Title: A phase-field modeling approach of hydraulic fracture in saturated porous media

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Hydraulic brittle fracture is simulated using a continuum porous media model extended by a phase-field modeling approach

The permanent changes of the permeability, the volume fractions as well as the interstitial-fluid flow are taken into consideration.

The fluid pressure fluctuation during crack propagation is obtained

A numerical application to demonstrate the proposed model is also introduced