UNIVERSITÀ DI PAVIA

Corso di Dottorato in Scienze della Terra e dell'Ambiente

1 . Project title

The role of structural inheritance in the Alpine inversion of the Ligurian Alps case-study

2. Proposer

Surname	MAINO
Name	MATTEO

3. Research Unit

Surname	**Name**	**Institution**
SENO	SILVIO	DSTA

4. Key words
(Max. 5 – at least 2)

Structural inheritance – Field mapping – Alps – Rifting tectonics -

5. Abstract
(Max.1.500 characters with spaces)

Deformation acting on heterogeneous rock media generates complex fault/fold patterns, which may result in intricate structures with different styles and orientations. A classic example of such complexity occurs in the collisional belts and it is often explained only through a discretization in multiple deformation phases that refer to change in far-field stress. However, clear evidences of changing tectonic stress are often lacking. On the other hand, pre-existing fault structures, paleo-morphology, sudden change in rock composition, which likely develop during continental rifting may be preferentially reactivated during subsequent contractional tectonics, generating 3D complexities. The project proposes to address fieldwork on a key sector of the Briançonnais margin of the Ligurian Alps, in the framework of the project CARG – Foglio Albenga. In the Albenga area, a complete succession of units marks the transition between the internal Briançonnias and the outermost oceanic sedimentary covers (i.e. the Helminthoid Flysch). The present-day architecture of this belt is complex and cannot be resolved through a classic multi-phase deformation within a fold-and-thrust belt model. A significant impact of the pre-Alpine structural inheritance is presumed. The final aim of the project is to unravel the geological and structural evolution of this sector of the Alpine belt.