

## First part

A numerical exercise, chosen with your instructor, using (i) Python or (ii) Python with Numpy or (iii) Scilab or (iv) Maxima or (v) two or three of them, in a comparative way

- .Content: a few line of code (10-30) using a matrix or a vector, a function, an input from a file
- .in the case of Maxima, using the 'ev' function
- .the use of classes is encouraged, but not mandatory
- .the application and the code have to be briefly explained, with one-two pages of comment

## Second part

A simulation application, chosen with your instructor, using NetLogo (or StarLogo TNG or SLAPP)

.starting from an economic or social problem or from an existing model

.to search for the argument, look at the models (i) prepared by the other students, (ii) published by the Community of the NetLogo users, (iii) reported locally in the NetLogo library

.the final homework will contain: an introduction, the presentation of the model, with code and comments, the experiment plan and the results

## Third part

Discussion of one or more papers, chosen with your instructor and related to your simulation work, both domain related or methodological ones

## Organization and timing

It is possible to work alone or in small groups;  
suggested max number of components: 3

Timing: wait until you have a sufficient knowledge of Python or Python-Scilab-Maxima and of NetLogo, then:

- discuss with the instructor about the numerical exercise and start doing it
- discuss with instructor about the subject of the simulation part and start doing it
- the preparation of the full work is assisted with 4-5 meetings, each of about one hour
- the papers for the third part are mainly coming from our Cmap