

**28th International Conference on Parallel Computational Fluid Dynamics
Kobe International Conference Center
May 9–12, 2016**

Monday, May 9

17:00~	<p style="text-align: center;">Registration 5th Floor, Kobe International Conference Center</p>
18:00~20:00	<p style="text-align: center;">Welcome Party</p>

Tuesday, May 10

08:30~	Registration		
09:15~09:30	Opening Address, Room 502		
09:30~10:20	Flying with Body Rotation: The Flight Dynamics Revealed from Butterflies in Free Flight Jing-Tang Yang, National Taiwan University Room 502		
10:20~10:45	Coffee Break		
	Parallel Algorithms & Solvers Room 502	Mechanical Engineering Applications Room 505	Acoustic & Rarefied Flows Room 504
10:45~11:10	A High-Precision and High-Resolution Parallel Numerical Model for Storm Surge Based on GPU R. Wang, Z. Zang, Q. Fang, J. Zhou, D. Qiang, B. Zhang, X. Zhang	Effects of Time Step and Convergence Rate of Implicit Scheme on Unsteady Compressible Flow Analyses K. Okada, H. Aono, T. Nonomura, S. Kawai, K. Fujii	Solving Aeroacoustics Problems with Highly Accurate Multioperators-Based Schemes A. I. Tolstykh, M. V. Lipavskii, D. A. Shirobokov
11:10~11:35	Parallel Smoothed Particle Hydrodynamics on a GPU Supercomputer M. Gestrich, S. Adami, T. Aoki, T. Indinger	Three-Dimensional Numerical Study on the Torque of Gas Force of Rotating Detonations L.-F. Zhang, S.-J. Zhang, J.-P. Wang	Computational Investigation of the Acoustic Installation Effect by Using a Cartesian Mesh Solver Y. Fukushima, S. Obayashi
11:35~12:00	The Influence of Transient Adaptive Mesh Refinement on Accuracy and Parallel Performance for Unstructured Grids Using GPU Parallel Computing J. C.-M. Chang, M. R. Smith	Gas-Particle Flow Simulation Based on Compressible Flow Solver with Immersed Boundary Method Y. Mizuno, S. Takahashi, T. Nonomura, T. Nagata, K. Fukuda	Parallel Computations of Subsonic Rarefied Flow past a Spinning Cylinder B. John, X.-J. Gu, R. W. Barber, D. R. Emerson
12:00~13:40	Lunch, Portopia Hotel		
13:40~14:30	Large-scale GPU-based CFD Applications based on a High-productivity Stencil Framework T. Shimokawabe, Tokyo Institute of Technology Room 502		
14:30~14:55	Coffee Break		

	Parallel Algorithms & Solvers Room 502	Mechanical Engineering Applications Room 505	Immersed Boundary Method Room 504
14:55~15:20	Building the Performance Model of Parareal Method S. Imamura, K. Ono, M. Iizuka, M. Yokokawa	A Parallelization of a Moving Mesh Method with Sliding Mesh Approach for Incompressible Flow S. Asao, K. Matsuno, M. Yamakawa, S. Ishihara	Constraint Based Immersed Boundary Method for "Thin" Structures R. Bale, N. Jansson, K. Onishi, M. Tsubokura
15:20~15:45	Adaptive Mesh Refinement and Load Balancing Based on Building Cube Method T. Misaka, D. Sasaki, S. Obayashi	An Embedded-Boundary AMR Method for Compressible Flow in Moving Complex Geometry M. A. Al-Marouf, N. R. Rapaka, R. Samtaney	GPU Implementation of Direct-Forcing Immersed Boundary Method T.-I. Tseng, F.-A. Kuo, M.-J. Chern, T.-L. Horng
15:45~16:10	Dynamic Load Balancing Method for Parallel Computational Fluid Dynamics Simulations Using Multi-Block Structured Grids H. Liu, Y. Piao, Y. Ren, J. Pan, Q. Wang, W. Zeng	Parallel Computation of Sliding Mesh for the Unstructured Grid Finite Volume Method on the Rotating Wheel Vehicle Aerodynamics Simulation K. Onishi, M. Tsubokura	Investigation of GPU-Based Immersed Boundary Method Solvers with Direct Forcing C. S. Minar, K. E. Niemeyer
16:10~16:35	Coffee Break		
	Software Frameworks & GPU Computing Room 502	Medical & Biological Applications Room 505	Fluid-Structure Interaction Room 504
16:35~17:00	Real-Time Simulation and Prognosis of Smoke Propagation in Underground Stations Using GPUS: Preliminary Results A. Severt, L. Arnold	Direct Numerical Simulation of Nasal Airflow S. Shimizu, T. Sakamoto, S. Kimura, G. Tanaka, T. Sera, H. Yokota, K. Ono	Structural Response to Blast and Fragment Loading Using a Parallel Coupled Fluid Dynamics and Structural Dynamics Methodology J. D. Baum O. A. Soto, F. Togashi, R. Löhner
17:00~17:25	Large-Scale Simulations for Fluid-Particle System Using Multiple GPUs S. Watanabe, T. Aoki, Y. Hasegawa	3D Simulation of Floral Oil Storage and Transport by Specialized Insects A. Rüttgers, M. Griebel	Simulation of a Freely Falling Ellipsoid Using Immersed Boundary Method with a Parallel Iterative Solver S. H. Chen, C. A. Lin
17:25~17:50	Higher Order Multiple-GPU Parallelization of a Finite Volume Scheme Using a Modified AUSM with CUDA and OpenMP for Hypersonic Flows J. W.-S. Chang, M. R. Smith	Validity of Patient-Specific Computational Hemodynamics for Noninvasive Quantification of Blood Flow H. W. Yu, X. Chen, Z. Wang, R. Chen, C. Lin, S. F. Kralik, Y. Zhao, A. P. Sawchuk	Large-Scale Particle-Based Simulations Using Dynamic Load Balance with Space Filling Curves on a GPU Supercomputer S. Tsuzuki, T. Aoki
17:50~18:15	Multi-GPU Implementation of OpenFOAM on Steady and Transient Flow Simulations T. Arslan, D. Jasiński, B. Pettersen, H. I. Andersson, A. Nocente	Nasal Air-Conditioning in Chimpanzee S. Kaouthar, K. Kotani, T. Matsuzawa	Higher Order Adaptive Mesh Refinement (AMR) Simulations for Fluid-Structure Interaction Problems in Compressible Flows Using GPU and OpenMP Parallelization M. R. Smith

Wednesday, May 11

08:30~	Registration		
09:00~09:50	The Use of CFD in the Design of a 1,000mph Car: BLOODHOUND SSC, an Engineering Adventure B. J. Evans, Swansea University Room 502		
09:50~10:15	Coffee Break		
	Software Frameworks & GPU Computing Room 502	Mechanical Engineering Applications Room 505	Optimization Room 504
10:15~10:40	Parallel Computing Study of WENO Scheme on Multiple Graphics Processing Units F.-A. Kuo, M. R. Smith, J.-S. Wu	Coupling OpenFOAM with WRF for Unsteady Wind Power Production Estimations in Parallel E. Leblebici, I. H. Tuncer	Industrial Strength Parallel Aerodynamic Shape Optimization B. Epstein, S. Peigin, S. Timchenko
10:40~11:05	Advanced GPU Direct-MPI Hybrid Framework with Block-Based Data Structure for Efficient CFD/MHD Simulations Using AMR on Multi-GPU Systems U.-H. Wong, T. Aoki	Development of a Parallel Direct Simulation Monte Carlo Code and Its Applications C.-C. Su, J.-S. Wu, Y.-L. Syue, M.-C. Lo	A GPU-Accelerated Steady CFD Solver for Turbomachinery Optimization M. H. Aissa, T. Verstraete, C. Vuik
11:05~11:30	Scalable Muti-GPU Tridiagonal Solver Based on Schur-Complement Algorithm M.M. Kamra, C. Hu	Parallel Computation of Flows over Cascade Using Multi-Block Cartesian Grid Method K. Morinishi, T. Fukui, K. Hirakawa, R. Yamawaki	Performance Optimization of Numerical Turbine for Supercomputer SX-ACE Y. Sakaguchi, K. Kataumi, H. Matsuoka, O. Watanabe, A. Musa, K. Komatsu, R. Egawa, H. Kobayashi, S. Yamamoto
11:30~11:55	HIVE: A Visual Analytics Framework for Large-Scale CFD on the K Computer J. Nonaka, K. Ono, M. Fujita, K. Oku, T. Kawanabe	A Unified Simulation Framework for Low Speed Compressible Turbulence in Industrial Applications C. Li, M. Tsubokura	CFD Optimization with Nelder-Mead Algorithm for Minimum Drag Wing J.-C. Huang, H. Lin, J.-Y. Yang
12:00~13:40	Lunch, Portopia Hotel		
13:40~14:30	Visualizing Extreme-Scale CFD Simulations Kwan-Liu Ma, University of California at Davis Room 502		

16:00~16:40	Visiting K Computer
17:00~17:50	Visiting Sake Brewery and Sake Tasting
18:00~20:00	Banquet

Thursday, May 12

08:30~	Registration		
09:00~09:50	Extract-based Workflows to Enable and Accelerate Large Scale Production CFD S. M. Legensky, Intelligent Light Room 502		
09:50~10:15	Coffee Break		
	Parallel Algorithms & Solvers Room 502	Aerospace Engineering Applications Room 505	Turbulent Flow Room 504
10:15~10:40	Investigation into a Computationally Efficient Method for Solving the Euler Equations Using the Triangular Equilibrium Flux Method and MPI J. P.-S. Su, M. R. Smith		Parallel Performance of an Implicit LES Code for Wildland Fire Spread T. Tang, J. M. Mcdonough
10:40~11:05	Towards Parallel CFD Computation Using Mesh Partitioning and the MUMPS Solver for the Adapt Framework I. Kissami, C. Cérin, F. Benkhaldoun	Parallel Computing for Propeller Aircraft Model Based on Aerodynamics and Flight Dynamics M. Nishimura, R. Sakashita, M. Yamakawa, K. Matsuno, S. Asao	Turbulent Flow Simulation by ACM without Subiteration and Its Parallelization I. Tanno, T. Hashimoto, T. Yasuda, Y. Tanaka, K. Morinishi, N. Satofuka
11:05~11:30	Optimizing Grid Partitioning for Large-Scale High-Order CFD Simulations with Complex Grids M. Xiong, C. Xu, D. Li, X. Gao	Fast Parallel Computing with Unstructured Grid Flow Solver A. Hashimoto, T. Ishida, T. Aoyama, K. Hayashi, K. Takekawa	High-Order Large-Eddy Simulation of Turbulent Flow over an Airfoil W. Gao, W. Zhang, R. Samtaney
11:30~11:55	Unstructured Computing Using Euler and Navier-Stokes Equations in an OpenMP Parallel Environment M. Yamakawa, Y. Ikuno, K. Matsuno, S. Asao	Numerical Analysis of DLR-F11 High Lift Configuration Using In-house CFD Solver KFLOW J. H. Sa, S. H. Park, K. W. Cho	Assessment of Closure Coefficients for Wind Flow and Turbulence Characteristics around a Bluff Body Q. M. Z. Iqbal, A. Chan
12:00~13:40	Lunch, Portopia Hotel		
13:40~14:30	Challenges of JAXA on High-Performance CFD E. Shima, Japan Aerospace Exploration Agency(JAXA) Room 502		
14:30~14:55	Coffee Break		

	Parallel Algorithms & Solvers Room 502	Multi-Physics Applications Room 505	Lattice Boltzmann Method Room 504
14:55~15:20	Comparison between Several Approaches to Simulate the Taylor-Green Vortex Case C. Moulinec, J. Fang, R. D. Sandberg, W. Wang, D. R. Emerson	Numerical Simulation and Analysis of Size Inequality on Microbubble Coalescence R. Chen, H. W. Yu, L. Zhu, T. Lee	Block Structured Lattice Boltzmann Simulation Using OPS High-Level Abstraction J. Meng, X.-J. Gu, D. R. Emerson, G. R. Mudalige, I. Z. Reguly, M. B. Giles
15:20~15:45	Analysis of Nozzle Jets in Arc Spraying by Parallel Computational Fluid Dynamics and Schlieren System R. Tamaki, Y. Imai, M. Yamakawa	Multi-GPU Parallel Computation of Dendrite Solidification with Melt Convection Using Phase-Field-Lattice Boltzmann Model S. Sakane, T. Takaki, M. Ohno, Y. Shibuta, T. Shimokawabe, T. Aoki	Flow Computations Using Lattice Boltzmann Method and Block-Structured Cartesian Grid T. Ishida
15:45~16:10	Scalable OpenMP Parallelization of a Combustion Simulation Application on Intel Xeon and Xeon Phi Y. Che, C. Xu, Z. Wang	Chan-Hilliard Equations Based Lattice Boltzmann Simulations of Two-Phase Flow on GPU T.-C. Huang, C.-A. Lin	Local Refinement with Single and Multi-Relaxation Lattice Boltzmann Method on GPU T.-Y. Wang C.-A. Lin
16:10~16:35	Coffee Break		
	Room A Parallel Algorithms & Solvers	Room B Multi-Physics Applications	Room C Lattice Boltzmann Method
16:35~17:00	DNS of a Turbulent Flow by MPI+OpenMP for Heterogeneous Computing Using Multi-CPU and Multi-MIC K. Hosaka, S. Saito, S. Satake, T. Kunugi	A Numerical Simulation of a Fully Coupled Three Dimensional Fluid Sediment System M. Burkow	Turbulent Duct Flow Simulations with Single Relaxation Time Lattice Boltzmann Method on Multi-GPU Cluster Y.-H. Lee, I.-H. Lee, C.-A. Lin
17:00~17:25	Scaling of a FFT and Pseudo-Spectral Fluid Solver up to 192K Cores R. Samtaney, A. Chatterjee, M. K. Verma	Parallel Numerical Simulation of Free Surface Flow with Moving Submerged Object S. Ishihara, K. Matsuno, M. Yamakawa, S. Asao	A Study on Effectiveness of Improved Entropic Lattice Boltzmann Model for Parallel Computing T. Yasuda, T. Hashimoto, I. Tanno, Y. Tanaka, K. Morinishi, N. Satofuka
17:25~17:50	Tsunami Simulation Accelerator Exploiting Find and Coarse-Grain Parallelism with FPGA K. Nagasu, K. Sano, F. Kono, N. Nakasato	Parallel Computation of Free-Surface Flow around the KRISO Container Ship D. Bingxin, Z. Wenping, M. Pingjian	Fundamental Study on Deep Bed Filtration by Regularized Lattice Boltzmann Method T. Fukui, K. Morinishi