

## Groundwater flow simulation by using DEM and LBM

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### 1. Background and purpose of research

The understanding of the flow of groundwater becomes an important problem in a wide field like the disaster prevention field and the resource field, etc.

It aims at the approach by the numerical simulation in this research though various approaches like the research in the field of the monitor etc. and the experiment on the laboratory scale, etc. are performed for the grasp of the groundwater flow.

### 2. Method of research

Two techniques (Distinct Element Method (DEM) and Lattice Boltzmann Method (LBM)) are used in this research, the deformation of a ground structure is analyzed by DEM and the flow of groundwater is analyzed by LBM. Both parties of the deformation of a ground structure and the flow of the groundwater can be analyzed by chasing the passage of time by this technique.