

Program for the second HPC-GA Workshop

11-15 March, 2013, Bilbao

Day 1 (March 11, 2013)

13:30-14:45 Lunch and coffee break

14:45-15:00 Welcome: *Enrique Zuazua (BCAM, Basque Country), Jean-François Méhaut (INRIA, Grenoble, France), Elena Akhmatskaya (BCAM, Basque Country)*

Chair: *Julien Diaz (INRIA Pau, France)*

15:00-15:45 *Josué Tago Pacheco (ISTerre, France / UNAM, Mexico)*
Modeling Earthquake Dynamics in Realistic 3D Media with an hp-Adaptive Discontinuous Galerkin Method: Toward Physics Based Seismic Hazard Assessment

15:45-16:30 *Emmanuel Chaljub (ISTerre, France)*
Verification of 3D Numerical modeling of earthquake ground motion in sedimentary basins: insights from the E2VP project

16:30-16:45 Coffee Break

16:45-17:30 *Victor Manuel Cruz-Atienza (UNAM, Mexico)*
Toward Physics-Based Earthquake Modelling for Hazard Assessment

17:30-18:15 *Edie Miglio (Politecnico di Milano, Italy)*
Tectonic evolution at mid-ocean ridges: geodynamics and numerical modeling

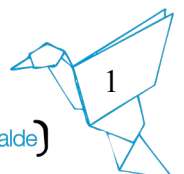
Day 2 (March 12, 2013)

10:45-11:00 Coffee Break

Chair: *Emmanuel Chaljub (UJF-ISTerre, France)*

11:00-11:45 *Enrique Zuazua (BCAM, Basque Country)*
Computational Challenges on Wave Propagation

11:45-12:30 *Victor Peron (INRIA, Pau, France)*
Asymptotic Models for Geophysical Applications



12:30-13:15 Vala Hjorleifsdottir (UNAM, Mexico)

An example of the use of computational seismology in observational seismology: Moment-tensor inversions of intermediate-size earthquakes in Mexico

13:15–15:00 Lunch Break

Chair: *Victor Manuel Cruz Atienza (UNAM, Mexico)*

15:00-15:45 Julien Diaz (INRIA, Pau, France)

Non-conforming meshes with curved elements and local-time stepping for the simulation of wave propagation in elasto-acoustic media

15:45-16:30 Leandro Farina (URFGS, Brazil /BCAM, Basque Country)

Aspects of Ocean Wave Modelling

16:30-16:45 Coffee Break

16:45-17:30 Fernando J. Méndez (Instituto de Hidráulica Ambiental "IH Cantabria", Universidad de Cantabria, Spain)

Past, Present and Future Wave Climate: Global, Regional and Local Scales

Day 3 (March 13, 2013)

10:45-11:00 Coffee Break

Chair: *Enrique Zuazua (BCAM, Basque Country)*

11:00-11:45 Ana M. Aransay (Genome Analysis Platform, CIC bioGUNE & CIBERehd, Basque Country)

Does High-Throughput Genome Analyses pose a challenge for High Performance Computing?

11:45-12:30 Jose M. Mercero, (UPV/EHU, Basque Country),

IZO-SGI SGIker, Scientific Computing at the UPV/EHU

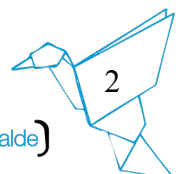
12:30-12:45 Eneko Perez (BCAM, Basque Country)

High Performance Computing at BCAM: Overview

12:45-13:15 Elena Akhmatkaya (BCAM, Basque Country)

High Performance Computing at BCAM: Simulating Complex Systems at various scales

13:15-15:00 Lunch Break



15:00–18:00 Social Program

20:30 Workshop Dinner

Day 4 (March 14, 2013)

10:45-11:00 Coffee break

Chair: *Philippe Navaux (UFRGS, Brazil)*

11:00-11:45 *David Michea (BRGM, France)*

Status of porting BRGM's simulation software on top of INRIA Bordeaux's StarPU runtime

11:45-12:30 *Giannis Ashiotis (INRIA, Grenoble, France)*

Performance optimization of Numerical Simulation of Waves Propagation in Time Domain and in Harmonic Domain using OpenMP Tasks

12:30-13:15 *Fabrice Dupros (BRGM, France)*

Scalability issues of elastodynamics equations on multicore architectures. Early results with libKOMP runtime system

13:15–15:00 Lunch Break

Chair: *Jean-Francois Mehaut (INRIA, Grenoble, France)*

15:00-15:45 *François Broquedis (INRIA, Grenoble, France)*

Task parallelism with the libKOMP runtime system

15:45-16:30 *Rafael Keller Tesser (URFGS, Brazil)*

Porting Ondes 3D to Adaptive MPI

16:30-16:45 Coffee Break

16:45-17:30 *Emilio Artacho (CIC nanoGUNE, Basque Country)*

Liquid water from first principles

Day 5 (March 15, 2013)

Working groups

