

### Preliminary Program

#### Monday 24<sup>th</sup> May

14:30 – 16:00 **Welcome session**

Rector of Universidade do Minho

Minister of Science, Technology and Higher Education (Portugal)

Minister of Science and Innovation (Spain)

Director of *Emerging Technologies and Infrastructures*, DG-INFISO (Europe)

16:00 – 16:30 *Coffee Break*

16:30 – 17:30

Advanced Computing & e-Science

*Luís Magalhães, (UMIC, Portugal) and Vicente Hernandez (e-Ciencia, Spain)*

19:00 – 20:30 **Welcome Reception** at Bom-Jesus do Monte

#### Tuesday 25<sup>th</sup> May

09:00 - 09:10 Welcome Address

09:10 - 10:00 **Theme: EGI / EGEE / NGI**

##### Keynote Talk

EGI.eu The European Grid Initiative

*Isabel Campos Plasencia*

10:00 - 10:40 **Paper Contributions**

The Grid-Ireland National Grid Infrastructure

*John Walsh, Brian Coghlan*

Ibergrid Transition to EGI

*Javier Lopez Cacheiro, Goncalo Borges, Jorge Gomes, Mario David, Hugo Gomes, Carlos*

*Fernandez, Alvaro Simon, Esteban Freire, Ruben Diez, Isabel Campos, Alvaro Lopez, Pablo Orviz*

10:40 – 11:00 *Coffee Break*

11:00 - 12:30 **Parallel Session 1A: EGI / EGEE / NGI**

##### Paper Contributions

Provisioning of Grid Middleware for EGI in the framework of EGI-InSPIRE

*Mario David, Goncalo Borges, Jorge Gomes, Isabel Campos, Alvaro Lopez, Pablo Orviz, Javier Lopez Cacheiro, Carlos Fernandez and Alvaro Simon*

The Metrics Portal: A tool to get statistics about EGEE operations

*Alvaro Simon, Esteban Freire Garcia, Javier Lopez Cacheiro, Carlos Fernandez Sanchez, Ruben Diez Lazaro, Pablo Rey Mayo and Sergio Diaz Montes*

Parallel Job Support in the Spanish NGI

*Enol Fernandez del Castillo*

# IBERGRID

## 4<sup>th</sup>iberian grid infrastructure conference

The road to Production: SGE Integration Process with CREAM-CE

*Esteban Freire Garcia, Alvaro Simon Garcia, Javier Lopez Cacheiro, Carlos Fernandez Sanchez, Ruben Díez Lazaro, Pablo Rey Mayo, Sergio Diaz Montes and Goncalo Borges*

11:00 - 12:30 **Parallel Session 1B: Regular Communications**

### Paper Contributions

Grid Prototype to Support Cancer of Breast Diagnostics in Clinic Practice

*Jose Salavert Torres, Cristina Maestre Urbano, Damia Segrelles Quilis, Ignacio Blanquer Espert, Vicente Hernandez Garcia, Rosana Medina and Luis Marti Bonmati*

EGEE site administration made easy

*Bruno Oliveira, Antonio Pina and Alberto Proenca*

Grid Computing for Breast Cancer CAD. A Pilot Experience in a Medical Environment

*Raul Ramos, Jose Miguel Franco Valiente, Jorge Sevilla, Naimy Gonzalez de Posada, Noel Perez Perez, Miguel Angel Guevara Lopez, Mario Augusto Pires Vaz, Joana Loureiro and Isabel Ramos*

Automated endoscopic capsule analysis using a Grid computing environment

*Ildio C. Oliveira, Luis Alves, Eduardo Dias, David Pacheco, Sergio Lima, Joao Barros, Miguel P. Monteiro, Jorge A. Silva, Jose Maria Fernandes, J. P. S. Cunha and Antonio Sousa-Pereira*

12:30 - 14:30 *Lunch*

14:30 - 16:10 **Theme: e-Science in Nanotechnology**

### Keynote Talks

The Impact of Nanosciences in Today's World and INL

*Jose Rivas*

Where Nanoscience and e-Science Meet

*Marshall Stoneham*

16:10 - 16:30 *Coffee Break*

16:30 - 18:00 **Parallel Session 2A: e-Science in Nanotechnology**

### Paper Contributions

Grid computing simulation of superconducting vortex lattice in superconducting magnetic nanostructures

*Manuel Rodriguez-Pascual, David Perez de Lara, Elvira M. Gonzalez, Alicia Gomez, Antonio J. Rubio-Montero, Rafael Mayo and Jose Luis Vicent*

Theory of doping graphene

*Hugo Pinto, Robert Jones, Jon Goss and Patrick Briddon*

SMNanoS: Submitting and Monitoring Nanoelectronic Simulations in the VO-MOSFET

*Raul Valin, Natalia Seoane, Antonio Garcia-Loureiro, Manuel Aldegunde and Javier Lopez Cacheiro*

Parallel Computing and Protein Design

*Leonor Cruzeiro and Paulo A. Lopes*

16:30 - 18:00 **Parallel Session 2B: Regular Communications**

### Paper Contributions

Accounting and Billing of Software Licenses in a Location Independent Manner

*David Garcia Perez, Jose Carlos Mourino Gallego and Andres Gomez Tato*



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Storage System Optimization, Improving CPU Efficiency in I/O Bounded Jobs

*Ana Y. Rodriguez Marrero and Iban Cabrillo Bartolome*

A platform to support Civil Protection applications on the GRID

*Antonio Pina, Bruno Oliveira, Joel Puga, Antonio Esteves and Alberto Proenca*

e-NMR gLite grid enabled infrastructure

*Nuno Loureiro-Ferreira, Tsjerk Wassenaar, Sjoerd de Vries, Marc van Dijk, Gijs van der Schot, Johan van der Zwan, Rolf Boelens, Andrea Giachetti, Dario Carotenuto, Antonio Rosato, Ivano Bertini, Torsten Herrmann, Anurag Bagaria, Victor Zharavin, Hendrik Jonker, Peter Guntert, Harald Schwalbe, Wim Vranken, Stefano Dal Pra, Mirco Mazzucato, Eric Frizziero, Sergio Traldi, Marco Verlati and Alexandre Bonvin*

### Wednesday 26th May

09:00 - 09:40 **Theme: e-Science in High Energy Physics**

#### Keynote Talk

Data Management for the LHC Experiments: Requirements and Challenges that drive the gLite Middleware Development

*Markus Shulz*

09:40 - 10:40 **Paper Contributions**

DIRAC Community Grid Solution

*Adrian Casajus Ramo and Ricardo Graciani Diaz*

Contribution of the Iberian Grid Resources to the Production of Simulated Physics Events for the ATLAS Experiment

*Mohammed Kaci, Gabriel Amoros, Goncalo Borges, Carlos Borrego, Marc Campos, Joao Carvalho, Mario David, Nuno Dias, Xavier Espinal, Alvaro Fernandez, Miguel Gila, Hugo Gomes, Jorge Gomes, Santiago Gonzalez, Alejandro Lamas, Joao P. Martins, Jordi Nadal, Miguel A. Oliveira, Elena Oliver, Carlos Osuna, Andres Pacheco Pages, Juan J. Pardo, Jose del Peso, Jose Salt, Javier Sanchez, Miguel Villaplana and Helmut Wolters*

The CMS Iberian Computing Sites performance in the advent of the LHC era

*E. Accion, N. Almeida, V. Acin, G. Bernabeu, G. Borges, A. Bria, M. Caubet, N. Colino, M. David, M. Delfino, A. Delgado-Peris, J. Flix, J. Gomes, J. Hernandez, F. Lopez, F. Martinez, J. Martins, G. Merino, M. Oliveira, E. Planas, L. Raposo, F. J. Rodriguez-Calonge, J. Varela*

10:40 - 11:00 *Coffee Break*

11:00 - 12:30 **Parallel Session 3A: e-Science in High Energy Physics**

#### Paper Contributions

Operational experience running the CIEMAT grid site

*Antonio Delgado Peris, Nicanor Colino, Jose M. Hernandez, Francisco Javier Rodriguez Calonge and Juan Jose Rodriguez Vazquez*

Portuguese Tier-2 readiness

*Goncalo Borges, Gaspar Barreira, Mario David, Nuno Dias, Hugo Gomes, Jorge Gomes, Joao Martins and Miguel Oliveira*

First tests with Tier-3 facility for the ATLAS experiment at IFIC (Valencia)

*Miguel Villaplana, Santiago Gonzalez de la Hoz, Elena Oliver, Jose Salt and Javier Sanchez*



# IBERGRID

## 4<sup>th</sup>iberian grid infrastructure conference

Data analysis on the ATLAS Spanish Tier2

*Gabriel Amoros, Carlos Borrego, Marc Campos, Alvaro Fernandez, Miguel Gila, Santiago Gonzalez, Mohammed Kaci, Alejandro Lamas, Jordi Nadal, Elena Oliver, Carlos Osuna, Andres Pacheco Pages, Juan J. Pardo, Jose del Peso, Jose Salt, Javier Sanchez and Miguel Villaplana*

11:00 - 12:30 **Parallel Session 3B: Regular Communications**

### Paper Contributions

An OGC/SOS Conformant Client to Manage Geospatial Data on the GRID

*Antonio Esteves, Marco Caldas, Antonio Pina and Alberto Proenca*

Integral Operator Spectral Computations using PETSc/SLEPc libraries

*Paulo B. Vasconcelos, Jose Roman and Filomena D. d'Almeida*

Running faster and further together: the AMILOIDE project, the onset of the Portuguese participation on the Ibercivis volunteer computing network

*Carlos J. V. Simoes, Alejandro Rivero, Alfonso Tarancon, Fermin S. Sanz, Javier L. Romero, Pedro Abreu, Carlos Manuel, Rui Duraõ, Joao Rosa, Joao Pagaimé, Pedro Veiga, Richard M. Jackson, Ana Noronha, Rosalia Vargas, Luis T. Magalhaes, Gaspar Barreira, and Rui M. M. Brito*

Custom execution environments in the BOINC middleware

*Diogo Ferreira, Filipe Araujo and Patricio Domingues*

12:30 - 14:30 *Lunch*

14:30 - 15:30 **Theme: Grid Computing in America Latina**

### Keynote Talk

Grid Infrastructure in Latin America: EELA-2 and its daughter GISELA

*Bernard Marechal*

15:30 - 16:10 **Paper Contributions**

The Emerging Virtual Research Communities in Latin America

*Luis A. Nunez*

Latin American GRID Initiatives: Background, Best Experiences and Ongoing Projects

*Luis Trejo Rodriguez*

16:10 - 16:30 *Coffee Break*

16:30 - 18:00 **Industrial Track**

Parallel Computing@Microsoft

*Przemyslaw Lenkiewicz and Sergio Martinho*

Oracle Database Machine

*Ricardo Martinez*

Supercomputing as a competitive weapon

*Jesus Gonzalez*

From HPC to Extreme Computing: Innovation without limits

*Oscar de Bustos*

18:30 - 22:30 **Social Event:** Gala Dinner at the Pousada Sta. Marinha (Guimaraes)

# IBERGRID

## 4<sup>th</sup>iberian grid infrastructure conference

**Thursday 27<sup>th</sup> May**

09:00 - 10:00 **Theme: HPC/PRACE**

### Keynote Talk

Towards a European Supercomputing Research Infrastructure  
*Sergi Girona*

10:00 - 10:40 **Paper Contributions**

OSIRIS: a state-of-the art numerical infrastructure for full scale kinetic modelling of laboratory and astrophysical plasmas with Petascale systems  
*R. A. Fonseca, P. Abreu, F. Fiúza, M. Marti, J. Martins, S. F. Martins, J. Vieira, V. Decyk, W. B. Mori, L. O. Silva*

High Performance Computing for extremely demanding climate modelling  
*Juan Antonio Anel Cabanelas*

10:40 – 11:00 *Coffee Break*

11:00 - 12:20 **Parallel Session 4A: HPC/PRACE**

### Paper Contributions

Petascaling of real-world applications: the case of OCTOPUS  
*Fernando Nogueira*

Performance evaluation of HP SFS striping parameters  
*Jesus Gonzalez Perez, Marta Loureiro, Miguel Pan and Aurelio Rodriguez*

Performance Study of Hyper-Threading Technology on the LUSITANIA Supercomputer  
*Cesar Gomez-Martin, Jose Luis Gonzalez-Sanchez, Javier Corral-Garcia, Angel Bejarano-Borrega and Javier Lazaro-Jareno*

11:00 - 12:20 **Parallel Session 4B: Regular Communications**

### Paper Contributions

Parallelisation Service in the AspectGrid Framework  
*Jorge Pinho, Matheus Almeida, Miguel Rocha and Joao Sobral*

Virtualization and network mirroring to deliver High Availability to Grid services  
*Alvaro Lopez Garcia and Pablo Orviz Fernandez*

Supporting Parallel Tasks with GRID superscalar  
*Jorge Ejarque, Enric Tejedor, Daniele Lezzi, Raul Sirvent and Rosa Badia*

12:20 - 12:30 Conference Closing Session