**MSc. Thesis/ BSc. Thesis/ Projektarbeit Topic**

Multiphase flow in porous media is often simulated using (Stochastic) Invasion Percolation (SIP) models. While many IP model variations exist, a quantitative comparison of these competing models with experiments is lacking. We have developed a comparison method for SIP models to imaging-based gas injection in homogenous soil experimental data.

The successful applicant will contribute to a comparison of the SIP models to imaging-based experimental data in heterogeneous soils.

**Prospective Tasks**

- Familiarizing with SIP model versions (existing codes)
- Familiarizing with a comparison method for model-experiment comparison (existing code)
- Implementing heterogeneities in SIP model (in Matlab)
- Applying the comparison method to the updated SIP models and experimental data.
- Documenting the method and the results

**General Information**

- Advisors: Ishani Banerjee (MSc.), Dr. Anneli Guthke, Prof. Wolfgang Nowak

**Desireable Skills**

- MATLAB, interest/skill in coding
- General understanding of modelling multiphase flow in porous media

**Apply now!**

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