

2nd Workshop in eScience Applications for Seismology: The role of HPC Edinburgh, 20-21 June

Recent earthquakes in Sumatra, Haiti, Chile and Japan have demonstrated that models for forecasting the occurrence and impact of earthquakes still need to be improved. Concurrently, the ability to model and to analyze seismic wave propagation in the Earth has improved significantly with new numerical techniques, ever faster computers and larger high-quality volumes of seismic data. In short, with significantly improved modeling techniques and volumes of rapidly available data we are currently in a position to improve significantly our understanding of earthquake processes and their impact.

Current ICT initiatives in Europe, Japan and the US aim at ICT solutions that increase significantly the efficiency of analyzing seismological data and improve our models. These E-Science / Cyberinfrastructure developments are at an early stage where all can benefit from coordination and closer interaction.

Our first workshop was primarily targeted on data analysis and data intensive computing. In the second workshop we encourage explicitly contribution from the HPC community, since we aim to bring closer together the high performance computing and data observation seismological community. Specifically, on-going and funded initiatives, focusing on computational aspects, wave form inversion and processing large volume data (e.g. ambient noise) are encouraged to participate. The main aim of the workshop is to bring together the international community working on eScience related issues in Seismology to discuss visionary and practical goals and directions. This includes:

- Exchanging information on and coordinating various currently ongoing initiatives in Seismology worldwide;
- Discussing and exchanging ideas between seismologists, computer scientists and outside experts to investigate innovative and relevant technological developments and directions;
- Engaging the UK seismological and eScience community;
- Investigating relevant options that broaden seismological analysis within a multidisciplinary geoscience environment.

The format of the workshop will be structured around a series of presentations together with focused discussion groups.