

## Simulation of two-phase flow in porous media

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The talk will focus on simulation of two-phase Darcy flow in porous media, which are needed, for example, for reservoir simulation and gas geological storage. In such cases the space domains have large dimensions and include geological layers which involve numerical constraints in the mesh grid and in the discretization scheme. As examples of such difficulties, we will consider discontinuous capillary pressure curves, and networks of fractures.