Générer un maillage du triangle stéréographique standard et y tracer un champ scalaire

```
neper -T -n 1 -domain "stdtriangle(10)" -dim 2 -o stdtri
neper -M stdtri.tess -cl 0.04 -mesh2dalgo fron -statnode x,y
awk '{print $2}' stdtri.stnode > data
neper -V stdtri.msh -showelt1d all -dataelt1drad 0.001           \
         -dataelt2dedgerad 0.0005 -cameraangle 3.4 -print stdtri \
         -datanodecol scal:data -dataeltcol from_nodes           \
         -datanodescale 0.0:0.1:0.2:0.3:0.4                      \
         -print stdtri-col
```

Convertir un maillage périodique pour Zebulon

```
neper -T -n 10 -dim 3 -per 1 -oriformat geof -o polyper
neper -M polyper.tess -for geof
```

```
from collections import defaultdict

def do_mpc(per_filename):
    pairs = np.loadtxt('per_filename', usecols=[0,1])
    pairs_dir = np.loadtxt('per_filename', usecols=[2,3,4])
    pair_counter = 0
    cells = ""
    bc_u = []
    mpc = defaultdict(list)
    for idx, n in enumerate(pairs):
        mpc[n[1]].append(n[0])

    for slave, master in mpc.iteritems():
        cells += "**nset cell{:0d}\n".format(pair_counter)
        if len(master)==1:
            n = [slave, master[0]]
            cells += "{:.0f} {:.0f}\n".format(n[0], n[1])
            bc_u.append('**mpc2 {:.0f} U1 {:.0f} U1\n**mpc2 {:.0f} U2 {:.0f}
U2\n**mpc2 {:.0f} U3 {:.0f} U3'.format(n[0], n[1], n[0], n[1], n[0], n[1]))
        else:
            cells += " ".join(["{:.0f}".format(i) for i in master]) + "
{:.0f}\n".format(slave)
```

```
            bc_u.append('**mpc1 cell{:0d} U1\n**mpc1 cell{:0d} U2\n**mpc1
cell{:0d} U3'.format(pair_counter, pair_counter, pair_counter))

        pair_counter += 1

    with open('cells_geof', 'w') as cell_geof:
        cell_geof.write(cells)

    with open('mpc_for_inp', 'w') as mpc_file:
        mpc_file.write('\n'.join(bc_u))

    return '\n'.join(bc_u)
```

Référents

- Romain Quey - Aurélien Villani