



Contribution ID: 345

Type: **Poster Presentation**

Comparison of Pore-network Simulation and Infiltration Experiment Performed on Coarse Sand

Thursday, 2 June 2022 15:15 (1h 10m)

The research focused on the simulation of the previous experiment described by Princ et al. (2020). The relationship between entrapped air content (ω) and the corresponding saturated hydraulic conductivity (K) was investigated for two coarse sands, in the experiment. Additionally the amount and distribution of air bubbles were quantified by X-ray computed tomography.

The pore-network model based on OpenPNM platform (Gostick et al. 2016) was used to attempt simulation of a distribution of the entrapped air bubbles after infiltration. Saturated hydraulic conductivity was determined to obtain the $K(\omega)$ relationship. The results from pore-network model were compared with the results from experiments. The using of special pore network, corresponds to distribution obtained by CT imaging, leads to obtaining satisfying results from simulations.

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Country

Czech Republic

References

Gostick et al. (2016). Computing in Science & Engineering. 18(4), p60-74.
Princ et al. (2020). Water. 12(2), p1-19.

Time Block Preference

Time Block B (14:00-17:00 CET)

Participation

Online

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Track Classification: (MS09) Pore-scale modelling