

# Day 1 (June 28th) MORNING

(Auditorium 2 - FC6 029)

8:30 - Registration

(the registration desk will be open from 8:30-17:30 June 28th, 29th, and morning of 30th)

9:00 - 9:15 Conference Opening Session

9:15 - 10:15 Invited Talk (Bruno Schulze) **HPC as a Service**

10:15 - 10:30 Coffee break

Session: Applications I

Chair: TBA

10:30 - 11:00 P2: **Toshiaki Hishinuma, Hidehiko Hasegawa and Teruo Tanaka. SIMD Parallel Sparse Matrix-Vector and Transposed-Matrix-Vector Multiplication in DD Precision**

11:00 - 11:30 P8: **Hartwig Anzt, Marc Baboulin, Jack Dongarra, Yvan Fournier, Frank Hulsemann, Amal Khabou and Yushan Wang. Accelerating the Conjugate Gradient Algorithm with GPU in CFD Simulations**

11:30 - 12:00 P14: **Ronan Guivarch, Guillaume Joslin, Ronan Perrussel, Daniel Ruiz, Jean Tshimanga and Thomas Unfer. Parallelisation of MACOPA, a multi-physics asynchronous solver**

12:00 - 12:30 P19:

**Naoya Nomura, Akihiro Fujii, Teruo Tanaka, Kengo Nakajima and Osni Marques. Performance Analysis of SA-AMG Method by Setting Extracted Near-kernel Vectors**

12:30 - 14:00 Lunch

# Day 1 (June 28th) AFTERNOON

(Auditorium 2 - FC6 029)

Session: Performance Model and Analysis I

Chair: TBA

14:00 - 14:30 P26:

**Rui Pinheiro, Nuno Roma and Pedro Tomás. A Cross-Core Performance Model for Heterogeneous Many-Core Architectures**

14:30 - 15:00 P30:

**Mayank Daga. On the Acceleration of Graph500: Characterizing PCIe Overheads with Multi-GPUs**

15:00 - 16:00 Crash Course - Part 1 (Silvio Stanzani) **Multithreading and Vectorization on Intel® Xeon™ and Intel® Xeon Phi™ Architectures using OpenMP**

16:00 - 16:20 Coffee break

16:20 - 17:50 Crash Course - Part 2 (Silvio Stanzani) **Multithreading and Vectorization on Intel® Xeon™ and Intel® Xeon Phi™ Architectures using OpenMP**

**18:00 - COCKTAIL**

# Day 2 (June 29th) MORNING

(Auditorium 2 - FC6 029)

9:00 - 10:00 Invited Talk (Omar Ghattas) **Scalable Algorithms for Bayesian Inference of Large-Scale Models from Large-Scale Data**

Chair: TBA

10:00 - 10:30 Coffee break

Session: Applications II

Chair: TBA

10:30 - 11:00 P24:

**Osni Marques and Paulo Vasconcelos. Computing the Bidiagonal SVD through an Associated Tridiagonal Eigenproblem**

11:00 - 11:30 P27:

**Paulo Martins and Leonel Sousa. HPC on the Intel Xeon Phi: Homomorphic Word Searching**

11:30 - 12:00 P37:

**Allen Malony, Stephanie McCumsey, Joseph Byrnes, Craig Rasmusen, Soren Rasmusen, Erik Keever and Douglas Toomey. A Data Parallel Algorithm for Seismic Raytracing**

12:00 - 14:00 Lunch

# Day 2 (June 29th) AFTERNOON

(Auditorium 2 - FC6 029)

Session: Performance Model and Analysis II

Chair: TBA

14:00 - 14:30 P33:

**Alcides Fonseca and Bruno Cabral. Evaluation of Runtime Cut-off Approaches for Parallel Programs**

14:30 - 15:00 P35:

**Kazuya Matsumoto, Norihisa Fujita, Toshihiro Hanawa and Taisuke Boku. Implementation and Evaluation of NAS Parallel CG Benchmark on GPU Cluster with Proprietary Interconnect TCA**

15:00 - 16:00 Invited Talk (Mateo Valero) **Runtime Aware Architectures**

Chair: TBA

16:00 - 16:30 Coffee break

Session: Low Level Support

Chair: TBA

16:30 - 17:00 P4:

**Shinji Sumimoto, Yuichiro Ajima, Kazushige Saga, Takafumi Nose, Naoyuki Shida and Takeshi Nanri. The Design of Advanced Communication to Reduce Memory Usage for Exa-scale Systems**

17:00 - 17:30 P18:

**Artur Mariano, Fábio Correia and Christian Bischof. A vectorized, cache efficient LLL implementation**

17:30 - 18:00 P38:

**João Lopes and José Sousa. Versat, a Minimal Coarse-Grain Reconfigurable Array**

**19:00 - DINNER**

# Day 3 (June 30th) MORNING

(Auditorium 2 - FC6 029)

9:00 - 10:00 Invited Talk (Luc Giraud) **Numerical resiliency in iterative linear algebra calculation**

Session: Environments/libraries to support parallelization I

Chair: TBA

10:00 - 10:30 P3:

**Iván Cores, Patricia Gonzalez, Emmanuel Jeannot, María J. Martín and Gabriel Rodriguez. An application-level solution for the dynamic reconfiguration of MPI applications**

10:30 - 11:00 P6:

**Ji Liu, Esther Pacitti, Patrick Valduriez and Marta Mattoso. Scientific Workflow Scheduling with Provenance Support in Multisite Cloud**

11:00 - 11:30 Coffee break

Session: Environments/libraries to support parallelization II

Chair: TBA

11:30 - 12:00 P12:

**Bruno Medeiros and João Sobral. Aspect Oriented Parallel Framework for Java**

12:00 - 12:30 P15:

**Rui Silva and João Sobral. Gaspar data-centric framework**

12:30 - 14:00 Lunch

# Day 3 (June 30th) AFTERNOON

(Auditorium 2 - FC6 029)

Session: Environments/libraries to support parallelization III

Chair: TBA

14:00 - 14:30 P25:

**Julien Adam and Marc Pérache. A Parallel and Resilient Frontend for High Performance Validation Suites**

14:30 - 15:00 P34:

**Nuno Oliveira and Pedro Medeiros. A Heterogeneous Runtime Environment for Scientific Desktop Computing**

Closing Session

## Parallel Event June 30th

WORKSHOP: [Workshop on "Big Data & Deep Learning in HPC"](#)

Venue: room 1, first floor

## July 1st

WORKSHOP: [Workshop on "Computational Challenges for Climate Modeling and Weather Prediction"](#)

Venue: Faculty of Engineering

**These other 2 workshops were cancelled:**

[Workshop on "High Performance Computing & Energy Efficiency \(HPCEE\)](#)

[Workshop on "Performance, Power and Energy-Efficiency Optimization in Heterogeneous Systems \(PPEO\)](#)