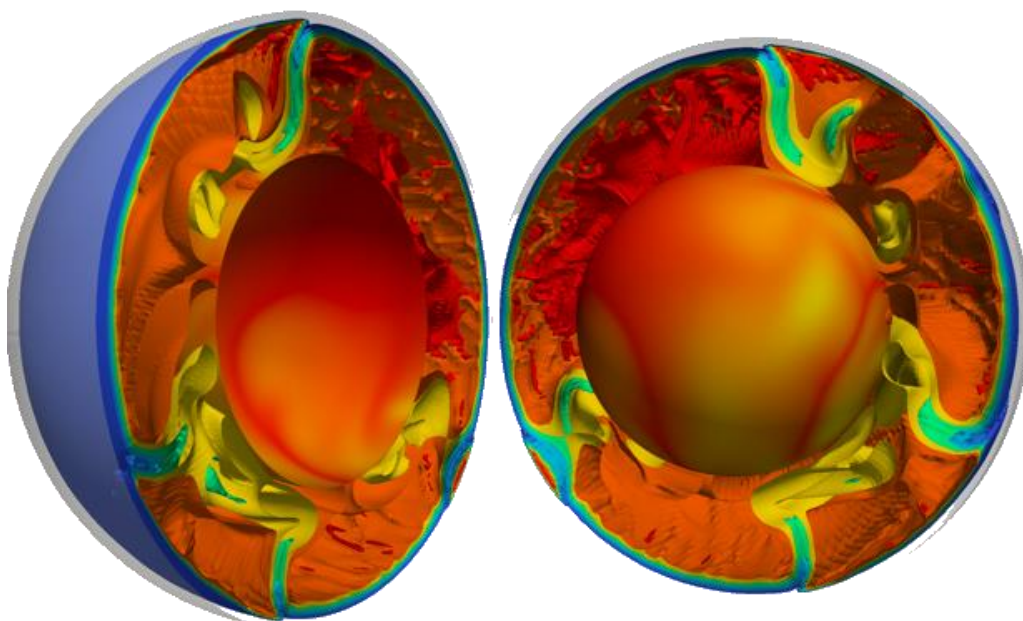


Introduction to Geodynamic and Landscape evolution **Numerical Modeling**

17-19.5.2022 live and online (2CFU)



Part I - Lithosphere Dynamics – 17.5.2022 Seminars by

**Sierd Cloetingh, Valentina Magni, Aleksandr Koptev, Laetitia Le Pourhiet
Alessio Lavecchia, Pietro Sternai**

Part II - Computational Geology – 18-19.5.2022 Lectures by **Pietro Sternai**

The course is free but registration is mandatory
Write to pietro.sternai@unimib.it for info and registration

Part I - Lithosphere Dynamics

Day 1 - 17.5.2022 – Seminars (40 min + 20 min discussion), [Room U9-12](#)

9:30-10:30 – **S. Cloetingh**: *From deep to surface Earth: intraplate deformation and plume-lithosphere interactions*

10:30-11:30 – **V. Magni**: *Modelling subduction zones*

11:30-12:30 – **A. Koptev**: *Geodynamic modelling coupled with geomorphology and paleoclimate*

Lunch break

14:30-15:30 – **L. Le Pourhiet**: *Long term tectonic modeling and data*

15:30-16:30 – **A. Lavecchia**: *Thermal perturbation, mineral assemblages and rheology variations induced by dyke emplacement in the crust*

16:30-17:30 – **P. Sternai**: *Climate-tectonics interactions in a numerical world*

Part II - Computational Geology

(Matlab licence and/or Fortran/C compilers, e.g., GCC suite, needed)

Day 2 - 18.5.2022 – Lecture, **P. Sternai**, [Room U9-12](#)

9:30-12:00 – Intro and short review, Continuity Eq.

Lunch break

14:30-17:00 – Finite Differences, Momentum Eq., Advection Eq.

Day 3 - 19.5.2022 – Lecture, **P. Sternai**, [Room U6-30](#)

9:30-12:00 – Landscape Evolution Models, hillslope, fluvial and glacial erosion

Lunch break

14:30-17:00 – Enjoy playing around with fully coupled thermo-mechanical geodynamic and landscape evolution numerical models