

Understanding Deep Crustal Processes

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Instrument

Graduate Summer/ Winter program

Description

An intensive four-day course on petrologic processes in the deep Earth's crust will be organized, with emphasis on melting in the lower crust, granitoid magmatism, geochemical differentiation and crustal rheology. Researchers at UNIL and UniPD possess complementary scientific expertise in the disciplines of the geology, petrology, geochemistry and mechanics of the deep crust of the Earth. By joining forces, we will be able to cover most of the coupled processes occurring during partial melting at high temperatures, exploring its thermodynamics and geochemistry, as well as the rheology of melt extraction and mobilization of granitic magmas.

Activity

One main objective of this four-day program is to harvest common research interests and personal connections between researchers of the two departments to seed joint projects and co-supervision of current and future research students (MSc and PhD).

Additionally, the proposed intensive course will enable early career researchers to create an international network of peers and senior scientists with expertise in their core field of research.

Last but not least, the course aims to expand the knowledge of the participants keeping a common objective (lower crust) but expanding the approaches, methodologies and parameters to investigate it.

The relevance of the project is manifold. The main aspect is the training action, which is addressed not only to early stage researchers of UNIL and UniPD, but to participants who will attend online. Our experience has shown that small expert meetings and seminars like the one proposed have become milestones in the career of early-stage researchers by building a network of scientific and personal relationships among peers and by providing contacts with future mentors or supervisors.

**Potential for
follow-up
activities**

In the short term:

1. direct collaboration among early-stage participants on the specific areas of research. PhD (and other) students attending the winter program will be enabled to collaborate with scientists of the teaching staff, starting formal or informal relationships of joint co-tutorship between UniPD and UNIL.
2. exchange of both staff and students is foreseen, with short visits at the partner institutions focused at supporting the specific teaching and research needs of students who attended the intensive course.

In the medium-long term:

1. strengthening of scientific relationships at staff level, with the start of joint projects involving co-supervision of Master and PhD students;
2. attempt to raise additional funding from the Swiss National Science Foundation. Obtaining funds for the current project will increase chances of joint applications for funding by SNSF;
3. possibility of making joint UniPD-UNIL summer/winter graduate programs a periodic action to be repeated every two-three years.