

Program [CARLA 2014](#), USM, Edificio A, Salón de Honor, 20 – 22 October, 2014.

| Monday 20 October   |                    |  |
|---|--------------------|--|
| <b>Morning Session</b><br><br>Chair:<br>Gonzalo Hernández                                 | 08:00 - 10:00 hrs. | Registration   |
|   | 10:00 - 10:15 hrs. | Welcoming Remarks<br>Gonzalo Hernández, General Chair CARLA 2014.  |
|   | 10:15 - 11:00 hrs. | Keynote 1:<br>Enrique Alba (Universidad de Málaga, Spain)  |
|   | 11:00 - 11:30 hrs. | Coffee Break (Hall Edificio A)   |
|   | 11:30 - 12:15 hrs. | Keynote 2:<br>Francisco Förster (Universidad de Chile, Chile)  |
|   | 12:15 - 13:00 hrs. | Keynote 3:<br>José Luis Gordillo (Universidad Nacional de México, México)  |
| 13:00 - 14:30 hrs.  | Lunch              |  |
| <b>Afternoon Session</b><br><br>Chairs:<br>Carlos García<br>Garino<br>&<br>Claudio Torres | 14:30 - 16:30 hrs. | Multiobjective energy-aware datacenter planning accounting for power consumption profiles<br>S. Nesmachnow, C. Perfumo and I. Goiri  |
|   |                    | An empirical study of the robustness of energy-aware schedulers for high performance computing systems under uncertainty<br>S. Iturriaga, S. García and S. Nesmachnow                                  |
|   |                    | Adaptive Spot-instances Aware Autoscaling for Scientific Workflows on the Cloud<br>D. Monge, C. García Garino  |
|   |                    | Flexicache: Highly Reliable and Low Power Cache under Supply Voltage Scaling<br>G. Yalcin, A. Seyedi, O. Unsal, A. Cristal   |
|   | 16:30 - 17:00 hrs. | Coffee Break (Hall Edificio A)   |
|   | 17:00 - 19:00 hrs. | A Parallel Discrete Firefly Algorithm on GPU for Permutation Combinatorial Optimization Problems<br>P. Vidal, A. Olivera   |
|   |                    | A Parallel Multilevel Data Decomposition Algorithm for Orientation Estimation of Unmanned Aerial Vehicles<br>C. Paz, S. Nesmachnow, J. Toloza  |
|   |                    | A Numerical Solution for Wootters Correlation<br>A. Hissami, A. Pretel, E. Tamura  |
|   |                    | Solving nonlinear, high-order partial differential equations using a high-performance isogeometric analysis framework<br>A. Cortes, P. Vignal, A. Sarmiento, D. García, N. Collier, L. Dalcin, V. Calo |
|   | 19:00 - 19:30 hrs. | Opening Ceremony CARLA 2014.   |

| Tuesday 21 October  |  |   |  |
|---|--|---|--|
| Morning Session<br>Chair:<br>Carlos Jaime Barrios   | 09:00 - 10:00 hrs.   | Keynote 4:<br>Carsten Trinitis (Technical University of Munich, Germany)  |  |
|   | 10:00 - 11:00 hrs.   | Keynote 5:<br>Sergio Nesmachnow (Universidad de la República, Uruguay)  |  |
|   | 11:00 - 11:30 hrs.   | Coffee Break (Hall Edificio A)  |  |
|   | 11:30 - 13:00 hrs.   | Alya multiphysics simulations on Intel's Xeon Phi accelerators<br>M. Vázquez, G. Houzeaux, F. Rubio, C. Simarro   |  |
| MBSPDiscover: An Automatic Benchmark for MultiBSP Performance Analysis<br>M. Alaniz, S. Nesmachnow, B. Goglin, M. Printista, V. Gil, S. Iturriaga |  |   |  |
| SI-based Scheduling of Parameter Sweep Experiments on Federated Clouds<br>E. Pacini, C. Mateos, C. García Garino                                  |  |   |  |
| 13:00 - 14:30 hrs.  | Lunch  |   |  |
| Afternoon Session<br>Chairs:<br>Sergio Nesmachnow & Mariano Vázquez   | 14:30 - 15:15 hrs.   | Talk SIASA  |  |
|   | 15:15 - 16:00 hrs.   | Talk Seagate  |  |
|   | 16:00 - 17:00 hrs.   | Distributed cache strategies for machine learning classification tasks over cluster computing resources<br>J. Arévalo, R. Ramos Pollán, F. González Osorio                          |  |
|   |  | A flexible strategy for distributed and parallel execution of a monolithic large-scale sequential application<br>F. Navarro, C. González, O. Peredo, G. Morales, A. Egaña, J. Ortiz |  |
|   |  | A Model to Calculate Amazon EC2 Instance Performance in Frost Prediction Applications<br>L. Iacono, J. Vázquez, C. García Garino, I. Martín   |  |
|   | 17:00 - 17:30 hrs.   | Coffee Break (Hall Edificio A)  |  |
|   | 17:30 - 20:00 hrs.   | Synthetic Aperture Radar Signal Processing using GPGPU<br>M. Denham, J. Areta, I. Vaquila, F. G. Tinetti  |  |
|   |  | Parallel Implementation of an Evolutionary Algorithm for Function Minimization on GPGPU<br>O. Alvarado-Nava, H. Chable, E. Rodriguez-Martinez, B. Almeida                           |  |
|   |  | Algorithm model and execution based on Petri Nets in an heterogeneous parallel computer<br>G. Wolfmann, A. De Giusti  |  |
|   |  | PISKa: A Parallel Implementation of Spatial Kappa<br>I. Fuenzalida, A. Martinand, T. Perez-Acle   |  |
| Indexing and Exhaustive Searching in Metric Spaces using a Xeon Phi Coprocessor<br>C. Toledo, R. Barrientos, A. Ávila, J. Gomez                   |  |   |  |
| 17:00 - 20:00 hrs.  | A Multicore Workflow for Inducing Data Driven GNSS Positioning Models<br>S. Sánchez-Naranjo, R. Ramos-Pollán, F. González                                  |   |  |
|   | Micropolar fluid modelling of nanofluids using divergence conforming B-spline space<br>A. Sarmiento, A. Cortes, D. Garcia,, L. Dalcin, N. Collier, V. Calo |   |  |
| 17:00 - 20:00 hrs.  | Joint Meeting CARLA + SCALAC Members   |   |  |

| Wednesday 22 October  |                    |  |
|---|--------------------|--|
| Morning Session<br>Chair:<br>Nicolas Wolovick   | 09:00 - 10:00 hrs. | Keynote 6:<br>Mario Storti (CONICET and Universidad Nacional del Litoral, Argentina)   |
|   | 10:00 - 11:00 hrs. | Keynote 7:<br>Yuri Ivanov (Universidad Técnica Federico Santa María, Chile)  |
|   | 11:00 - 11:30 hrs. | Coffee Break (Hall Edificio A)   |
|   | 11:30 - 13:00 hrs. | Efficient Symmetric Band Matrix-Matrix Multiplication on GPUs<br>E. Dufrechou, P. Ezzatti, E. Quintana-Ortí, A. Remón  |
| Implications of CPU Dynamic Performance and Energy-Efficient Technologies on the Intrusiveness Generated by Desktop Grids Based on Virtualization<br>G. Sotelo, E. Rosales, H. Castro |                    |  |
| Ensemble Learning of Run-time Prediction Models for Data-intensive Scientific Workflows<br>D. Monge, M. Holec, F. Zelezny, C. García Garino   |                    |  |
| 13:00 - 15:00 hrs.  | Lunch              |  |
| Afternoon Session<br>Chair:<br>Tomás Pérez-Acle   | 15:00 - 16:00 hrs. | Efficient fluorescence microscopy analysis over a volunteer grid/cloud infrastructure<br>M. Da Silva, S. Nesmachnow, M. Geier, E. Mocskos, J. Angiolini, V. Levi, A. Cristobal |
|   |                    | LARTop50 2014 List<br>M. Printista   |
|   | 16:00 - 16:30 hrs. | Coffee Break (Hall Edificio A)   |
|   | 16:30 - 17:15 hrs. | Talk INTEL   |
|   | 17:15 - 19:00 hrs. | INTEL Workshop: Parallel Programming with Xeon PHI   |



**CARLA 2014: Latin American HPC Conference**  
**First HPCLATAM – CLCAR Joint Conference**  
**Universidad Santa María, Valparaíso, Chile**  
**20 - 22 October 2014**



Organized by: [CCTVal \(USM\)](#) & [NLHPC \(UCHILE\)](#)



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