

Foreword

The inter-Disciplinary Underground Science and Technology (i-DUST) conference held in Apt (France) from June 8 to June 11, 2010, is the third conference of a cycle whose objective is to promote small- and medium-scale underground science. The 2010 i-DUST conference dealt with multi-physics environmental Research and Development, experimental methodology, numerical modelling, metrology and instrumentation developments in the following fields:

- Fluids and Multiphysics Couplings in Fractured Porous Rocks: from Borehole Testing to Multiphase Flow, Underground Storage and Fault Stability Processes.
- Water resources and reserves and more generally hydro-geophysical studies concerning fluid flow characterization across the soil and weathered zone, the unsaturated porous and fractured zone and the aquifer and springs.
- Large dynamics, high sensitivity magnetometry and more particularly studies concerning the seismo-electromagnetic coupling, the Earth's magnetic field, space weather, ...
- Applied Physics including radioactive environment characterization for geophysics and electronic reliability application.
- Borehole instrumentation.
- Sensor technology development and testing.

The number of participants reached about 80 people, coming from Canada, the United States, Australia, South Africa, Germany, Portugal or France. This corresponds to a sharp increase with respect to the previous conferences. It shows the growing interest of underground inter-disciplinary science to understand and solve contemporary issues related to the Earth, its atmosphere and near-Universe. To promote and follow these research activities, we proposed from this conference to give access, whenever possible, to the slides and videos of the talks of i-DUST 2010. You will find also the peer-reviewed papers for some of the presentations. We hope they will be of interest for your activities.



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