



Thursday 14 December 2023

11am (Rome time) - Aula 4, Dip. di Scienze della Terra, Torino

Or: [via webex at this LINK](#)



Working with hot rocks: challenges and new opportunities



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

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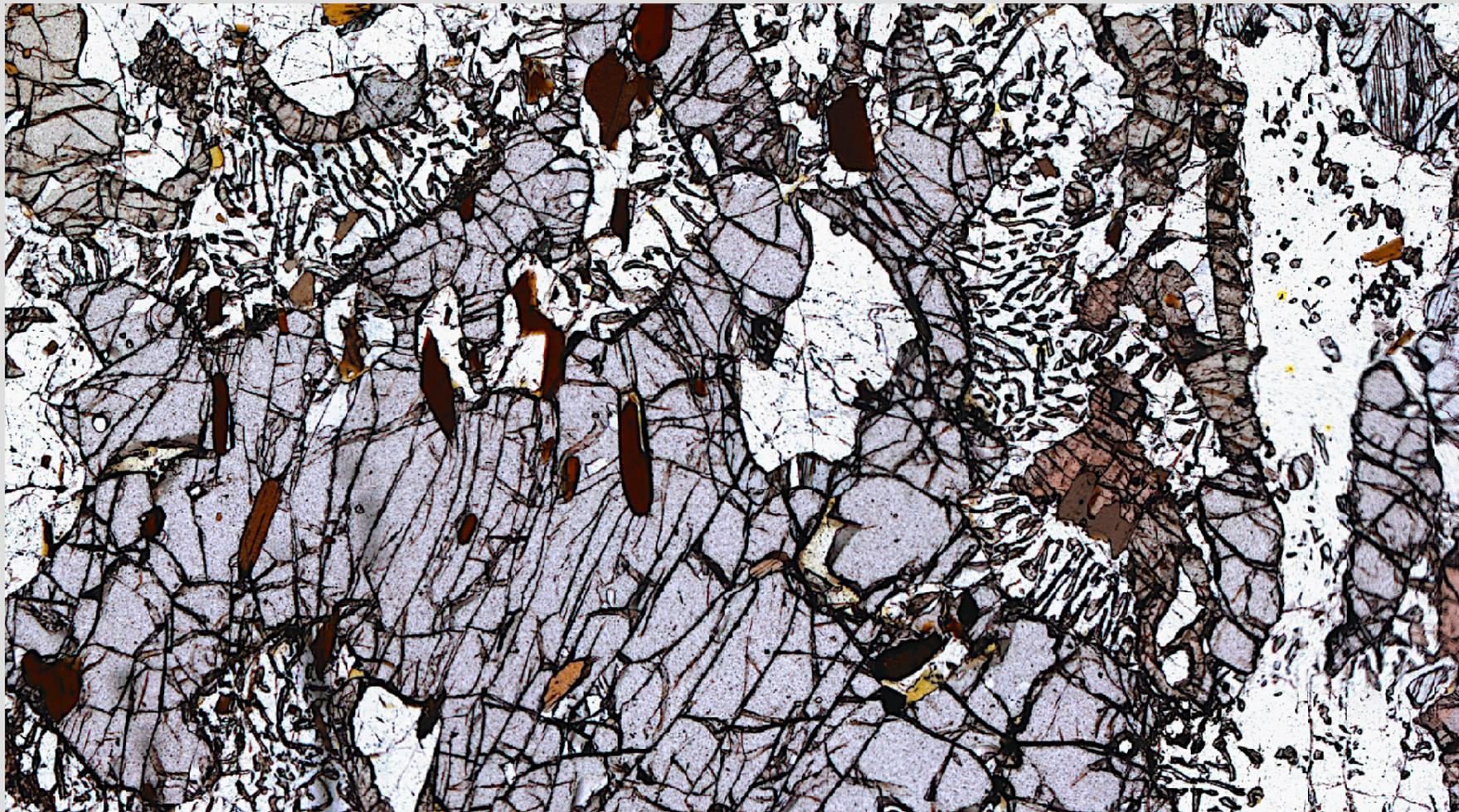
Department of Geosciences, University of Padova



DIPARTIMENTO
DI GEOSCIENZE

Granulites and migmatites are important constituents of the roots of continents and represent key rocks to investigate mass and heat transport and to interpret the evolution of orogenic belts and interactions between crust and mantle. The integration of detailed microstructural studies with geochronology, geochemistry and phase equilibrium diagram investigations allowed to solve important issues related to hot rocks. However, the continuous improvement of existing and new analytical and computational techniques has demonstrated that the thermodynamic equilibrium paradigm cannot explain all the complexity of continuously evolving systems such as migmatitic and granulitic rocks. Trying to reconcile models and nature is often a tricky task for petrologists and geochronologists. For example, there is currently no consensus concerning the mechanisms and timescales by which extremely hot crustal conditions are achieved.

In this seminar, I will elucidate the main challenges related to the reconstruction of the thermal and temporal evolution of high-grade metamorphic terranes and I will present opportunities for new research insights.



The Speaker

Omar Bartoli is Associate Professor of Petrology at the Department of Geosciences, University of Padova. He is specialized in the study of crustal anatexis and anatectic granites. He combines field and microstructural observations with in situ geochemical data and computational and experimental petrology.

