Group on
Mathematical Modeling, Simulation,
and Industrial Applications

Postdoctoral Fellowship in Computational and Applied Mathematics

We offer a postdoctoral fellow position in computational and applied mathematics.

Title: Efficient simulation of geophysical electromagnetic measurements using a dimensionally adaptive high-order finite element method.

Abstract: An accurate assessment of the material properties of the Earth's subsurface is fundamental to many important societal endeavours, such as to increase hydrocarbon extraction, improve the design of geothermal energy systems, monitor subsurface CO_2-sequestration, predict earthquakes, and estimate seismic hazards. This subsurface assessment is obtained via computer simulations, which are used to (a) design proper measurement acquisition systems and (b) solve the so-called “inverse problem".
The postdoctoral fellow will work on the development of a parallel implementation of a dimensionally adaptive high-order finite element software that is capable of efficiently combining 1D, 2D, and 3D subdomains within the same wave propagation problem.

Supervisor: David Pardo (University of the Basque Country UPV/EHU, BCAM, and IKERBASQUE).

Place: Department of Applied Mathematics, Statistics, and Operational Research,
University of the Basque Country (UPV/EHU). Leioa, Bizkaia, Spain.

Starting Date: Nov-Dec. 2016.
Gross annual salary: 26,000-30,000 euros/year (depending upon qualifications) + social security benefits.
Duration: 1 year. Depending upon the group´s funding and performance of the Postdoctoral Fellow, this position can be renewed for up to two additional years.

Requirements: *Mandatory*: Ph.D. in Applied Mathematics, Physics, Computer Sciences, or Engineering. *Preferred*: Knowledge on (a) Message Passage Interface (MPI) and OpenMP, (b) object-oriented programming, and (c) High Performance Computing (HPC). Experience in developing scientific software and finite element methods in a team environment.

For applications and additional info, contact as soon as possible to David Pardo (dzubiaur@gmail.com), and send him an email with your CV in Spanish or English. Deadline for applications: Oct 15th, 2016.