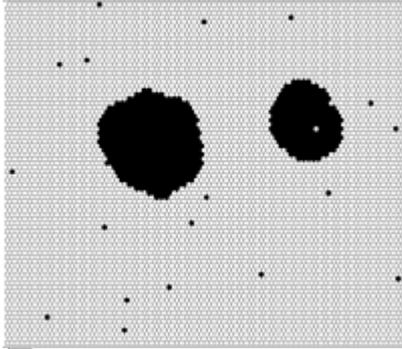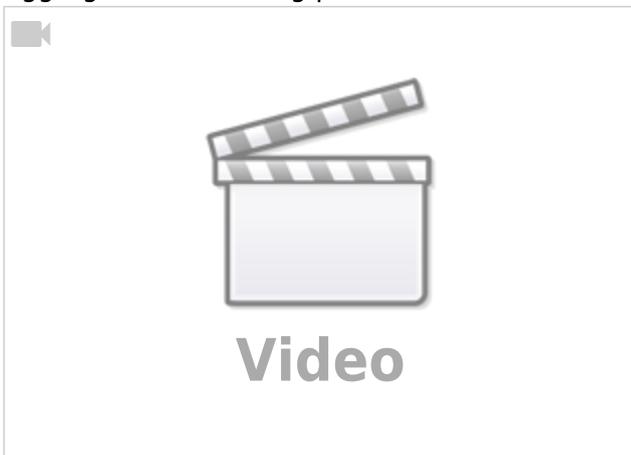# Miscellaneous models

Particle Aggregation: FlipCells

Aggregation of moving particles

Introduction

This models approximates an interacting particle system (IPS) model of particle aggregation. Each black dot represents a particle that moved due to spin flips with random neighbors. The particles perform random walks in which the probability of moving depends on the number of neighboring cells.

Model description

Each lattice site (white or black) counts the number of particles (black neighboring sites) using a NeighborsReporter.

The probability of movement of each particle is made dependent on its number of neighbors by using it in the Condition of FlipCells. When this condition is satisfied, the particle changes positions with a random neighboring lattice site.

A PopulationReporter is used to return the fraction of isolated black particles. This number is logged and plotted using the Logger.

Things to try

- Change the parameter p.

Model

h ParticleAggregation.xml |h

```
extern>http://imc.zih.tu-dresden.de/morpheus/examples/Miscellaneous/Particle
Aggregation.xml
```

In Morpheus GUI: Examples → Miscellaneous → ParticleAggregation.xml

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