



**University of Genova**

**Department of Earth, Environmental  
and Life Sciences**

**Doctorate Course in Earth and  
Environmental Science and  
Technology**

Università degli Studi di Genova



Dottorato in Scienze e Tecnologie  
per l'Ambiente e il Territorio

### **Earth Science Curriculum**

#### Research Theme n. 2

<p>Titolo (Italiano): Stratigrafia, facies e (bio)diversità dei depositi prossimali della trasgressione oligocenica in Liguria e Piemonte meridionale: Calibrazione biostratigrafica e ricostruzioni paleoambientali ad alta risoluzione.</p> <p>Title (inglese): Timing, facies and (bio)diversity of the shallow marine deposits of the Oligocene transgression in Liguria and southern Piedmont: coupling biostratigraphic data and high resolution palaeoenvironmental reconstructions.</p>
<p>Tutor (name and email) and eventual co-tutor</p> <p>Antonino Briguglio: <a href="mailto:Antonino.briguglio@unige.it">Antonino.briguglio@unige.it</a></p> <p>Michele Piazza: <a href="mailto:michele.piazza@unige.it">michele.piazza@unige.it</a></p> <p>Andrea Baucon: <a href="mailto:andrea.baucon@unige.it">andrea.baucon@unige.it</a></p>
<p>Program description including the formation program abroad (Inglese)</p> <p>The Oligocene sedimentary deposits cropping out in Liguria and southern Piedmont are often characterized by continental to riverine to shallow marine facies and record a transgression event that moved westward from its oldest deposits north of Genova, to its end near Cuneo. They are lithologically very diverse and encompass from poorly sorted conglomerates to carbonate biohermes/biostromes. These latter can be at time rich in larger foraminifera, calcareous algae, cnidarians, and ichnofossils with different degrees of preservations. Whilst cnidarians, ichnofossils and red calcareous algae are important facies fossil, larger foraminifera have also a strong biostratigraphic potential. This project aims to use larger foraminifera as index fossils to create a chronostratigraphic map that reconstructs the dynamic of the shallow marine deposits in Liguria and southern Piedmont. The project will also use ichnofossils, abundant in the study area: they can help the reconstruction of precise palaeogeographic and palaeoenvironmental dataset.</p> <p>Since all deposits are limited within the Oligocene and might reach the base of the Miocene, the use of Sr stable isotopes to constrain the geochronology of the sites might be a valuable option. For this reason, abroad mobility will be important at various institutions (Univ. Lausanne, Copenhagen Nat.Hist. Museum, Univ. Bonn) where the applicant can get deep insights into various laboratory techniques regarding geochemistry, applied biostratigraphy and precise palaeogeographic datasets.</p>
<p>Financial support: The tutors have sufficient financial support to dedicate to the candidate research, travel plans as well as result dissemination</p>
<p>Tutor's publications (max 3)</p> <ul style="list-style-type: none"><li>• Briguglio, A., Vannucci, G., Bruzzone, C., Piazza, M., 2021, Stratigraphic development of a late oligocene reef complex under strong fluvatile influence in the tertiary piedmont basin (liguria, NW Italy). <i>Micropaleontology</i>, 2021, 67(4), pp. 315–339;</li><li>• Briguglio, A., Crobu, S., Lutaj, E., Piazza, M., 2021, Integrated stratigraphy from a transgressive upper Oligocene section in NW Italy. <i>Stratigraphy</i>, 2021, 18(2), pp. 123–137</li></ul>

- Baucon, A., Bednarz, M., Dufour, S., Felletti, F., Malgesini, G., Neto De Carvalho, C., Niklas, K.J., Wehrmann, J., Batstone, R., Bernardini, F., Briguglio, A., Cabella, R., Cavalazzi, B., Ferretti, A., Zanterl, H., McIlroy, D. (2020). Ethology of the trace fossil Chondrites: form, function and environment. *Earth Science Review*, 202, 102989.