

## **Three questions for Hedi Sellami Head of the Department**

### **What are the special features of the Earth and Environment Sciences department ?**

The department consists of the Higher Institute for Engineering and Environmental Management (ISIGE), dedicated to teaching, and the Geosciences department, a research and teaching unit which research activities deal with three main areas :

- i) the management of underground resources (mineral resources, energy, heat)
- ii) the characterization of the underground space to promote its use, in particular for energy and waste storage
- iii) the analysis of anthropogenic environments (water and soil pollution ...).

The department participates in teaching in the Civil Engineers cycle (field geology, options, introductory courses to Multidisciplinary integrative project (MIG), the Act of Undertaking) as well as in continuous training dedicated to the management of mineral resources and in specialized masters devoted to the environment and sustainable development.

### **What were the achievements in 2014 ?**

In relation to the three main areas mentioned above, the Geosciences department emphasizes and manages many cross-disciplinary scientific themes with its six research teams. In the field of underground movement monitoring, the Department has developed a new approach that couples probabilistic and geophysical models to better locate and interpret seismic events induced by the disruption of deep rocks. The Department has continued its work on reactive transport modelling with new industrial applications, especially in the field of uranium mining by geochemical drainage.

Beyond the production of new scientific results, the Department has heavily invested in the organization of scientific events. The Geosciences department organized the 10<sup>th</sup> International Conference dedicated to environmental applications of Geostatistics (GeoEnv2014) and actively participated in the management of the scientific symposium "Natural Resources and Environment" organized by Mines-Télécom Institute.

### **What are the plans or ambitions for the Department in 2015 ?**

Many new projects will be conducted about the development of non-conventional mineral and energy resources and about the sustainable management of water resources. The year 2015 will be among others the year of the start of new projects related to the development of mineral resources, to the development of innovative methods for the exploitation of geothermal energy, and to the development of new approaches to environment monitoring. These projects will appeal to all scientific disciplines of the Department. The ambition of the Department is to continue its contribution to scientific, technical, economic and social debates about issues related to the management of natural resources, the role of the underground in the energy transition and the environmental issues.