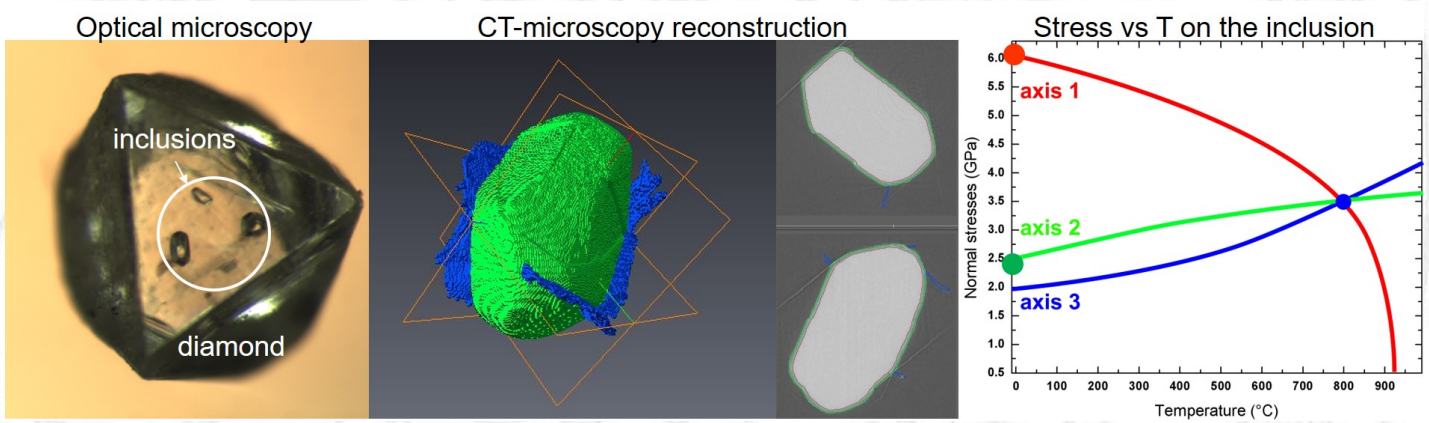
Università degli Studi di Pavia
Computational Mechanics & Advanced Materials Group - DICAr

SEMINAR

Earth science meets technology: from paleo-subduction to material sciences

In the framework of the ERC project TRUE DEPTHS (n. 714936 to M. Alvaro), the investigation of the residual stresses distribution in a context of continental crust subduction, will be carried out with a newly developed instrument that combines X-ray diffraction (single/poly-crystal) and micro-tomography, hereafter tomodiffractometer.
The major advantage of such multi-analytical instrument is the possibility to measure three-dimensional residual stress distribution on host-inclusion systems and determine 3D crystallographic orientation of the phases directly on pristine cylindrical micro-core samples directly drilled on hand-size samples. High spatial resolution (e.g. 0.3µm depending on the surrounding matrix), combined with the possibility to uniquely identify phases makes it one of the most advanced multi-analytical instrument available for fast, detailed and reliable sample characterization currently available for home labs.
This instrument finds many applications not only in the field of Earth Sciences but also material science and engineering.



Dr. Matteo Alvaro
Department of Environmental Sciences
University of Pavia

February 10th, 12:00pm
DICAr – Hydraulic
Meeting Room (ground floor)
Via Ferrata, 3 – Pavia