TREMOL

Preprocessing

Definition of input parameters

- Size of the domain Ω
- Size of the asperity and effective area
- Algorithm parameters such as strength and load-transfer value

Workflow

Generation of domain Ω with $N_x \times N_y$

Generation of asperity size and domain R_{asp}

Location of R_{asp} via coordinates of the epicenter

Each cell is defined as either background or aspertiy cell

First step of the simulation ($k = 1$, $\delta = 0$):

- Uniform distribution of stress load/ rupture probability to each cell
- Strength allocation to background and asperity cells (plus variation therein)

FBM algorithm

Post-processing

Synthetic catalog

Statistical analysis

(e.g., GR law, MOL, Hurst exponents, etc.)

Generation of output plots and files