

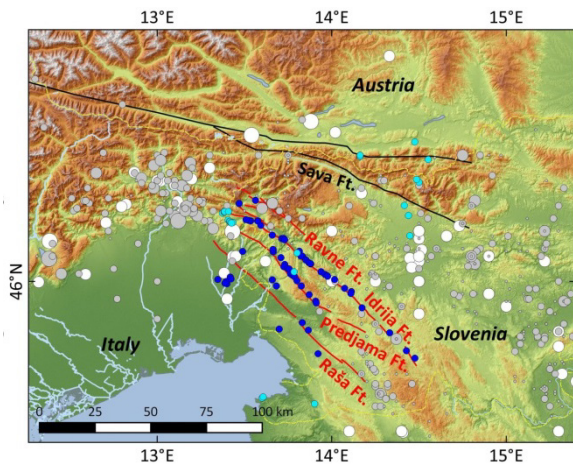
MSc. thesis available:

Active tectonics & karst in Slovenia - a remote sensing approach

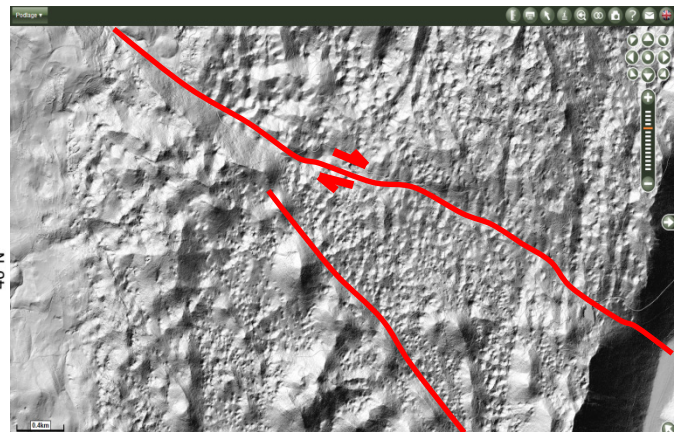


Background:

The Dinarides in Slovenia host a number of active right-lateral strike-slip faults. They accommodate the motion of the Adriatic Plate with respect to Eurasia. Deformation rates in this area are low. As a result, the surface traces of active faults are not always clear. An additional problem is the karstification of limestones, which strongly modifies the landscape.



The study area in Western Slovenia.



The Predjama Fault runs through karstified terrain.

Research question:

Does the occurrence of karst dolines correlate with active faults? Can we use remote mapping of dolines to find active fault traces?

Approach:

- Create a training data set by manual mapping of dolines. **Free 1 m LiDAR data are available for entire Slovenia.**
- Use (supervised) remote sensing classification techniques and/or image analyses tools to map doline density, size/depth, orientation, ellipticity.
- Use statistical analyses to check if known active faults correlate with the doline pattern.
- See if hitherto unknown faults may be present in the study area.

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