AGH University of Science and Technology

Multiscale Modelling

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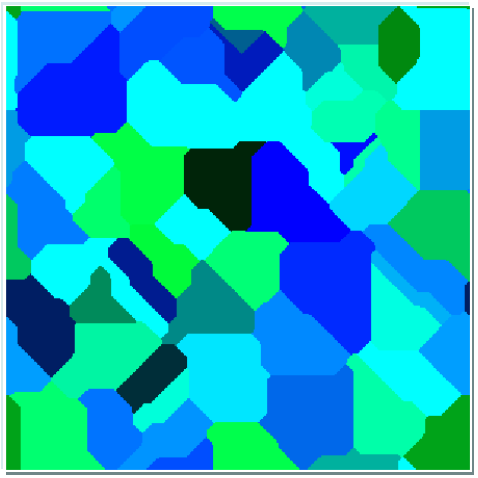
Classes calendar

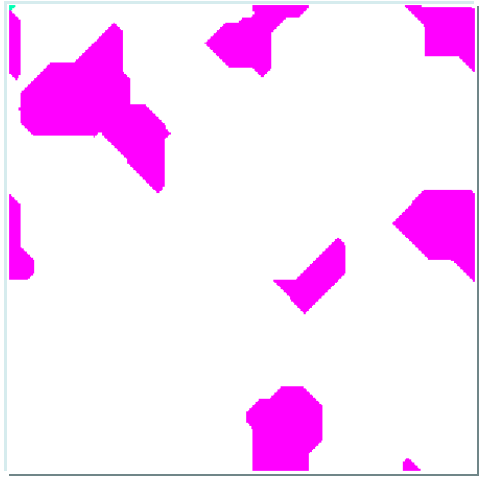
	Issues
1	Organizational class - simple grain growth CA + visualization
2	Microstructures export/import to/from txt files, pictures.
3	Modification of cellular automata grain growth algorithm- inclusions (at the beginning/end of the simulation)
4	Modification of CA grain growth algorithm - influence of grain curvature
5	Modification of CA grain growth algorithm - substructures CA
6	Modification of CA grain growth algorithm - boundaries coloring
7	**Reports 1st part**
8	Monte Carlo grain growth algorithm
9	**Modification of MC grain growth algorithm - substructures CA, MC**
10	MC static recrystallization algorithm - energy distribution
11	MC static recrystallization algorithm - nucleation
12	MC static recrystallization algorithm - growth
13	**Reports 2nd part**
14	Final degree

Dual phase

Step 3: Grain growth CA

Step 1: Simple grain growth CA

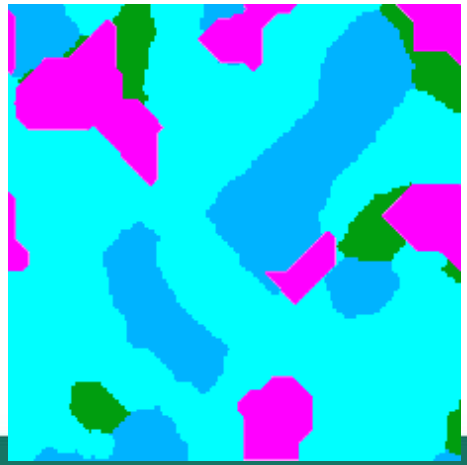




or

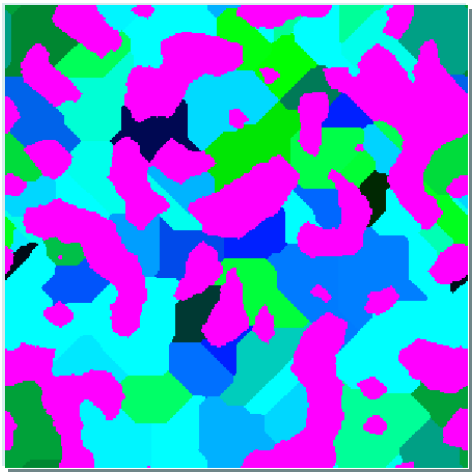
Step 3: Grain growth MC

Step 2: Grains selection

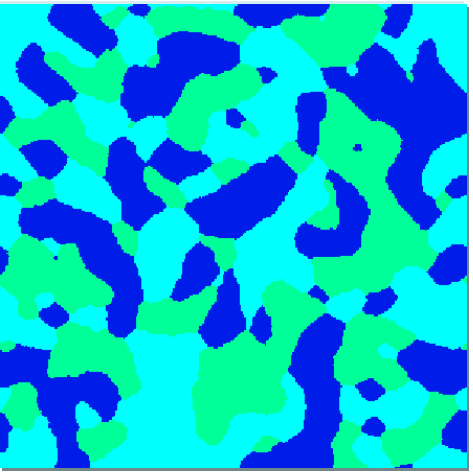


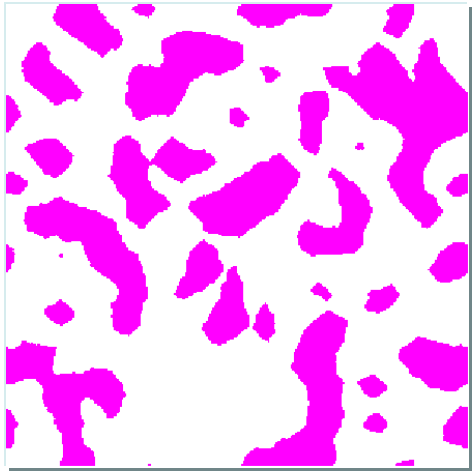
Dual phase

Step 3: Grain growth CA



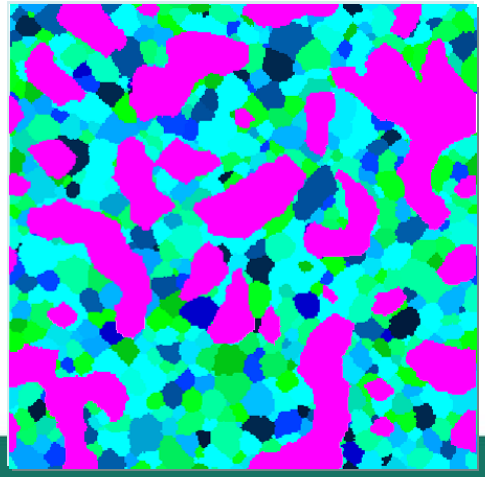
Step 1: Simple grain growth MC





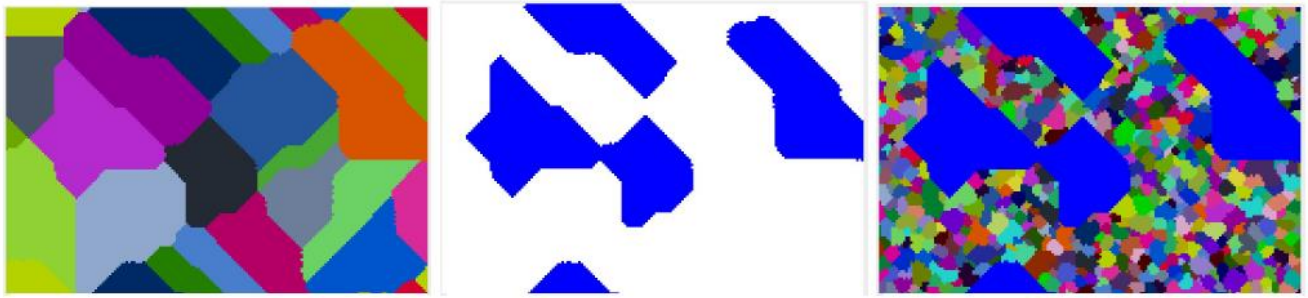
or

Step 3: Grain growth MC

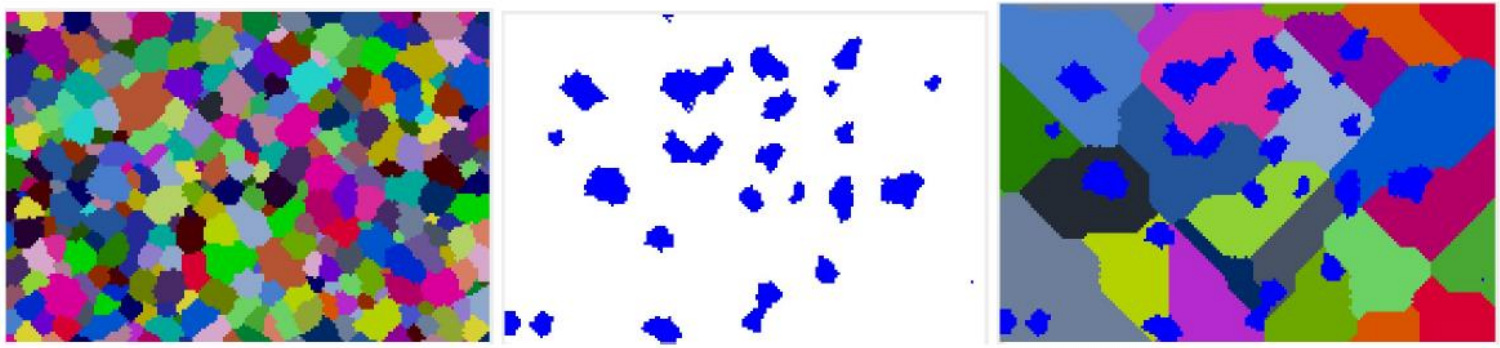


Step 2: Grains selection

Examples



CA - > MC



MC -> CA