



Real time numerical simulation of volcanic mudflow and debris flow by cellular automaton method

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Mt. Fuji is the largest duplicated volcano on the Japanese archipelago, and has remained quiet for more than 300 years since the eruption of Hoei in 1707 AD.

At the vast mountain foot of Mt. Fuji many people's living and economic activities are carried out, and there are infrastructure / lifelines including important transportation networks that greatly influence the living base and Japan's economic activities.

As sediment movements accompanying volcanic eruption, there are debris flow after ash fall, snow melting type volcanic mud flow and lava flow, etc. There are also sediment movement disasters such as heavy rainfall and slash avalanche.

We will show the methods and the results for real time simulation of these sediment movement phenomena using Cellular Automaton (CA) and Multi Agent System (MAS). In Japan every year shallow landslides due to heavy rainfall is occurring frequently. We will also show the results of debris flow by this simulation method.