Algebra Routines with Partial Execution and Performance Modeling. <i>Lecture Notes in Computer Science</i> , 2012 , 730-739	0.9	3
250	Dense Linear Algebra on Accelerated Multicore Hardware 2012 , 123-146		2
249	Accelerating GPU Kernels for Dense Linear Algebra. <i>Lecture Notes in Computer Science</i> , 2011 , 83-92	0.9	15
248	Soft error resilient QR Factorization for hybrid system with GPGPU 2011 ,		7
247	Keeneland: Bringing Heterogeneous GPU Computing to the Computational Science Community. <i>Computing in Science and Engineering</i> , 2011 , 13, 90-95	1.5	79
246	The International Exascale Software Project roadmap. <i>International Journal of High Performance Computing Applications</i> , 2011 , 25, 3-60	1.8	392
245	LU factorization for accelerator-based systems 2011 ,		25
244	A Class of Hybrid LAPACK Algorithms for Multicore and GPU Architectures 2011 ,		19
243	QR Factorization on a Multicore Node Enhanced with Multiple GPU Accelerators 2011 ,		54
242	2011 ,		4
241	High Performance Dense Linear System Solver with Soft Error Resilience 2011 ,		15
240	QCG-OMPI: MPI applications on grids. <i>Future Generation Computer Systems</i> , 2011 , 27, 357-369	7.5	9
239	High-performance high-resolution semi-Lagrangian tracer transport on a sphere. <i>Journal of Computational Physics</i> , 2011 , 230, 6778-6799	4.1	24
238	Parallel reduction to condensed forms for symmetric eigenvalue problems using aggregated fine-grained and memory-aware kernels 2011 ,		21
237	Optimizing symmetric dense matrix-vector multiplication on GPUs 2011 ,		22
236	High performance matrix inversion based on LU factorization for multicore architectures 2011 ,		15

235	Flexible Development of Dense Linear Algebra Algorithms on Massively Parallel Architectures with DPLASMA 2011 ,		62
234	DAGuE: A Generic Distributed DAG Engine for High Performance Computing 2011 ,		41
233	Two-Stage Tridiagonal Reduction for Dense Symmetric Matrices Using Tile Algorithms on Multicore Architectures 2011 ,		21
232	Trace-based performance analysis for the petascale simulation code FLASH. <i>International Journal of High Performance Computing Applications</i> , 2011 , 25, 428-439	1.8	2
231	Selected papers of the Workshop on Clusters, Clouds and Grids for Scientific Computing (CCGSC). <i>International Journal of High Performance Computing Applications</i> , 2011 , 25, 259-260	1.8	
230	GUEST EDITORS NOTE. <i>Parallel Processing Letters</i> , 2011 , 21, 109-109	0.3	
229	A Scalable High Performant Cholesky Factorization for Multicore with GPU Accelerators. <i>Lecture Notes in Computer Science</i> , 2011 , 93-101	0.9	7
228	Towards an Efficient Tile Matrix Inversion of Symmetric Positive Definite Matrices on Multicore Architectures. <i>Lecture Notes in Computer Science</i> , 2011 , 129-138	0.9	5
227	A Fully Empirical Autotuned Dense QR Factorization for Multicore Architectures. <i>Lecture Notes in Computer Science</i> , 2011 , 194-205	0.9	3
226	Scheduling Two-Sided Transformations Using Tile Algorithms on Multicore Architectures. <i>Scientific Programming</i> , 2010 , 18, 35-50	1.4	5
225	An Improved Magma Gemm For Fermi Graphics Processing Units. <i>International Journal of High Performance Computing Applications</i> , 2010 , 24, 511-515	1.8	97
224	Mixed-Tool Performance Analysis on Hybrid Multicore Architectures 2010 ,		1
223	Dense linear algebra solvers for multicore with GPU accelerators 2010 ,		109
222	Parallel Two-Sided Matrix Reduction to Band Bidiagonal Form on Multicore Architectures. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2010 , 21, 417-423	3.7	14
221	Scalable Tile Communication-Avoiding QR Factorization on Multicore Cluster Systems 2010 ,		18
220	Tile QR factorization with parallel panel processing for multicore architectures 2010 ,		17
219	QR factorization of tall and skinny matrices in a grid computing environment 2010 ,		23
218	Scheduling dense linear algebra operations on multicore processors. <i>Concurrency Computation Practice and Experience</i> , 2010 , 22, 15-44	1.4	44

217	SmartGridRPC: The new RPC model for high performance Grid computing. <i>Concurrency Computation Practice and Experience</i> , 2010 , 22, 2467-2487	1.4	2
216	Redesigning the message logging model for high performance. <i>Concurrency Computation Practice and Experience</i> , 2010 , 22, 2196-2211	1.4	26
215	Improvement of parallelization efficiency of batch pattern BP training algorithm using Open MPI. <i>Procedia Computer Science</i> , 2010 , 1, 525-533	1.6	15
214	Accelerating the reduction to upper Hessenberg, tridiagonal, and bidiagonal forms through hybrid GPU-based computing. <i>Parallel Computing</i> , 2010 , 36, 645-654	1	49
213	Self-healing network for scalable fault-tolerant runtime environments. <i>Future Generation Computer Systems</i> , 2010 , 26, 479-485	7.5	15
212	Towards dense linear algebra for hybrid GPU accelerated manycore systems. <i>Parallel Computing</i> , 2010 , 36, 232-240	1	219
211	Dense Linear Algebra for Hybrid GPU-Based Systems. <i>Chapman & Hall/CRC Computational Science</i> , 2010 , 37-55		4
210	BLAS for GPUs. <i>Chapman & Hall/CRC Computational Science</i> , 2010 , 57-80		2
209	Collecting Performance Data with PAPI-C 2010 , 157-173		88
208	Transparent Cross-Platform Access to Software Services Using GridSolve and GridRPC 2010 , 253-274		0
207	Implementing Matrix Multiplication on the Cell B. E.. <i>Chapman & Hall/CRC Computational Science</i> , 2010 , 3-20		1
206	Implementing Matrix Factorizations on the Cell B. E.. <i>Chapman & Hall/CRC Computational Science</i> , 2010 , 21-35		
205	QR Factorization for the Cell Broadband Engine. <i>Scientific Programming</i> , 2009 , 17, 31-42	1.4	18
204	Analytical modeling and optimization for affinity based thread scheduling on multicore systems 2009 ,		14
203	Dynamic task scheduling for linear algebra algorithms on distributed-memory multicore systems 2009 ,		54
202	The International Exascale Software Project: a Call To Cooperative Action By the Global High-Performance Community. <i>International Journal of High Performance Computing Applications</i> , 2009 , 23, 309-322	1.8	49
201	Computing the conditioning of the components of a linear least-squares solution. <i>Numerical Linear Algebra With Applications</i> , 2009 , 16, 517-533	1.6	14
200	Accelerating scientific computations with mixed precision algorithms. <i>Computer Physics Communications</i> , 2009 , 180, 2526-2533	4.2	92

199	Paravirtualization effect on single- and multi-threaded memory-intensive linear algebra software. <i>Cluster Computing</i> , 2009 , 12, 101-122	2.1	7
198	A class of parallel tiled linear algebra algorithms for multicore architectures. <i>Parallel Computing</i> , 2009 , 35, 38-53	1	248
197	Optimizing matrix multiplication for a short-vector SIMD architecture CELL processor. <i>Parallel Computing</i> , 2009 , 35, 138-150	1	42
196	Algorithm-based fault tolerance applied to high performance computing. <i>Journal of Parallel and Distributed Computing</i> , 2009 , 69, 410-416	4.4	133
195	Numerical linear algebra on emerging architectures: The PLASMA and MAGMA projects. <i>Journal of Physics: Conference Series</i> , 2009 , 180, 012037	0.3	185
194	. <i>IEEE Transactions on Computers</i> , 2009 , 58, 1512-1524	2.5	26
193	A Note on Auto-tuning GEMM for GPUs. <i>Lecture Notes in Computer Science</i> , 2009 , 884-892	0.9	62
192	A Holistic Approach for Performance Measurement and Analysis for Petascale Applications. <i>Lecture Notes in Computer Science</i> , 2009 , 686-695	0.9	6
191	Towards Efficient MapReduce Using MPI. <i>Lecture Notes in Computer Science</i> , 2009 , 240-249	0.9	37
190	A Scalable Non-blocking Multicast Scheme for Distributed DAG Scheduling. <i>Lecture Notes in Computer Science</i> , 2009 , 195-204	0.9	
189	A Scalable Checkpoint Encoding Algorithm for Diskless Checkpointing 2008 ,		11
188	Algorithm-Based Fault Tolerance for Fail-Stop Failures. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2008 , 19, 1628-1641	3.7	72
187	The PlayStation 3 for High-Performance Scientific Computing. <i>Computing in Science and Engineering</i> , 2008 , 10, 84-87	1.5	17
186	Recovery Patterns for Iterative Methods in a Parallel Unstable Environment. <i>SIAM Journal of Scientific Computing</i> , 2008 , 30, 102-116	2.6	30
185	Request Sequencing: Enabling Workflow for Efficient Problem Solving in GridSolve 2008 ,		2
184	A comparison of search heuristics for empirical code optimization 2008 ,		26
183	Exploring New Architectures in Accelerating CFD for Air Force Applications 2008 ,		16
182	REVISITING MATRIX PRODUCT ON MASTER-WORKER PLATFORMS. <i>International Journal of Foundations of Computer Science</i> , 2008 , 19, 1317-1336	0.6	1

181	Matrix product on heterogeneous master-worker platforms 2008 ,		10
180	. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2008 , 19, 1175-1186	3.7	53
179	. <i>IEEE Annals of the History of Computing</i> , 2008 , 30, 30-41	0.2	25
178	DARPA's HPCS Program: History, Models, Tools, Languages. <i>Advances in Computers</i> , 2008 , 1-100	2.9	17
177	Parallel tiled QR factorization for multicore architectures. <i>Concurrency Computation Practice and Experience</i> , 2008 , 20, 1573-1590	1.4	69
176	State-of-the-art eigensolvers for electronic structure calculations of large scale nano-systems. <i>Journal of Computational Physics</i> , 2008 , 227, 7113-7124	4.1	22
175	Special section: Grid computing and the message passing interface. <i>Future Generation Computer Systems</i> , 2008 , 24, 119-120	7.5	2
174	Using Mixed Precision for Sparse Matrix Computations to Enhance the Performance while Achieving 64-bit Accuracy. <i>ACM Transactions on Mathematical Software</i> , 2008 , 34, 1-22	2.3	48
173	Performance Instrumentation and Compiler Optimizations for MPI/OpenMP Applications. <i>Lecture Notes in Computer Science</i> , 2008 , 267-278	0.9	5
172	Fast and Small Short Vector SIMD Matrix Multiplication Kernels for the Synergistic Processing Element of the CELL Processor. <i>Lecture Notes in Computer Science</i> , 2008 , 935-944	0.9	2
171	Implementation of mixed precision in solving systems of linear equations on the Cell processor. <i>Concurrency Computation Practice and Experience</i> , 2007 , 19, 1371-1385	1.4	34
170	MPI collective algorithm selection and quadtree encoding. <i>Parallel Computing</i> , 2007 , 33, 613-623	1	19
169	The use of bulk states to accelerate the band edge state calculation of a semiconductor quantum dot. <i>Journal of Computational Physics</i> , 2007 , 223, 774-782	4.1	6
168	Automatic analysis of inefficiency patterns in parallel applications. <i>Concurrency Computation Practice and Experience</i> , 2007 , 19, 1481-1496	1.4	10
167	Editorial introduction to the special issue on computational linear algebra and sparse matrix computations. <i>Applicable Algebra in Engineering, Communications and Computing</i> , 2007 , 18, 205-207	0.6	
166	Performance analysis of MPI collective operations. <i>Cluster Computing</i> , 2007 , 10, 127-143	2.1	87
165	Feedback-directed thread scheduling with memory considerations 2007 ,		8
164	Self Adaptive Application Level Fault Tolerance for Parallel and Distributed Computing 2007 ,		3

163	Optimal Routing in Binomial Graph Networks 2007 ,		1
162	L2 Cache Modeling for Scientific Applications on Chip Multi-Processors. <i>Parallel Processing (ICPP), Proceedings of the International Symposium, 2007</i> ,		9
161	High Performance Development for High End Computing With Python Language Wrapper (PLW). <i>International Journal of High Performance Computing Applications, 2007</i> , 21, 360-369	1.8	3
160	IMPROVED RUNTIME AND TRANSFER TIME PREDICTION MECHANISMS IN A NETWORK ENABLED SERVERS MIDDLEWARE. <i>Parallel Processing Letters, 2007</i> , 17, 47-59	0.3	
159	Multithreading for synchronization tolerance in matrix factorization. <i>Journal of Physics: Conference Series, 2007</i> , 78, 012028	0.3	8
158	Mixed Precision Iterative Refinement Techniques for the Solution of Dense Linear Systems. <i>International Journal of High Performance Computing Applications, 2007</i> , 21, 457-466	1.8	80
157	Self-healing in Binomial Graph Networks 2007 , 1032-1041		1
156	Disaster Survival Guide in Petascale Computing. <i>Chapman & Hall/CRC Computational Science, 2007</i> , 263-288		
155	Parallel Tiled QR Factorization for Multicore Architectures 2007 , 639-648		6
154	Scalability Analysis of the SPEC OpenMP Benchmarks on Large-Scale Shared Memory Multiprocessors. <i>Lecture Notes in Computer Science, 2007</i> , 815-822	0.9	8
153	On Using Incremental Profiling for the Performance Analysis of Shared Memory Parallel Applications. <i>Lecture Notes in Computer Science, 2007</i> , 62-71	0.9	10
152	Binomial Graph: A Scalable and Fault-Tolerant Logical Network Topology. <i>Lecture Notes in Computer Science, 2007</i> , 471-482	0.9	19
151	Retrospect: Deterministic Replay of MPI Applications for Interactive Distributed Debugging. <i>Lecture Notes in Computer Science, 2007</i> , 297-306	0.9	12
150	GridSolve: The Evolution of A Network Enabled Solver 2007 , 215-224		8
149	Scheduling workflow applications on processors with different capabilities. <i>Future Generation Computer Systems, 2006</i> , 22, 665-675	7.5	62
148	13. Parallel Linear Algebra Software 2006 , 233-247		1
147	Tools and techniques for performance---Exploiting the performance of 32 bit floating point arithmetic in obtaining 64 bit accuracy (revisiting iterative refinement for linear systems) 2006 ,		8
146	Recent Developments in Gridsolve. <i>International Journal of High Performance Computing Applications, 2006</i> , 20, 131-141	1.8	21

145	Exploiting the Performance of 32 bit Floating Point Arithmetic in Obtaining 64 bit Accuracy (Revisiting Iterative Refinement for Linear Systems) 2006 ,		54
144	Conjugate-gradient eigenvalue solvers in computing electronic properties of nanostructure architectures. <i>International Journal of Computational Science and Engineering</i> , 2006 , 2, 205	0.4	7
143	An asynchronous algorithm on the NetSolve global computing system. <i>Future Generation Computer Systems</i> , 2006 , 22, 279-290	7.5	8
142	The Impact of Multicore on Math Software 2006 , 1-10		37
141	Implementing Linear Algebra Routines on Multi-core Processors with Pipelining and a Look Ahead 2006 , 147-156		9
140	Prospectus for the Next LAPACK and ScaLAPACK Libraries 2006 , 11-23		3
139	Eigenvalue Computation with NetSolve Global Computing System. <i>Lecture Notes in Computer Science</i> , 2006 , 446-453	0.9	1
138	Condition Numbers of Gaussian Random Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2005 , 27, 603-620	1.5	91
137	Processes Distribution of Homogeneous Parallel Linear Algebra Routines on Heterogeneous Clusters 2005 ,		5
136	NetSolve: Grid enabling scientific computing environments. <i>Advances in Parallel Computing</i> , 2005 , 14, 33-51	1.1	13
135	NanoPSE: Nanoscience Problem Solving Environment for atomistic electronic structure of semiconductor nanostructures. <i>Journal of Physics: Conference Series</i> , 2005 , 16, 277-282	0.3	2
134	Biological sequence alignment on the computational grid using the GrADS framework. <i>Future Generation Computer Systems</i> , 2005 , 21, 980-986	7.5	13
133	Recent trends in the marketplace of high performance computing. <i>Parallel Computing</i> , 2005 , 31, 261-273		21
132	Enabling interactive and collaborative oil reservoir simulations on the Grid. <i>Concurrency Computation Practice and Experience</i> , 2005 , 17, 1387-1414	1.4	9
131	The Component Structure of a Self-Adapting Numerical Software System. <i>International Journal of Parallel Programming</i> , 2005 , 33, 137-143	1.5	2
130	New Grid Scheduling and Rescheduling Methods in the GrADS Project. <i>International Journal of Parallel Programming</i> , 2005 , 33, 209-229	1.5	88
129	Numerically Stable Real Number Codes Based on Random Matrices. <i>Lecture Notes in Computer Science</i> , 2005 , 115-122	0.9	12
128	Comparison of Nonlinear Conjugate-Gradient Methods for Computing the Electronic Properties of Nanostructure Architectures. <i>Lecture Notes in Computer Science</i> , 2005 , 317-325	0.9	3

127	Fault tolerant high performance computing by a coding approach 2005 ,		39
126	Hash Functions for Datatype Signatures in MPI. <i>Lecture Notes in Computer Science</i> , 2005 , 76-83	0.9	4
125	A Scalable Approach to MPI Application Performance Analysis. <i>Lecture Notes in Computer Science</i> , 2005 , 309-316	0.9	7
124	Design of Interactive Environment for Numerically Intensive Parallel Linear Algebra Calculations. <i>Lecture Notes in Computer Science</i> , 2004 , 270-277	0.9	3
123	Efficient Pattern Search in Large Traces Through Successive Refinement. <i>Lecture Notes in Computer Science</i> , 2004 , 47-54	0.9	13
122	Accurate Cache and TLB Characterization Using Hardware Counters. <i>Lecture Notes in Computer Science</i> , 2004 , 432-439	0.9	11
121	Automatic blocking of QR and LU factorizations for locality 2004 ,		10
120	THE VIRTUAL INSTRUMENT: SUPPORT FOR GRID-ENABLED MCELL SIMULATIONS. <i>International Journal of High Performance Computing Applications</i> , 2004 , 18, 3-17	1.8	14
119	Trends in High Performance Computing. <i>Computer Journal</i> , 2004 , 47, 399-403	1.3	7
118	GrADSolve grid-based RPC system for parallel computing with application-level scheduling. <i>Journal of Parallel and Distributed Computing</i> , 2004 , 64, 774-783	4.4	7
117	High Performance Computing Trends and Self Adapting Numerical Software. <i>Lecture Notes in Computer Science</i> , 2003 , 1-9	0.9	
116	GrADSolve [RPC for High Performance Computing on the Grid. <i>Lecture Notes in Computer Science</i> , 2003 , 394-403	0.9	4
115	Automatic translation of Fortran to JVM bytecode. <i>Concurrency Computation Practice and Experience</i> , 2003 , 15, 207-222	1.4	4
114	Self-adapting software for numerical linear algebra and LAPACK for clusters. <i>Parallel Computing</i> , 2003 , 29, 1723-1743	1	35
113	Self-Adapting Software for Numerical Linear Algebra Library Routines on Clusters. <i>Lecture Notes in Computer Science</i> , 2003 , 665-672	0.9	1
112	Performance Instrumentation and Measurement for Terascale Systems. <i>Lecture Notes in Computer Science</i> , 2003 , 53-62	0.9	7
111	Self-Adapting Numerical Software and Automatic Tuning of Heuristics. <i>Lecture Notes in Computer Science</i> , 2003 , 759-767	0.9	7
110	Distributed Probabilistic Model-Building Genetic Algorithm. <i>Lecture Notes in Computer Science</i> , 2003 , 1015-1028	0.9	9

109	NetBuild: transparent cross-platform access to computational software libraries. <i>Concurrency Computation Practice and Experience</i> , 2002 , 14, 1445-1456	1.4	2
108	Innovations of the NetSolve Grid Computing System. <i>Concurrency Computation Practice and Experience</i> , 2002 , 14, 1457-1479	1.4	24
107	HARNESS fault tolerant MPI design, usage and performance issues. <i>Future Generation Computer Systems</i> , 2002 , 18, 1127-1142	7.5	6
106	Middleware for the use of storage in communication. <i>Parallel Computing</i> , 2002 , 28, 1773-1787	1	7
105	An updated set of basic linear algebra subprograms (BLAS). <i>ACM Transactions on Mathematical Software</i> , 2002 , 28, 135-151	2.3	356
104	Preface: Basic Linear Algebra Subprograms Technical (Blast) Forum Standard. <i>International Journal of High Performance Computing Applications</i> , 2002 , 16, 1-1	1.8	49
103	A Parallel Implementation of the Nonsymmetric QR Algorithm for Distributed Memory Architectures. <i>SIAM Journal of Scientific Computing</i> , 2002 , 24, 284-311	2.6	17
102	Truss Structural Optimization using NetSolve System. <i>The Proceedings of OPTIS</i> , 2002 , 2002.5, 141-146	0	3
101	Overview of GridRPC: A Remote Procedure Call API for Grid Computing. <i>Lecture Notes in Computer Science</i> , 2002 , 274-278	0.9	61
100	Automated empirical optimizations of software and the ATLAS project. <i>Parallel Computing</i> , 2001 , 27, 3-35	1	704
99	HARNESS and fault tolerant MPI. <i>Parallel Computing</i> , 2001 , 27, 1479-1495	1	38
98	Telescoping Languages: A Strategy for Automatic Generation of Scientific Problem-Solving Systems from Annotated Libraries. <i>Journal of Parallel and Distributed Computing</i> , 2001 , 61, 1803-1826	4.4	35
97	Numerical Libraries and the Grid. <i>International Journal of High Performance Computing Applications</i> , 2001 , 15, 359-374	1.8	46
96	Numerical Libraries and Tools for Scalable Parallel Cluster Computing. <i>International Journal of High Performance Computing Applications</i> , 2001 , 15, 175-180	1.8	3
95	Numerical libraries and the grid 2001 ,		10
94	. <i>Computing in Science and Engineering</i> , 2001 , 3, 32-39	1.5	16
93	The GrADS Project: Software Support for High-Level Grid Application Development. <i>International Journal of High Performance Computing Applications</i> , 2001 , 15, 327-344	1.8	181
92	Recursive Approach in Sparse Matrix LU Factorization. <i>Scientific Programming</i> , 2001 , 9, 51-60	1.4	11

91	An Iterative Solver Benchmark. <i>Scientific Programming</i> , 2001 , 9, 223-231	1.4	5
90	The design and implementation of the parallel out-of-core ScaLAPACK LU, QR, and Cholesky factorization routines. <i>Concurrency and Computation: Practice and Experience</i> , 2000 , 12, 1481-1493		26
89	Numerical linear algebra algorithms and software. <i>Journal of Computational and Applied Mathematics</i> , 2000 , 123, 489-514	2.4	18
88	Request Sequencing: Optimizing Communication for the Grid. <i>Lecture Notes in Computer Science</i> , 2000 , 1213-1222	0.9	13
87	JLAPACK [C]ompiling LAPACK FORTRAN to Java. <i>Scientific Programming</i> , 1999 , 7, 111-138	1.4	11
86	ALGORITHMIC ISSUES ON HETEROGENEOUS COMPUTING PLATFORMS. <i>Parallel Processing Letters</i> , 1999 , 09, 197-213	0.3	20
85	Algorithmic redistribution methods for block-cyclic decompositions. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 1999 , 10, 1201-1216	3.7	21
84	Logistical quality of service in NetSolve. <i>Computer Communications</i> , 1999 , 22, 1034-1044	5.1	6
83	HARNESS: a next generation distributed virtual machine. <i>Future Generation Computer Systems</i> , 1999 , 15, 571-582	7.5	44
82	Deploying fault tolerance and tasks migration with NetSolve. <i>Future Generation Computer Systems</i> , 1999 , 15, 745-755	7.5	15
81	Static tiling for heterogeneous computing platforms. <i>Parallel Computing</i> , 1999 , 25, 547-568	1	19
80	The marketplace of high-performance computing. <i>Parallel Computing</i> , 1999 , 25, 1517-1544	1	22
79	Stochastic Performance Prediction for Iterative Algorithms in Distributed Environments. <i>Journal of Parallel and Distributed Computing</i> , 1999 , 58, 68-91	4.4	5
78	Tiling on systems with communication/computation overlap. <i>Concurrency and Computation: Practice and Experience</i> , 1999 , 11, 139-153		5
77	A Parallel Divide and Conquer Algorithm for the Symmetric Eigenvalue Problem on Distributed Memory Architectures. <i>SIAM Journal of Scientific Computing</i> , 1999 , 20, 2223-2236	2.6	53
76	A Comparison of Parallel Solvers for Diagonally Dominant and General Narrow-Banded Linear Systems II. <i>Lecture Notes in Computer Science</i> , 1999 , 1078-1087	0.9	9
75	Applying NetSolve's network-enabled server. <i>IEEE Computational Science and Engineering</i> , 1998 , 5, 57-67		52
74	Using agent-based software for scientific computing in the NetSolve system. <i>Parallel Computing</i> , 1998 , 24, 1777-1790	1	6

73	Scheduling block-cyclic array redistribution. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 1998 , 9, 192-205	3.7	41
72	Programming tools and environments. <i>Communications of the ACM</i> , 1998 , 41, 64-73	2.5	5
71	High performance linear algebra package for FORTRAN 90. <i>Lecture Notes in Computer Science</i> , 1998 , 579-583	0.9	4
70	Deploying fault-tolerance and task migration with NetSolve. <i>Lecture Notes in Computer Science</i> , 1998 , 418-432	0.9	
69	High performance linear algebra package LAPACK90. <i>Lecture Notes in Computer Science</i> , 1998 , 387-391	0.9	
68	Dynamic Reconfiguration and Virtual Machine Management in the Harness Metacomputing System. <i>Lecture Notes in Computer Science</i> , 1998 , 127-134	0.9	14
67	Netsolve: a Network-Enabled Server for Solving Computational Science Problems. <i>International Journal of High Performance Computing Applications</i> , 1997 , 11, 212-223		207
66	The Spectral Decomposition of Nonsymmetric Matrices on Distributed Memory Parallel Computers. <i>SIAM Journal of Scientific Computing</i> , 1997 , 18, 1446-1461	2.6	25
65	Changing technologies of HPC. <i>Future Generation Computer Systems</i> , 1997 , 12, 461-474	7.5	4
64	Key concepts for parallel out-of-core LU factorization. <i>Parallel Computing</i> , 1997 , 23, 49-70	1	11
63	Java access to numerical libraries. <i>Concurrency and Computation: Practice and Experience</i> , 1997 , 9, 1279-1291		16
62	Fault-Tolerant Matrix Operations for Networks of Workstations Using Diskless Checkpointing. <i>Journal of Parallel and Distributed Computing</i> , 1997 , 43, 125-138	4.4	35
61	Providing access to high performance computing technologies. <i>Lecture Notes in Computer Science</i> , 1997 , 24-34	0.9	
60	Block-cyclic array redistribution on networks of workstations. <i>Lecture Notes in Computer Science</i> , 1997 , 343-350	0.9	
59	NetSolve 1996 ,		44
58	A proposal for a set of parallel basic linear algebra subprograms. <i>Lecture Notes in Computer Science</i> , 1996 , 107-114	0.9	34
57	PB-BLAS: a set of parallel block basic linear algebra subprograms. <i>Concurrency and Computation: Practice and Experience</i> , 1996 , 8, 517-535		6
56	ScaLAPACK: a portable linear algebra library for distributed memory computers [design issues and performance. <i>Computer Physics Communications</i> , 1996 , 97, 1-15	4.2	95

55	Algorithmic bombardment for the iterative solution of linear systems: A poly-iterative approach. <i>Journal of Computational and Applied Mathematics</i> , 1996 , 74, 91-109	2.4	20
54	Chebyshev tau-QZ algorithm methods for calculating spectra of hydrodynamic stability problems. <i>Applied Numerical Mathematics</i> , 1996 , 22, 399-434	2.5	189
53	Parallel matrix transpose algorithms on distributed memory concurrent computers. <i>Parallel Computing</i> , 1995 , 21, 1387-1405	1	19
52	Recent Enhancements To Pvm. <i>International Journal of High Performance Computing Applications</i> , 1995 , 9, 108-127		13
51	Location-independent naming for virtual distributed software repositories. <i>Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM</i> , 1995 , 20, 179-185	0.4	1
50	Software distribution using Xnetlib. <i>ACM Transactions on Mathematical Software</i> , 1995 , 21, 79-88	2.3	7
49	Templates for linear algebra problems. <i>Lecture Notes in Computer Science</i> , 1995 , 115-140	0.9	1
48	. <i>IEEE Computational Science and Engineering</i> , 1995 , 2, 62-69		12
47	Software Libraries for Linear Algebra Computations on High Performance Computers. <i>SIAM Review</i> , 1995 , 37, 151-180	7.4	90
46	. <i>IEEE Parallel and Distributed Technology</i> , 1995 , 3, 75-83		41
45	A parallel algorithm for the reduction of a nonsymmetric matrix to block upper-Hessenberg form. <i>Parallel Computing</i> , 1995 , 21, 1189-1211	1	24
44	The Netlib Mathematical Software Repository. <i>D-Lib Magazine</i> , 1995 , 1,		18
43	The PVM concurrent computing system: Evolution, experiences, and trends. <i>Parallel Computing</i> , 1994 , 20, 531-545	1	158
42	Scalability Issues Affecting the Design of a Dense Linear Algebra Library. <i>Journal of Parallel and Distributed Computing</i> , 1994 , 22, 523-537	4.4	46
41	Pumma: Parallel universal matrix multiplication algorithms on distributed memory concurrent computers. <i>Concurrency and Computation: Practice and Experience</i> , 1994 , 6, 543-570		63
40	Templates for the Solution of Linear Systems: Building Blocks for Iterative Methods 1994 ,		1383
39	PVM 1994 ,		1120
38	A Parallel Algorithm for the Nonsymmetric Eigenvalue Problem. <i>SIAM Journal of Scientific Computing</i> , 1993 , 14, 542-569	2.6	16

37	Integrated Pvm Framework Supports Heterogeneous Network Computing. <i>Computers in Physics</i> , 1993 , 7, 166		68
36	. <i>Computer</i> , 1993 , 26, 88-95	1.6	46
35	Numerical Considerations in Computing Invariant Subspaces. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1992 , 13, 145-161	1.5	23
34	Reduction to condensed form for the Eigenvalue problem on distributed memory architectures. <i>Parallel Computing</i> , 1992 , 18, 973-982	1	37
33	A comparative study of automatic vectorizing compilers. <i>Parallel Computing</i> , 1991 , 17, 1223-1244	1	25
32	Parallel loops [A test suite for parallelizing compilers: Description and example results. <i>Parallel Computing</i> , 1991 , 17, 1247-1255	1	20
31	A tool to aid in the design, implementation, and understanding of matrix algorithms for parallel processors. <i>Journal of Parallel and Distributed Computing</i> , 1990 , 9, 185-202	4.4	42
30	Algorithm 679: A set of level 3 basic linear algebra subprograms: model implementation and test programs. <i>ACM Transactions on Mathematical Software</i> , 1990 , 16, 18-28	2.3	133
29	A set of level 3 basic linear algebra subprograms. <i>ACM Transactions on Mathematical Software</i> , 1990 , 16, 1-17	2.3	1039
28	Block reduction of matrices to condensed forms for eigenvalue computations. <i>Journal of Computational and Applied Mathematics</i> , 1989 , 27, 215-227	2.4	81
27	. <i>IEEE Software</i> , 1989 , 6, 78-85	1.5	3
26	An update notice on the level 3 BLAS. <i>ACM SIGNUM Newsletter</i> , 1989 , 24, 9-10		
25	Tools to aid in the analysis of memory access patterns for FORTRAN programs. <i>Parallel Computing</i> , 1988 , 9, 25-35	1	14
24	Programming methodology and performance issues for advanced computer architectures. <i>Parallel Computing</i> , 1988 , 8, 41-58	1	10
23	An extended set of FORTRAN basic linear algebra subprograms. <i>ACM Transactions on Mathematical Software</i> , 1988 , 14, 1-17	2.3	514
22	. <i>IEEE Spectrum</i> , 1987 , 24, 38-43	1.7	35
21	Distribution of mathematical software via electronic mail. <i>Communications of the ACM</i> , 1987 , 30, 403-407.	2.5	187
20	A portable environment for developing parallel FORTRAN programs. <i>Parallel Computing</i> , 1987 , 5, 175-186		26

19	Solving banded systems on a parallel processor. <i>Parallel Computing</i> , 1987 , 5, 219-246	1	34
18	Implementation of some concurrent algorithms for matrix factorization. <i>Parallel Computing</i> , 1986 , 3, 25-34	1	43
17	Squeezing the most out of eigenvalue solvers on high-performance computers. <i>Linear Algebra and Its Applications</i> , 1986 , 77, 113-136	0.9	28
16	Linear algebra on high performance computers. <i>Applied Mathematics and Computation</i> , 1986 , 20, 57-88	2.7	9
15	Comparison of the CRAY X-MP-4, Fujitsu VP-200, and Hitachi S-810/20. <i>Simulation</i> , 1986 , 47, 93-107	1.2	2
14	Implementing Linear Algebra Algorithms for Dense Matrices on a Vector Pipeline Machine. <i>SIAM Review</i> , 1984 , 26, 91-112	7.4	181
13	Multiprocessing linear algebra algorithms on the CRAY X-MP-2: Experiences with small granularity. <i>Journal of Parallel and Distributed Computing</i> , 1984 , 1, 22-31	4.4	32
12	Solving the secular equation including spin orbit coupling for systems with inversion and time reversal symmetry. <i>Journal of Computational Physics</i> , 1984 , 54, 278-288	4.1	16
11	The eigenvalue problem for Hermitian matrices with time reversal symmetry. <i>Linear Algebra and Its Applications</i> , 1984 , 60, 27-42	0.9	20
10	A collection of parallel linear equations routines for the Denelcor HEP. <i>Parallel Computing</i> , 1984 , 1, 133-142		23
9	On some parallel banded system solvers. <i>Parallel Computing</i> , 1984 , 1, 223-235	1	59
8	Improving the Accuracy of Computed Eigenvalues and Eigenvectors. <i>SIAM Journal on Numerical Analysis</i> , 1983 , 20, 23-45	2.4	62
7	Unrolling loops in fortran. <i>Software - Practice and Experience</i> , 1979 , 9, 219-226	2.5	59
6	NetSolve: Past, Present, and Future [A Look at a Grid Enabled Server]		615-624 12
5	A Block-Asynchronous Relaxation Method for Graphics Processing Units		4
4	Preliminary Results of Autotuning GEMM Kernels for the NVIDIA Kepler Architecture- GeForce GTX 680		5
3	TOP500 Supercomputers for June 2002		3
2	Efficient exascale discretizations: High-order finite element methods. <i>International Journal of High Performance Computing Applications</i> , 109434202110208	1.8	5

- 1 An Introduction to High Performance Computing and Its Intersection with Advances in Modeling Rare Earth Elements and Actinides. *ACS Symposium Series*,3-53 0.4 0