

UMR 5275 - UGA / CNRS-INSU / IRD / IFSTTAR / USMB

Faculty: UFR Sciences et Montagne

PhD school: Earth Science, the Universe and the Environment (TUE) + secondary attachment to other PhD schools in mechanics, physics and applied mathematics

FIELDS OF TRANSVERSAL SKILLS

Fundamental Science, Earth sciences and Environment • Mountain studies, Tourism, Sport, Health

KEY WORDS

*Geology • Geophysics • Geochemistry • Tectonics
• Faults • Natural hazards • Geodesy • Seismology
• Volcanoes • Geomagnetism • Mineralogy •
Environment*

SECTORS

*Geological and mining resources • Mountains
• Natural hazards • Energy • Pollution control •
Observations*

PRESENTATION

Created in 2011, ISTERre brings together 102 researchers in Earth Science from Université Grenoble Alpes, under the supervision of two universities – Joseph-Fourier University and Université Savoie Mont Blanc – and three organisations: CNRS, IRD and IFSTTAR. Its aim is to understand the geophysical, geochemical and geological processes at the centre of the planet, tectonics and erosion of the mountains.

RESEARCH THEMES

ISTerre's research work is centred on eight themes:

- The Earth's core and its magnetic field
- Using seismic waves to image structures
- The geophysical operation of volcanoes
- How tectonic faults work
- Analysis and geochemical and mineralogical development of rocks
- Telluric hazards (terrain movements, earthquakes, volcanoes...)
- The deformation of the earth's crust
- The formation and evolution of mountains

KEY DATA*

- **25** researchers and professors (USMB, CNRS & IRD)
- **4** administrative and technical staff
- **13** PhD students and **1** post-doctoral student
- **1** professor emeritus from the universities
- **13** research directors

* Chambéry team academic year 2014-2015

SPECIFIC EQUIPMENT AND EXPERTISE

- Geophysical observations (seismology, positioning, radar, electromagnetism...)
- Chemical and mineralogical analysis of rocks
- Imagery data processing
- Analogical laboratory experimentation
- Digital modelling of complex natural systems
- Expertise on natural hazards
- On-site missions, in France and the southern countries

NETWORKS / PARTNERSHIPS

Academic cooperations

- Auvergne-Rhône-Alpes Region
- Conseil Savoie Mont Blanc
- ANR
- ESRF
- Europe - ESF
- Department of ecology and equipment (IFSTTAR)
- French Ministry of foreign affairs (IRD)
- IRSN

Industrial collaborations

- EDF
- Total
- ANDRA
- Shell
- CGG veritas
- AREVA

RELATIONS INTERNATIONALES

Exchanges and partnerships with researchers from the South (IGP-Peru, Ingemmet-Peru, IG-Equator, CNRSL-Beirut, CRAG-Algiers, CVGHM-Indonesia...)

- Hosting students on MEEES European Masters courses
- Hosting around twenty visitors from abroad every year