

PrepMultiSim

Aim

ShellPrepMultiSim.sh prepares a set of MaBoSS run, according to different modifications of a generic model (mutations, parameter sensitivity, etc.)

How to run the script

ShellPrepMultiSim.sh is a shell script that uses a perl library, PrepMultiSim.pm. Launching ShellPrepMultiSim.sh is done with the following command:

```
source ShellPrepMultiSim.sh File.pmbss
```

ShellPrepMultiSim.sh must be in the working directory. Executable MaBoSS and PrepMultiSim.pm must be accessible (either as readable files or accessible within environment variables).

The file “File.pmbss” contains the following fields

- MABOSS = Executable_name;
- BND= bnd_file.bnd;
- CFG= cfg_file.cfg;

The file File.pmbss can contain the optional fields:

- INIT_COND=[Previous_model.bnd,Previous_model_probtraj.csv,#line_number];

From a previous run of MaBoSS that uses the file “Previous_model.bnd” and produces a trajectory file “Previous_model_probtraj.csv”, PrepMultiSim uses the line “#line_number” of this trajectory file as an initial condition in the .cfg file(s) in the project folder.

- MUT= First_node Second_Node ...;
- COMB_MUT=#number_of_possible_combined_mutation;
- VAR_SENS=[\$External_variable1,Suffix_to_add] [\$External_variable2,Suffix_to_add] ...;
- COMB_VAR_SENS=#number_of_possible_combined_variable_sensitivity;
- TRAJ_TABLE=yes;
- STAT_TABLE=[yes,#probability_threshold];

Outputs

According to the file “File.pmbss”, a project folder “File” is created, which contains all necessary inputs and a shell script “File.sh”. Launching this shell script runs (multiple) MaBoSS and creates output tables (if specified).