

# 06-06-11 2nd International Workshop on Multiphysics, Multiscale and Optimization

June 6 - 7, 2011 Paraninfo de la Facultad de Ciencias Universidad del País Vasco

Introduction|

Organizing Committee

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Confirmed Speakers

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Timetable |Registration

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Location

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Additional Information

Introduction This workshop is intended to be a meeting forum for discussion of a variety of challenging engineering problems, as well as state-of-the-art numerical and combinatorial methods needed for efficiently solving those applications. Thus, we will count with the presence of people from industry and researchers from local and worldwide renowned universities and research centers. The workshop is expected to develop synergies between industry and academia.

Organizing Committee

- David Pardo, University of the Basque Country.
- Javier Del Ser, TECNALIA.
- Mikel Lezaun, University of the Basque Country.
- Carlos Gorriá, University of the Basque Country.
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Confirmed Speakers

- Javier Del Ser, TECNALIA.
- Artzai Picón, TECNALIA.
- José Ignacio Antolín, Baltogar.
- Gino Duffett, Aperiotec.
- Juan Luis Muñoz, ESS Bilbao.
- Ibon Bustinduy, ESS Bilbao.
- Sebastien Tordeux, University of Pau, France.
- Victor M. Calo, University of KAUST, Saudi Arabia.
- José Manuel Barandiarán, University of the Basque Country.
- Carlos Gorria, University of the Basque Country.
- David Pardo, University of the Basque Country.

- Ibai Ulacia, University of Mondragón.
- Mariano Sánchez, EDE Ingenieros.
- Txema Mercero, University of the Basque Country.
- Jon Matxain, University of the Basque Country.

## Timetable

MONDAY, 6th June 2011

09:00 Workshop Opening and  
Presentation

09:20 Electromagnetic forming process: 3D coupled multiphysics  
(electromagnetic-thermal-mechanical) simulation

Ibai  
Ulacia, University of Mondragon.

09:55 Development of a reversible  
axial Jet fan using CFD. Possible optimization

José  
Ignacio Antolín, Baltogar.

10:30 Mathematical approaches of Computer Vision  
Artzai  
Picón, Tecnalía.

11:05 Coffee

Break

11:30 Multiphysics simulation challenges in the design  
of ESS-Bilbao linac accelerating structures

Juan Luis  
Muñoz, ESS Bilbao.

12:05 Computational Methods in Accelerator Physics  
Ibon

Bustinduy, ESS Bilbao.

12:40 Modelling the optimal  
distribution of the switching on for the electrical devices under  
incentives in the prices and forecast of the aggregated demand for  
electrical power

Carlos Gorria, Mikel Lezaun, Applied  
Math. Department, University of the Basque Country (UPV/EHU).

13:15 Lunch

15:15 Ferromagnetic shape memory alloys: a  
new class of high performance active materials

José  
Manuel Barandiaran, Department of Electricity and Electronics,  
University of the Basque Country (UPV/EHU).

15:50 Round-up discussion: "How can we enhance collaborations between University,  
Technological Centers, and Private Industry?"

Confirmed  
Participants: Iñaki Largo (UPV/EHU), Mikel Lezaun (UPV/EHU), Javier del  
Ser (Tecnalía), José Manuel Barandiarán (BECMAN), Peregrina Quintela  
(Coordinadora Nodo CESGA i-MATH).

17:00 End of First day of Workshop

TUESDAY, 7th June 2011

09:00 Diseño de depósitos para la acumulación de energía térmica mediante agua caliente y/o fría mediante estratificación

Mariano Sánchez, EDE Ingenieros.

09:35 On the application of advanced multiobjective and grouping heuristics to localization, positioning, and network planning

Javier del Ser, Tecnalia.

10:10 Simulating materials: Quantum and Atomistic Scale Simulations

Jon M. Matxain, Chemistry

Department, University of the Basque Country (UPV/EHU).

10:45 Coffee Break

11:15 Engineering applications using Isogeometric Analysis

Victor M. Calo, King Abdullah

University of Sciences and Technology, Saudi Arabia.

11:50 Multi-disciplinary methodologies for process integration and design optimization related to products and/or processes

Gino Duffett, Aperiotec.

12:25 Matched acoustic in multiperforated and perforated domain

Sebastien Tordeux, University of

Pau, France.

13:00 Lunch

15:00 Characterization of the power distribution sent by an solar field of heliostats using least squares fitting

Igor Agarraberes, SENER.

15:35 High Performance Computing at the UPV/EHU. A powerful tool to solve Numerical Problems

Txema Mercero,

Computational Service Unit at University of the Basque Country (UPV/EHU).

16:10 Solving engineering problems using high-order Finite Element Methods

David Pardo, Dept. of Applied Math, University of the Basque Country

(UPV/EHU).

16:45 Announcement of job offers for students

17:00 End of workshop

Registration

Deadline

for registration for academics and researchers

is 3 June 2011 and there is no fee. The registration is done by

filling this form . Location Paraninfo de la Facultad de Ciencias.Universidad del País Vasco / Euskal Herriko Unibertsitatea (UPV / EHU) Campus de Leioa, Vizcaya.

See the map bigger

Additional Information David Pardo Zubiaur

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