ID	TITLE	AUTHORS
	Main Track: Numerical Algorithms and Parallel Scientific Computing	
1	*Performance of dense eigensolvers on BlueGene/Q*	I. Gutheil, J. F. Muenchhalfen, J. Grotendorst
2	*Experiences with a Lanczos eigensolver in high-precision arithmetic*	A. Alperovich, A. Druinsky, S. Toledo
3	*Adaptive load balancing for massively parallel multi-level Monte Carlo solvers*	J. Sukys
4	*A simple implementation of parareal-in-time on a parallel bucket-brigade interface*	T. Takami, D. Fukudome
5	*Methods for high-throughput computation of elementary functions*	M. Dukhan, R. Vuduc
6	*Engineering nonlinear pseudorandom number generators*	S. Neves, F. Araujo
7	*Extending the generalized Fermat prime number search beyond one million digits using GPUs*	I. Bethune, M. Goetz
8	*Iterative solution of singular systems with applications*	R. Blaheta, O. Jakl, S. Jiri, E. Turan
9	*Statistical estimates for the conditioning of linear least squares problems*	M. Baboulin, S. Gratton, R. Lacroix, A. Laub
10	*Numerical treatment of a cross-diffusion model of biofilm exposure to antimicrobials*	K. Rahman, H. Eberl
11	*Performance analysis for stencil-based 3D MPDATA algorithm on hybrid CPU-GPU platform*	K. Rojek, L. Szustak, R. Wyrzykowski
12	*Elliptic solver performance evaluation on modern hardware architectures*	M. Ciznicki, P. Kopta, M. Kulczewski, K. Kurowski, P. Gepner
13	*Parallel geometric multigrid preconditioner for 3D FEM in NuscaS software package*	T. Olas
14	*Scalable parallel generation of very large sparse benchmark matrices*	D. Langr, I. Šimeček, P. Tvrdík, T. Dytrych
	Main Track: Parallel Non-Numerical Algorithms	
15	*Co-operation schemes for the parallel memetic algorithm*	J. Nalepa, M. Blocho, Z. J. Czech
16	*Efficient parallel selection*	C. Siebert
17	*Optimal diffusion for load balancing in heterogeneous networks*	K. Dimitrakopoulou, N. Missirlis
18	*Parallel bounded model checking of security protocols*	O. Siedlecka-Lamch, M. Kurkowski, S. Szymoniak, H. Piech
	Main Track: Environment and Tools for Distributed/Cloud/Grid Computing	
19	*Development of Domain-Specific Solutions within the Polish Infrastructure for Advanced Scientific Research*	J. Kitowski, P. Bala, M. Borcz, A. Czyzewski, L. Dutka, R. Kluszczynski, J. Kotus, P. Kustra, N. Meyer, A. Milenin, Z. Mosurska, R. Pająk, L. Rauch, M. Sterzel, D. Stoklosa, T. Szepieniec
20	*Cost optimization of execution of multi-level deadline-constrained scientific workflows on clouds*	M. Malawski, K. Figiela, M. Bubak, E. Deelman, J. Nabrzyski
21	*Parallel computations in the volunteer based Comcute system*	P. Czarnul, J. Kuchta, M. Matuszek
22	*Secure storage and processing of confidential data on public clouds*	J. Meizner, M. Bubak, M. Malawski, P. Nowakowski

23	*Efficient service delivery in complex heterogeneous and distributed environment*	J. Kwiatkowski, M. Fras
24	*Domain-driven visual query formulation over RDF data*	B. Balis, T. Grabiec, M. Bubak
25	*Distributed program execution control based on application global states monitoring in PEGASUS DA*	M. Tudruj, D. Kopanski, L. Masko
	Main Track: Applications of Parallel Computing	
26	*New scalable SIMD-based ray caster implementation for virtual machining*	T. Welsch, A. Leutgeb, M. Hava
27	*Parallelization of permuting schema-less XML compressors*	T. Corbin, T. Muldner, J. K. Miziołek
28	*Parallel processing model for syntactic pattern recognition-based electrical load forecast*	M. Flasinski, J. Jurek, T. Peszek
29	*Parallel event-driven simulation based on application global state monitoring*	L. Masko, M. Tudruj
	Main Track: Applied Mathematics, Evolutionary Computing and Metaheuristics	
30	*It's not a bug, it's a feature. Wait-free asynchronous cellular genetic algorithm*	F. Pinel, B. Dorronsoro, P. Bouvry, S. Khan
31	*Evolutionary algorithms for abstract planning*	J. Skaruz, A. Niewiadomski, W. Penczek
32	*Solution of the inverse continuous casting problem with the aid of modified harmony search algorithm*	E. Hetmaniok, D. Slota, A. Zielonka
33	*Influence of a topology of a spring network on its ability to learn mechanical behaviour*	M. Czoków, J. Miękisz
	Minisymposium on GPU Computing	
34	*Evaluation of autoparallelization toolkits for commodity graphics hardware*	D. Williams, V. Codreanu, P. Yang, B. Liu, F. Dong, B. Yasar, B. Mahdian, A. Chiarini, X. Zhao, J. Roerdink
35	*Real-time multiview human body tracking using GPU-accelerated PSO*	B. Rymut, B. Kwolek
36	*Implementation of a heterogeneous image reconstruction system for clinical Magnetic Resonance*	G. Kowalik, J. Steeden, D. Atkinson, A. Taylor, V. Muthurangu
37	*X-ray laser imaging of biomolecules using multiple GPUs*	S. Engblom, J. Liu
38	*Out-of-core solution of eigenproblems for macromolecular simulations on GPUs*	J. I. Aliaga, D. Davidovic, E. S. Quintana-Ortí
39	*GPU implementation of the Monte-Carlo simulations of the extended Ginzburg--Landau mode*	P. Bialas, J. Kowal, A. Strzelecki
40	*Using GPUs for parallel stencil computations in relativistic hydrodynamic simulation*	S. Cygert, D. Kikoła, J. Porter-Sobieraj, J. Sikorski, M. Słodkowski
	Special Session on Multicore Systems	
41	*PDNOC: an efficient partially diagonal network-on-chip design*	T. C. Xu, V. Leppänen, P. Liljeberg, J. Plosila, H. Tenhunen
42	*Adaptive fork-heuristics for software thread-level speculation*	Z. Cao, C. Verbrugge
43	*Inexact sparse matrix vector multiplication in Krylov subspace methods: An application-oriented reduction method*	A. Mansour, J. Götze
44	*The regular expression matching algorithm for the energy efficient reconfigurable SoC*	P. Russek, K. Wiatr

Workshop on Models, Algorithms and Methodologies for Hierarchical Parallelism in New HPC Systems

45	*Transparent application acceleration by intelligent scheduling of shared library calls on heterogeneous systems*	J. Colaço, A. Matoga, A. Ilić, N. Roma, P. Tomás, R. Chaves
46	*Improving parallel I/O performance using multithreaded two-phase I/O with processor affinity management*	Y. Tsujita, K. Yoshinaga, A. Hori, M. Sato, M. Namiki, Y. Ishikawa
47	*Storage systems for organizationally distributed environments - PLGrid PLUS case study*	R. Slota, L. Dutka, B. Kryza, D. Nikolow, D. Król, M. Wrzeszcz, J. Kitowski
48	*The high performance Internet of Things: using GVirtuS for gluing cloud computing and ubiquitous connected*	R. Montella, G. Laccetti

Workshop on Numerical Algorithms on Hybrid Architectures

49	*Performance evaluation of sparse matrix multiplication kernels on Intel Xeon Phi*	E. Saule, K. Kaya, U. Catalyurek
50	*Portable HPC programming on Intel Many-Integrated-Core hardware with MAGMA port to Xeon Phi*	J. Dongarra, M. Gates, A. Haidar, Y. Jia, K. Kabir, P. Luszczek, S. Tomov
51	*Accelerating a massively parallel numerical simulation in electromagnetism using a cluster of GPUs*	C. Augonnet, D. Goudin, A. Pujols, M. Sesques
52	*Multidimensional Monte Carlo integration on clusters with hybrid GPU-accelerated nodes*	D. Szalkowski, P. Stpiczynski
53	*Efficient execution of erasure codes on AMD APU architecture*	M. Woźniak, L. Kuczynski, R. Wyrzykowski
54	*AVX acceleration of DD arithmetic between a sparse matrix and vector*	T. Hishinuma, A. Fujii, T. Tanaka, H. Hasegawa
55	*Using quadruple precision arithmetic to accelerate Krylov subspace methods on GPUs*	D. Mukunoki, D. Takahashi
56	*Effectiveness of sparse data structure for double-double and quad-double arithmetics*	T. Saito, S. Kikkawa, E. Ishiwata, H. Hasegawa
57	*Efficient heuristic adaptive quadrature on GPUs: design and evaluation*	D. Thuerck, S. Widmer, A. Kuijper, M. Goesele
58	*Square block code for positive definite symmetric Cholesky band routines*	F. G. Gustavson, J. R. Herrero, E. Morancho

Minisymposium on Communication Avoiding Algorithms for Linear Algebra

59	*Exploiting Data Sparsity in Parallel Matrix Powers Computations*	N. Knight, E. Carson, J. Demmel
60	*Communication Avoiding ILU0 Preconditioner*	L. Grigori, S. Moufawad
61	*Parallel Design and Performance of Nested Filtering Factorization Preconditioner*	L. Grigori, F. Nataf, Long Qu

Workshop on Applied High Performance Numerical Algorithms in PDEs

62	*A Domain decomposition method for discretization of multiscale elliptic problems by discontinuous Galerkin method*	M. Dryja
63	*Parallel preconditioner for finite volume element discretization of elliptic problem*	L. Marcinkowski, T. Rahman

64	*Abstract Schwarz method for nonsymmetric local discontinuous Galerkin discretization of elliptic problem*	F. Klawe
65	*Fast numerical method for 2D initial-boundary value problems for the Boltzmann equation*	A. Heintz, P. Kowalczyk
66	*Simulating phase transition dynamics on nontrivial domains*	M. Gokieli, Ł. Bolikowski
67	*Variable block multilevel iterative solution of general sparse linear systems*	B. Carpentieri, J. Liao, M. Sosonkina
68	*An automatic way of finding optimal elimination trees for sequential and parallel multi-frontal direct solver for adaptive finite element method*	H. Aboueisha, P. Gurgul, A. Paszynska, M. Paszynski, M. Moshkov, K. Kuźnik
69	*Parallel efficiency of an adaptive, dynamically balanced flow solver*	S. Gepner, J. Majewski, J. Rokicki
70	*Modification of the Newton's method for the simulations of gallium nitride semiconductor devices*	K. Sakowski, L. Marcinkowski, S. Krukowski
71	*A project of numerical realization of the one-dimensional model of burning methanol*	K. Moszynski
	Workshop on Scheduling for Parallel Computing	
72	*Scheduling Bag-of-Tasks Applications to Optimize Computation Time and Cost*	A. Grekioti, N. V. Shakhlevich
73	*Scheduling Moldable Tasks with Precedence Constraints and Arbitrary Speedup Functions on Multiprocessors*	S. Hunold
74	*OStrich: Fair Scheduling for Multiple Submissions*	J. Emeras, V. Pinheiro, K. Rzadca, D. Trystram
75	*Fair share is not enough: measuring fairness in scheduling with cooperative game theory*	P. Skowron, K. Rzadca
76	*Setting up clusters of computing units to process several data streams efficiently*	D. Millot, C. Parrot
	Workshop on Complex Collective Systems	
77	*Bridging the gap: from Cellular Automata to differential equation models for pedestrian dynamics*	F. Dietrich, G. Koester, M. Seitz, I. von Sivers
78	*Cellular model of pedestrian dynamics with adaptive time span*	M. Bukáček, P. Hrabak, M. Krbalek
79	*The use of GPGPU in continuous and discrete models of crowd dynamics*	H. Mróz, J. Wąs, P. Topa
80	*Modeling behavioral traits of employees in a workplace with Cellular Automata*	P. Saravakos, G. Ch. Sirakoulis
81	*Probabilistic pharmaceutical modelling: a comparison between synchronous and asynchronous Cellular*	M. Bezbradica, H. J. Ruskin, M. Crane
82	*Coupling lattice Boltzmann gas and level set method for simulating free surface flow in GPU/CUDA environment*	T. Kryza, W. Dzwinel
83	*Creation of agent's vision of social network through episodic memory*	M. Wrzeszcz, J. Kitowski
84	*The influence of multi-agent cooperation on the efficiency of taxi dispatching*	M. Maciejewski, K. Nagel
85	*Basic endogenous-money economy: an agent-based approach*	I. Blecic, A. Cecchini, G. A. Trunfio
	Minisymposium on High Performance Computing Interval Methods	
86	*A shaving method for interval linear systems of equations*	M. Hladík , J. Horáček

87	*Inner estimation of linear parametric AE-solution sets*	E. Popova
88	*Finding enclosures for linear systems using interval matrix multiplication in CUDA*	A. Dallmann, P. Beck
89	*GPU accelerated metaheuristics for solving large scale parametric interval algebraic systems*	I. Skalna, J. Duda
90	*Parallel approach to Monte Carlo simulation for option price sensitivities using the adjoint and interval analysis*	G. Kozikowski, B. Kubica
91	*Subsquares approach - simple scheme for solving overdetermined interval linear systems*	J. Horáček, M. Hladík
92	*Using quadratic approximations in an interval method of solving underdetermined and well-determined nonlinear systems*	B. Kubica
93	*Interval finite difference method for solving the problem of bioheat transfer between blood vessel and tissue*	M. A. Jankowska

Minisymposium on Applications of Parallel Computation in Industry and Engineering

94	*A parallel solver for the time-periodic Navier-Stokes equations*	P. Arbenz, D. Hupp, D. Obrist
95	*Parallel numerical algorithms for simulation of rectangular waveguides using GPU*	R. Ciegis, A. Bugajev, Z. Kancleris, G. Slekas
96	*OpenACC parallelisation for diffusion problems, applied to temperature distribution on a honeycomb around the bee brood: a worked example using BiCGSTAB*	H. Eberl, R. Sudarsan
97	*Application of CUDA for acceleration of calculations in boundary value problems solving using PIES*	A. Kuzelewski, E. Zieniuk, A. Boltuc
98	*Modeling and simulations of beam stabilization in edge-emitting broad area semiconductor devices*	M. Radziunas, R. Ciegis
99	*Concurrent nomadic and bundle search: a class of parallel algorithms for local optimization*	C. Voglis, D. Papageorgiou, I. Lagaris
100	*Parallel multi-objective memetic algorithm for competitive facility location*	A. Lančinskas, J. Žilinskas
101	*Parallelization of encryption algorithm based on chaos system and neural networks*	D. Burak

Workshop on Language-Based Parallel Programming Models

102	*Towards standardization of measuring the usability of parallel languages*	A. Marowka
103	*Experiences with implementing task pools in Chapel and X10*	C. Fohry, J. Breitbart
104	*Parampl: A simple approach for parallel and distributed execution of AMPL programs*	A. Olszak, A. Karbowski
105	*Prototyping framework for parallel numerical computations*	O. Meca, S. Böhm, M. Běhálek, M. Surkovsky
106	*Algorithms for in-place matrix transposition*	F. G. Gustavson, D. Walker
107	*FooPar: a functional object oriented parallel framework in Scala*	F. P. Hargreaves, D. Merkle
108	*Effects of segmented finite difference time domain on GPU*	J. Mijares, P. Thulasiraman, R. Thulasiram, G. Battoo
109	*Optimization of an OpenCL-based multi-swarm PSO algorithm on an APU*	W. Franz, P. Thulasiraman, R. Thulasiram

110	*Core allocation strategies on multicore platforms to accelerate forest fire spread predictions*	T. Artés, A. Cencerrado, A. Cortés, T. Margalef

Workshop on Parallel Computational Biology

111	*Resolving load balancing issues in BWA on NUMA multicore architectures*	C. Herzeel, T. J. A. Pascal C. Wolfgang D. Meuter
112	*K-mulus: strategies for BLAST in the cloud*	C. Hill, C. Albach, S. Angel, M. Pop
113	*Faster GPU-accelerated Smith-Waterman Algorithm with Alignment Backtracking for Short DNA Sequences*	Y. Liu, B. Schmidt
114	*Accelerating string matching on MIC architecture for motif extraction*	S. Pissis, C. Goll, P. Pavlidis, A. Stamatakis
115	*A parallel, distributed-memory framework for comparative motif discovery*	D. De Witte, M. Van Bel, P. Audenaert, P. Demeester, B. Dhoedt, K. Vandepoele, J. Fostier
116	*Parallel seed-based approach to protein structure similarity detection*	G. Chapuis, M. Le Boudic - Jamin, R. Andonov, H. Djidjev, D. Lavenier

Workshop on Power and Energy Aspects of Computation

117	*Energy and deadline constrained robust stochastic static resource allocation*	M. Oxley, S. Pasricha, H. Siegel, A. Maciejewski
118	*Performance and energy analysis of the iterative solution of sparse linear systems on multicore and manycore architectures*	J. I. Aliaga, M. Castillo, J. C. Fernandez, G. Leon, J. Perez, E. S. Quintana-Orti
119	*Measuring the sensitivity of graph metrics to missing data*	A. Zakrzewska, D. A. Bader
120	*The energy/frequency convexity rule: modeling and experimental validation on mobile devices*	K. De Vogeleer, G. Memmi, P. Jouvelot, F. Coelho

Minisymposium on HPC Applications in Physical Sciences

121	*Simulations of the adsorption behavior of dendrimers*	J. Klos, J. Sommer
122	*An optimized Lattice Boltzmann code for BlueGene/Q*	M. Pivanti, F. Mantovani, S. F. Schifano, R. Tripiccione, L. Zenesin
123	*A parallel and scalable iterative solver for sequences of dense eigenproblems arising in FLAPW*	M. Berljafa, E. Angelo D. Napoli
124	*Sequential Monte Carlo in Bayesian assessment of contaminant source localization based on the sensors concentration measurements*	A. Wawrzynczak-Szaban, P. Kopka, M. Borysiewicz
125	*Effective parallelization of quantum simulations: nanomagnetic molecular rings*	P. Kozłowski, G. Musiał, M. Antkowiak, D. Gatteschi
126	*DFT study of the Cr8 molecular magnet within chain-model approximations*	V. Bellini, D. M. Tomecka, B. Brzostowski, M. Wojciechowski, F. Troiani, F. Manghi, M. Affronte

Workshop on Performance Evaluation of Parallel Applications on Large-Scale Systems

127	*The effect of parallelization on a tetrahedral mesh optimization method*	D. Benitez, E. Rodríguez, J. M. Escobar, R. Montenegro
128	*Analysis of partitioning models and metrics in parallel sparse matrix-vector multiplication*	K. Kaya, B. Ucar, U. Catalyurek
129	*Achieving memory scalability in the Gysela code to fit exascale constraints*	G. Latu, J. Roman, F. Rozar
130	*Probabilistic analysis of barrier eliminating method applied to load-imbalanced parallel application*	N. Yonezawa, K. Katou, I. Kino, K. Wada
131	*Multi-GPU parallel memetic algorithm for capacitated vehicle routing problem*	M. Wodecki, W. Bozejko, M. Karpiński, M. Pacut

132	*Parallel applications performance evaluation using the concept of granularity*	J. Kwiatkowski

POSTERS

MAIN TRACK

133	*Improving perfect parallelism*	L. Karlsson, C. Christian K. Mikkelsen,, B. Kågström
134	*Parallel one--sided Jacobi SVD algorithm with variable blocking factor*	M. Becka, G. Oksa
135	*Using Intel Xeon Phi coprocessor to accelerate computations in MPDATA algorithm*	L. Szustak, K. Rojek, P. Gepner
136	*Genetic programming in automatic discovery of relationships in computer system monitoring data*	P. Koperek, W. Funika
137	*Genetic algorithms execution control under a global application state monitoring infrastructure*	A. Smyk, M. Tudruj

Minisymposium on HPC Applications in Physical Sciences

138	*Non-perturbative methods in phenomenological simulations of ring-shape molecular nanomagnets*	P. Kozłowski, G. Musiał, M. Haglauer, W. Florek, M. Antkowiak, F. Esposito, D. Gatteschi
139	*Non-uniform quantum spin chains: static and dynamic properties*	A. Barasinski, B. Brzostowski, R. Matysiak, P. Sobczak, D. Wozniak

Workshop on Complex Collective Systems

140	*Neighborhood selection and rules identification for cellular automata: a rough sets approach*	B. Płaczek
141	*The graph of Cellular Automata applied for modelling tumour induced angiogenesis*	P. Topa

Workshop on Applied High Performance Numerical Algorithms in PDEs

142	*Preconditioning iterative substructuring methods using inexact local solvers*	P. Krzyzanowski

Workshop on Numerical Algorithms on Hybrid Architectures

143	*An efficient representation on GPU for transition rate matrices for Markov chains*	J. Bylina, B. Bylina, M. Karwacki
144	*Eigen-G: GPU-based eigenvalue solver for real-symmetric dense matrices*	T. Imamura, S. Yamada, M. Machida

Workshop on Models, Algorithms and Methodologies for Hierarchical Parallelism in New HPC Systems

145	*A study on adaptive algorithms for numerical quadrature on hybrid GPU and multicore based systems*	G. Laccetti, M. Lapegna, V. Mele, D. Romano

Minisymposium on High Performance Computing Interval Methods

146	*The definition of interval-valued intuitionistic fuzzy sets in the framework of Dempster-Shafer theory*	L. Dymova, P. Sevastjanov