InterPore2023



Contribution ID: 879

Type: Oral Presentation

Elastic normal fracture deformation in thermoporomechanical media

Monday, 22 May 2023 17:30 (15 minutes)

Many subsurface processes feature mechanically closed fractures elastically deforming in response to stress changes. In cases involving temperature contrasts, such as geothermal reservoirs, these changes are typically due to thermal stresses as well as pore pressure. In turn, changes in hydraulic fracture apertures impact the flow field and thereby also heat transport, resulting in a strongly coupled system of governing equations. We study this interplay drawing on a series of numerical simulations using the fracture simulation toolbox PorePy. The thermoporomechanical system is solved fully coupled in both fractures and matrix, ensuring a rigorous numerical representation of the modelled processes.

Participation

In-Person

References

MDPI Energies Student Poster Award

No, do not submit my presenation for the student posters award.

Country

Norway

Acceptance of the Terms & Conditions

Click here to agree

Energy Transition Focused Abstracts

This abstract is related to Energy Transition

Primary author: Dr STEFANSSON, Ivar (University of Bergen)
Presenter: Dr STEFANSSON, Ivar (University of Bergen)
Session Classification: MS03

Track Classification: (MS03) Flow, transport and mechanics in fractured porous media