**Implication of Flow in the Lower Crust on Strain Localization**

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A major difference between oceanic and continental crust is the capacity of the lower crust to flow. This has been the motto of the research group centered around Genia Burov over the last 15 years and I will try to summarize the results of number of numerical models run in different geodynamic setting to tackle the question of the rheology of the lithosphere and crust at the scale of plate tectonics.

I will insist on how apriori very complex numerical models have helped the community to build our intuition on geodynamics processes and change the way of thinking the interactions between mantle process and crustal processes which are the core of plate tectonic and beyond.

I will finally discuss what have we learn about the rheology of the lithosphere so far and how we intend to pursues evgeni’s fundamental contribution to the field.