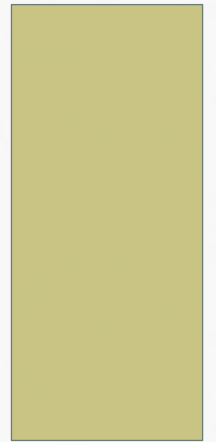


# INTERFACE FOR CFD GROUND MODELS

ALBERT GANCEDO VILA



# INDEX

- **IMPORTING A TERRAIN**
- **MESHES**
- **BODY FITTED MESH**
- **BODY FITTED CASES**
- **EMBEDDED MESH**
- **FURTHER STEPS**

Several

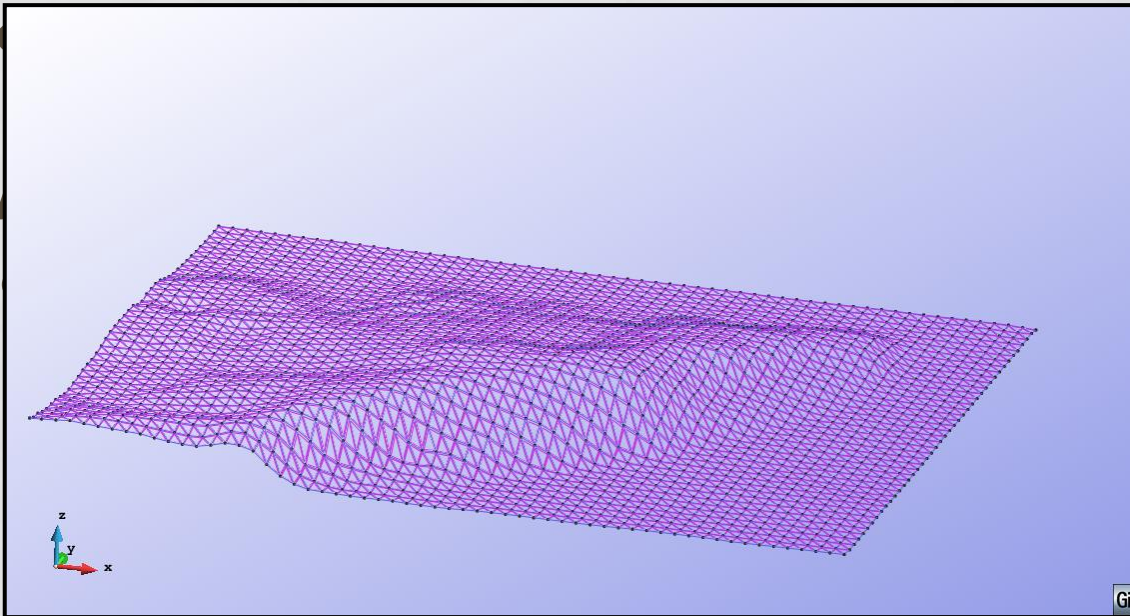
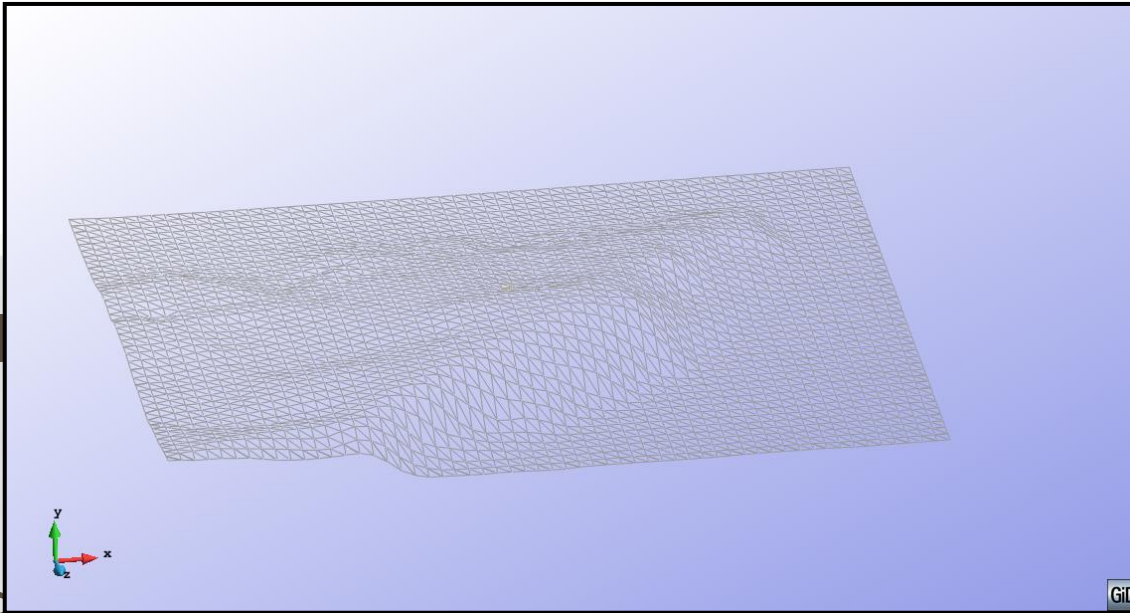
gráfico

- **MESH**

- Need to be controlled by geometry
- Check

- **GEOM**

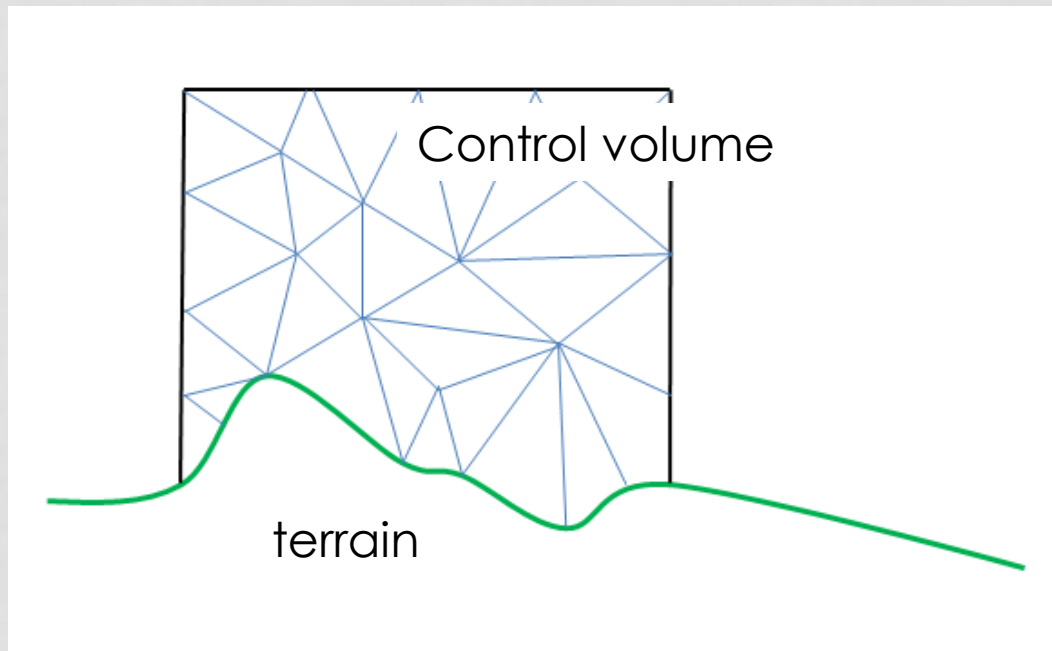
- Check



# BODY FITTED MESH

- **BODY FITTED**

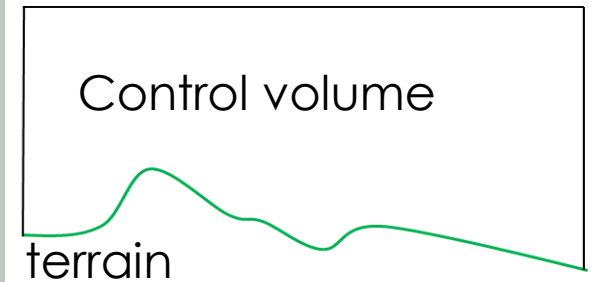
- Terrain is well defined
- Control volume by the base and 5 sides of a parallelepiped
- All points belong to fluid (or boundary at least)



# BODY FITTED CASES

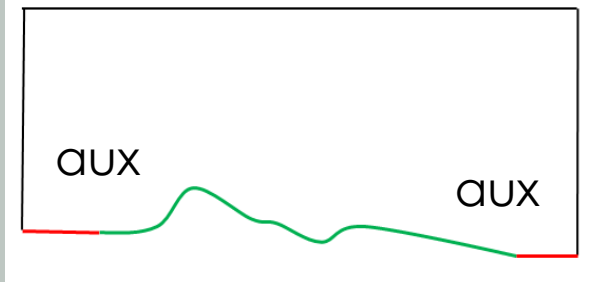
- **EXACT BASE**

- Geometry fits with Control Volume
- Extrusion of the corners



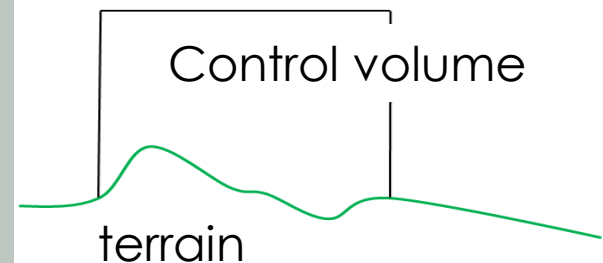
- **AUXILIAR TERRAIN**

- Auxiliar surfaces for intersecting the Control Volume



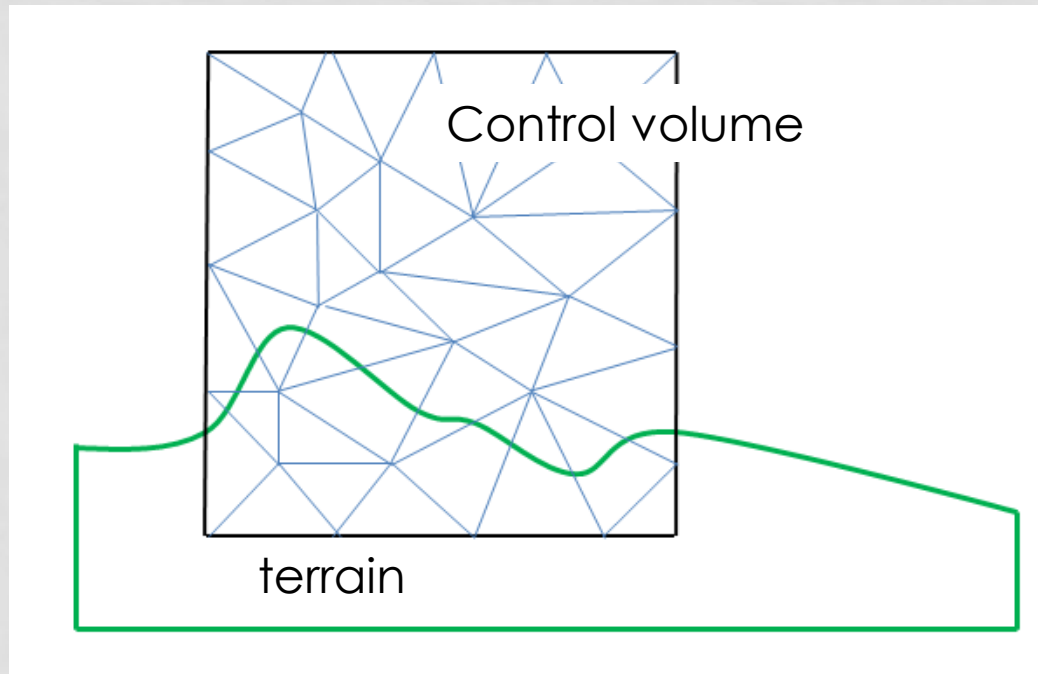
- **CUT TERRAIN**

- Control Volume smaller than terrain
- Control Volume intersects terrain



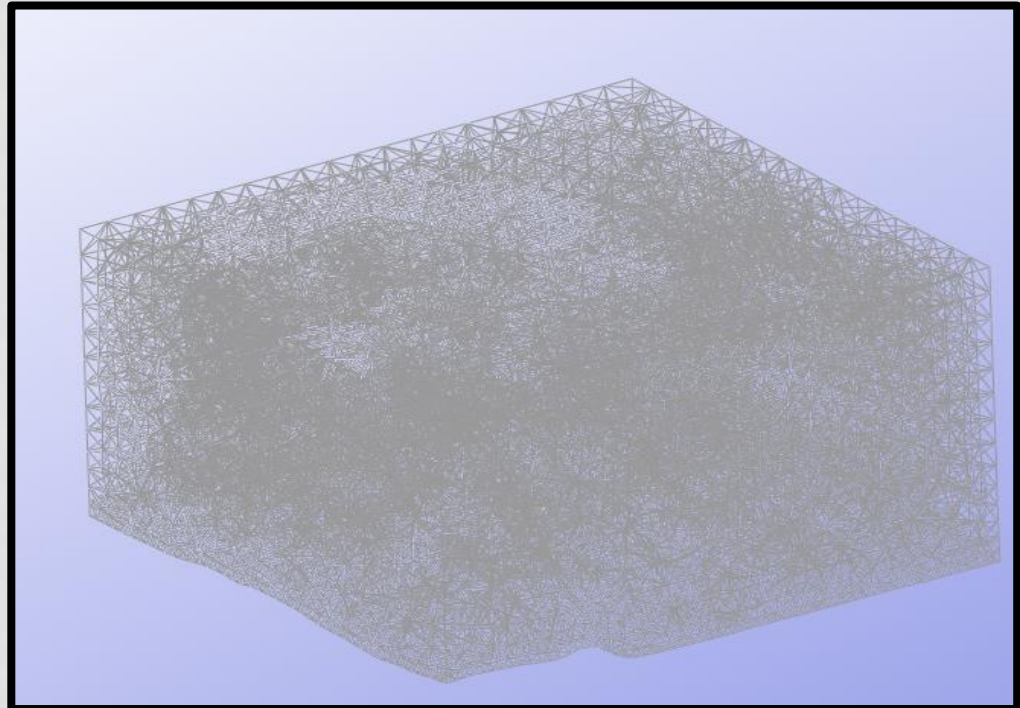
# EMBEDDED MESH

- Does not respect the shape of the terrain
- Detection of the domain of the points
- Easy to implement



# FURTHER STEPS

- Location and properties of the Control Volume
- Properties of the mesh
- Full automation of the calculation
  - User interface
  - Flow properties



Thanks for your attention