

Computational domain configuration

We here suppose a regular cartesian grid. We set the geometrical configuration, the place and the size of the domain as well as the mesh size.

For a sequential computing

```
&Domain_Features Geometric_Layout          = 0,          !--- Option
value for a cartesian geometry
                Start_Coordinate_I_Direction = 0.0 ,        !--- Start
coordinate along the I-direction
                End_Coordinate_I_Direction   = 12. ,        !--- End
coordinate along the I-direction
                Start_Coordinate_J_Direction = 0.0 ,        !--- Start
coordinate along the J-direction
                End_Coordinate_J_Direction   = 2.0 ,        !--- End
coordinate along the J-direction
                Start_Coordinate_K_Direction = 0.00 ,        !--- Start
coordinate along the K-direction
                End_Coordinate_K_Direction   = 0.00 ,        !--- End of
the domain along the K-direction
                Cells_Number_I_Direction     = 384 ,        !--- Number
of cells along the I-direction (not counting the ghost cells)
                Cells_Number_J_Direction     = 128 ,        !--- Number
of cells along the J-direction (not counting the ghost cells)
                Cells_Number_K_Direction     = 1,           !--- Number
of cells along the K-direction (not counting the ghost cells)
                Regular_Mesh                 = .true. /      !--- The grid
is regular for any direction
```



Even though the geometry is 2D, the third direction must be set. Just one cell must be set for the K-direction.

For OpenMP or MPI parallel computing

(Not for the release SUNFLUIDH_EDU).

The code SUNFLUIDH can perform OpenMP or MPI computing (if it has been compiled with the appropriate options, see [How to configure the makefile](#)). The user can configure a parallel computing from the data file by setting the appropriate variables of the previous namelist. All details for our example are given [here](#).

From:

<https://sunfluidh.lisn.upsaclay.fr/> - **Documentation du code de simulation
numérique SUNFLUIDH**

Permanent link:

https://sunfluidh.lisn.upsaclay.fr/doku.php?id=sunfluidh:tuto1_domainfeatures

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