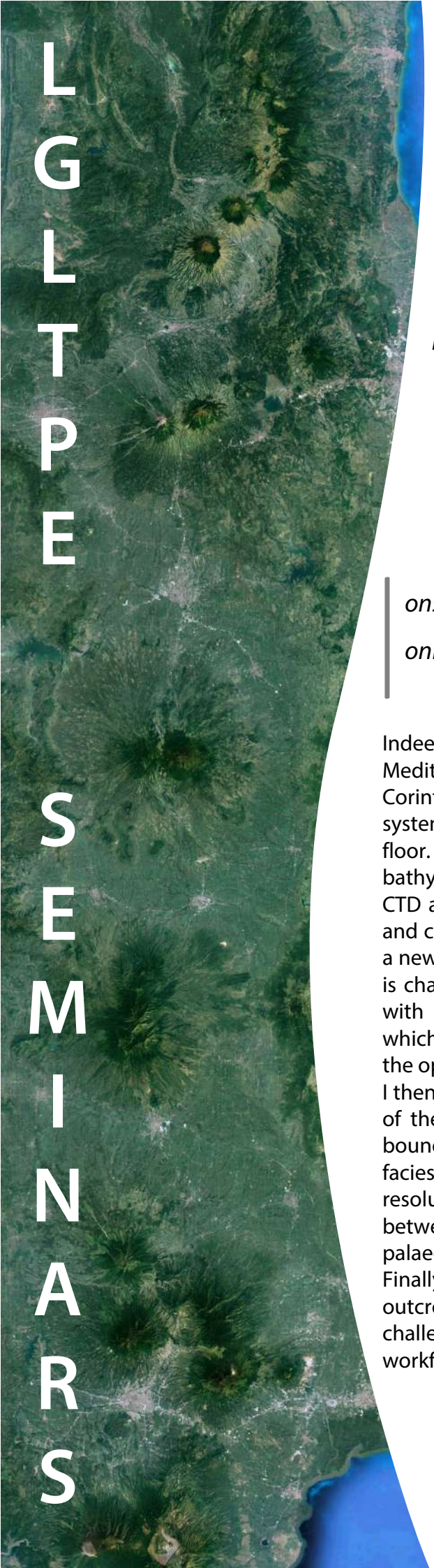

LGLTPE SEMINARS

Romain Rubi

Université de liège

How bottom currents can impact early-rift sediments? The unexpected case study of the Corinth rift, Greece'

Mon, 10th October 2022 @ 14h

onsite: *Doua, Salle Fontannes*

online: *https://univ-lyon1.webex.com/univ-lyon1-en/j.php?MTID=mda85f0c3e87094823bab90a2d6c9efdc*

Indeed, it is quite a challenge to explore this problematic in its microtidal Mediterranean context! I invite you to dive to the strait waters between the Corinth Gulf and the Mediterranean Sea to discover a powerful present-day system with high velocities currents up to 2 m/s totally re-shaping the sea floor. Thanks to a combined oceanographic survey with high resolution bathymetry (MBES), seismic profiles, in situ current measurements (ADCP), CTD and sediment cores, this tidal-strait system documents complex pool and crest morphologies without any 3D or 2D tidal dunes. Thus, it provides a new end member to the tidal-strait depositional model. This end member is characterized by a re-localization of the erosion, bypass and deposition with respective facies and it illustrates the key role of the internal tides which are w located at the boundary between a confined deep-basin and the open-sea.

I then encourage you to compare this present-day system with the outcrop of the Corinth's canal which consists in a 6 km long cliff located at the boundary between the Gulf and the Aegean Sea. Here we can detail the facies, facies associations and large-scale architectures supported by a high-resolution photogrammetric model. This approach allows to bring the gap between the field- and the seismic-scale and enhance the palaeogeographies of the rift during its connections with the sea.

Finally, we will discuss about the deep water early syn rift sediments both outcropping and on seismic lines. Indeed, many observations are challenging the accepted "gravity-driven" model. Last but not least this workflow is now supported by a (paleo)oceanographic model.

Laboratoire de Géologie de Lyon
Terre planètes Environnement
Université Claude Bernard Lyon 1
ENS DE LYON
UNIVERSITÉ JEAN MONNET SAINT-ÉTIENNE