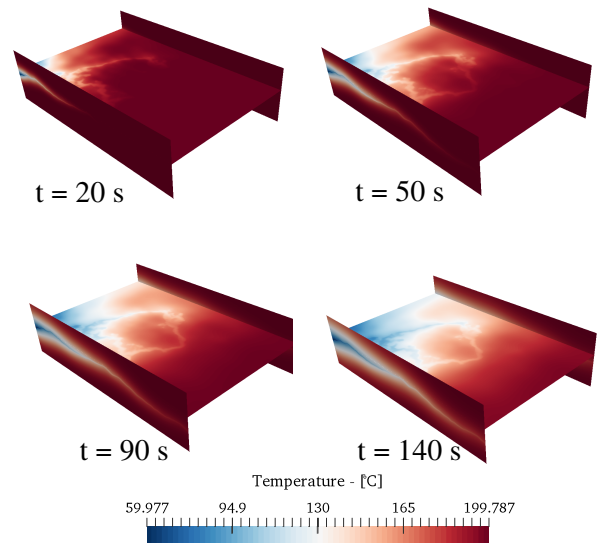


Thermal Modeling and multi-physics analysis in digital sandstones

Background:

Thermal flow simulation in veins within sandstones is a critical area of study in geology focusing on understanding how heat transfer affects fluid movement and mineral transformations in porous rock formations. These simulations are essential for predicting the behavior of hydrocarbons in reservoirs. The effect of heat on sandstone texture evolution is significant; as temperature increases, it can lead to changes in mineral composition and the recrystallization of quartz grains, which in turn affects the porosity and permeability of the sandstone.



Your Tasks:

- Modeling various multi-physics processes involved in geological system.
- Perform sensitivity analysis for different key factors.
- Documentation of results.

Requirements:

For the preparation of the thesis work, foundational understanding in materials science and physics will be beneficial. A keen interest in engaging with numerical simulations, along with a willingness to explore new methodologies and areas of study, is desired.

Your benefits:

- Intensive Supervision and support
- Modern workstations and high-performance computers in work environment
- Productive and dynamic team atmosphere
- Collaborations with international research groups
- Career prospects for early-career scientists

Interested in working with us?

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