Coupled numerical modeling of multiphase reactive transport and geomechanics

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Résumé

During the last few years, we have developed a prototype software coupling multiphase reactive
transport in porous media and geomechanics.
In our talk, we will outline the features of the different models and recall the principle of the virtual-element method used for solving the poro-elastic model. We will then present our coupling approach and discuss its advantages and limitations. As an illustration, we will present numerical simulations of gas injection and storage operations at field scale and reactive plug flow experiments at the laboratory scale
See the pdf file submitted for the full summary.

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