

Mesh generator for sunfluidh

In the code Sunfluidh, the spatial discretization of equations is carried out on a cartesian staggered grid.

When the grid is regular (cell size is identical over the computational domain), the code build the mesh itself. The user can also build a non-regular grid for sunfluidh by using the in-house software [meshgen_doc Meshgen](#).

More regular is the mesh ore accurate is the simulation. Several basic rules should be respected as it is possible.



- The cell size ratio between two adjoined cells does not generally overcome 5%, especially in the strong gradient areas.
- For every cell, the aspect ratio should be :
 $0.2 \leq \frac{\Delta x_j}{\Delta x_i} \leq 5$ with

From:

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

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https://sunfluidh.lisn.upsaclay.fr/doku.php?id=sunfluidh:sunfluidh_meshgen&rev=1512223199

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