Dipartimento di Scienze della Terra
Sapienza, Università di Roma

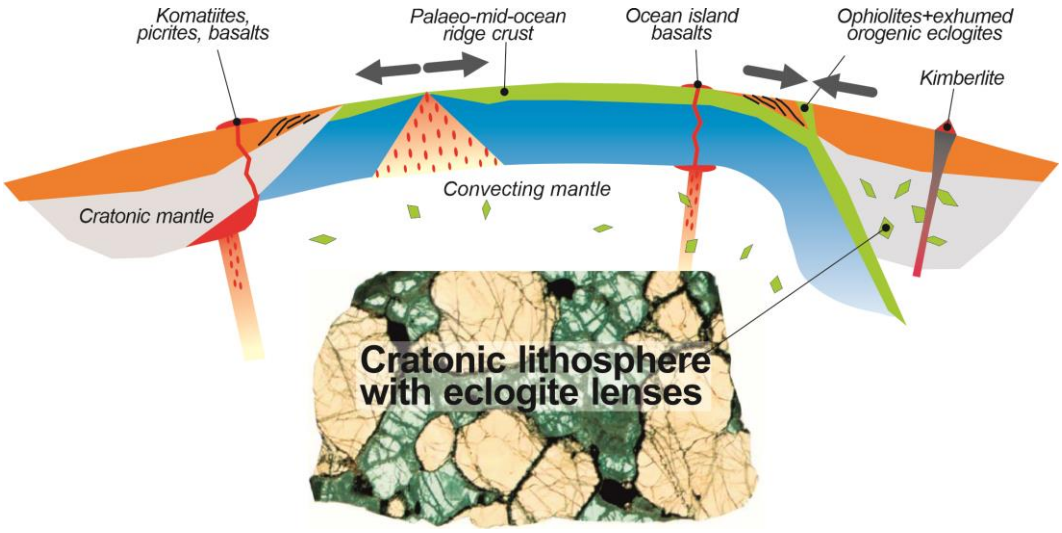
Piazzale
A. Moro, 5
Roma

Mercoledì 7 giugno 2023 ore 10:00

Aula Lucchesi – Edificio CU005 (Mineralogia)

Visiting Researcher - Sonja Aulbach

"Properties of Earth's mantle and subduction zone processes through time: The message from eclogite xenoliths"



Program

10.00 Sonja Aulbach
Institute of Geosciences, Goethe-Universität, Frankfurt am Main, Germany.

Link Google meet per seguire da remoto: https://meet.google.com/jme-fgxc-rrq

Properties of Earth's mantle and subduction zone processes through time:
The message from eclogite xenoliths.

Kimberlite-borne xenolithic ("mantle") eclogite has been studied for many decades. Given their origin as mid-ocean ridge basalt and gabbro, such samples can provide insights into the convecting mantle source from which their igneous protoliths were derived, and into the conditions during their subduction back into the mantle. Such applications are contingent on a good grasp of each individual sample's multistage petrogenesis, comprising differentiation processes in the ocean floor, seafloor weathering, metamorphic reactions in palaeo-subduction zones, and overprint during their later extended residence in the lithospheric mantle. I will discuss what we can learn from eclogite xenoliths about the temperature and redox evolution of the convecting mantle from which their protoliths formed, about the supercontinent cycle from their age distribution, and about redox conditions and interactions with slab-derived liquids during their subduction in Archaean and Palaeoproterozoic time.

Dipartimento di Scienze della Terra – Aula Lucchesi