PhD Course in Earthquake and Environmental Hazards - EEH

Scuola superiore «G. D'Annunzio» doctoral cycle XXXV

Luca Carbone

Born in San Benedetto del Tronto il 19-07-1991
Scientific interest: Geology, Geophysic and Seismology.

Graduated in **Geological Sciences** in April 2015 at «G. D'Annunzio» University in Chieti, thesis «**Use and Application of the R AMR (Revised Accelerating Moment Release) method for the study of the southern California seismicity**» supervisor **Angelo De Santis.**

Graduated in **Geological Sciences and Technologies** in April 2019 at «G. D'Annunzio» University in Chieti, thesis «**Physics - statistical analysis of seismic swarms for seismotectonics: worldwide context and detailed case studies from the central Apennines of Italy**» supervisor **Rita de Nardis.**

Presentation of a poster in the scientific conference in memory of G.Pialli «**Background seismicity vs earthquake clustering: quantitative analyses of case studies in central Italy for seismotectonics purposes**» Workshop in memory of G. Pialli Perugia 9 10 july 2019.

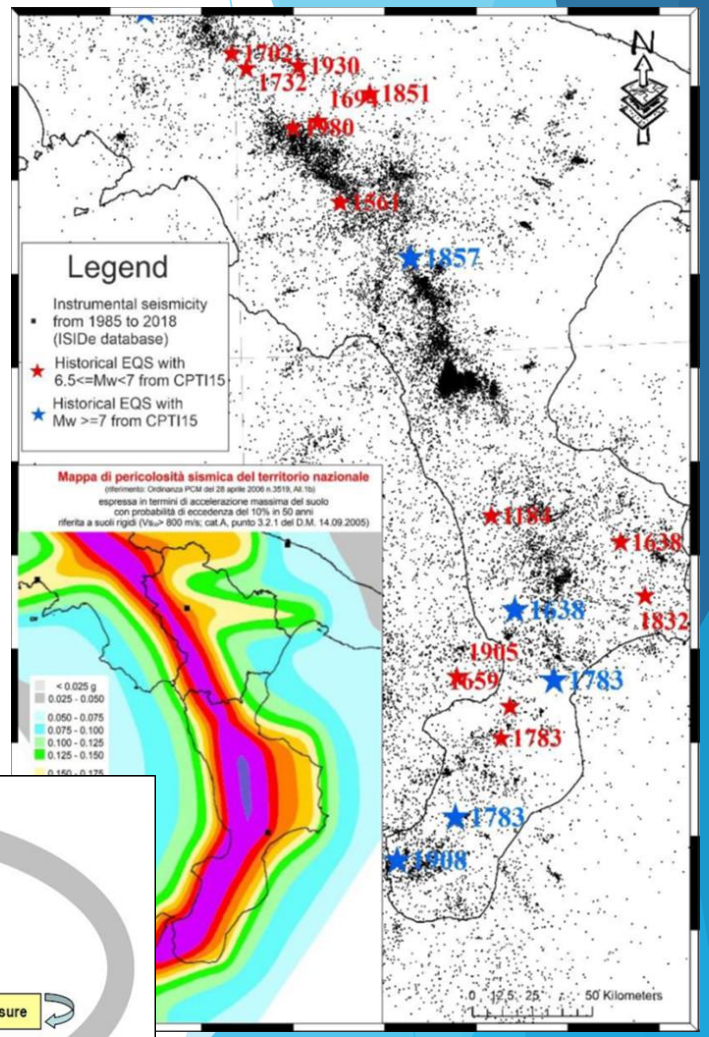
PHD THEME: AN INTERDISCIPLINARY APPROACH TO LONG-TERM AND ACTIVE TECTONIC DEFORMATION FOR SEISMIC HAZARD PURPOSES

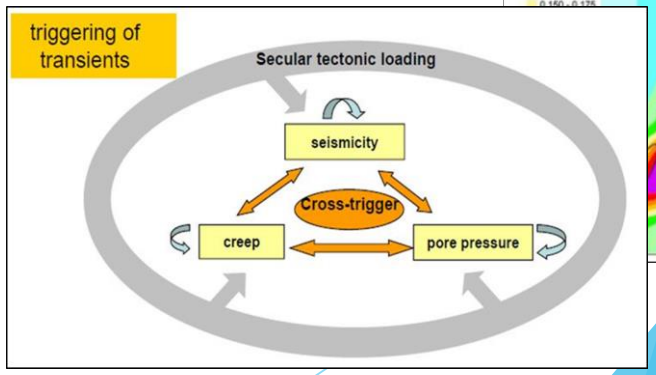
Research Topic:

The role of **seismic swarms** and **repeating earthquakes** in complex seismotectonics context: genesis and spatio-temporal analysis **linked to active fault systems for seismic hazard purposes**

Tutor: Rita de Nardis

- A systematic analysis of the **principal seismogenic structures** of the area considering **geological surface data** and **seismological data**
- Application of **declustering algorithm** to study the distribution of the **background seismicity**.
- Individuation of **seismic swarms** and **repeatings earthquakes**, analysis and characterization of their main features.
- The clustered seismicity will be used to **characterize the single structure** in term of release of deformation and level of stress.





AIMS FOR 2020:

- Partecipation to an Italian and international congress
- Submission of a paper on TES in central Apennine.