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GeoChemFoam, the open-source pore-scale modelling toolbox

Wednesday, 24 May 2023 10:30 (1h 30m)

GeoChemFoam is an open-source toolbox for modelling flow processes in porous media images. It is based on OpenFOAM, the open-source Computational Fluid Dynamics (CFD) toolbox, and includes many additional packages that extend the software to more complex physics, including multiphase reactive transport, heat transfer and mineral dissolution, which are essential for modelling porous media applications such as CO2 storage or geothermal energy. Amongst the most popular capabilities of the toolbox is the potential to simulate flow in micro-porous rocks using the multiscale Darcy-Brinkman-Stokes (DBS) model. The objective of the GeoChemFoam project is to support our own research, foster new and existing collaborations, like the ones we currently have with Columbia University and the University of Tohoku, and to provide students around the world with a simulation platform to advance their own research.

Participation

In-Person

References

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