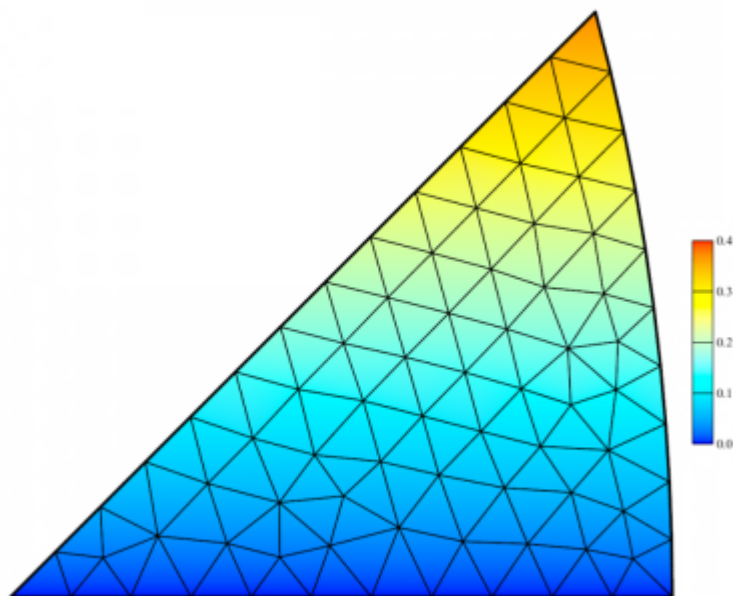
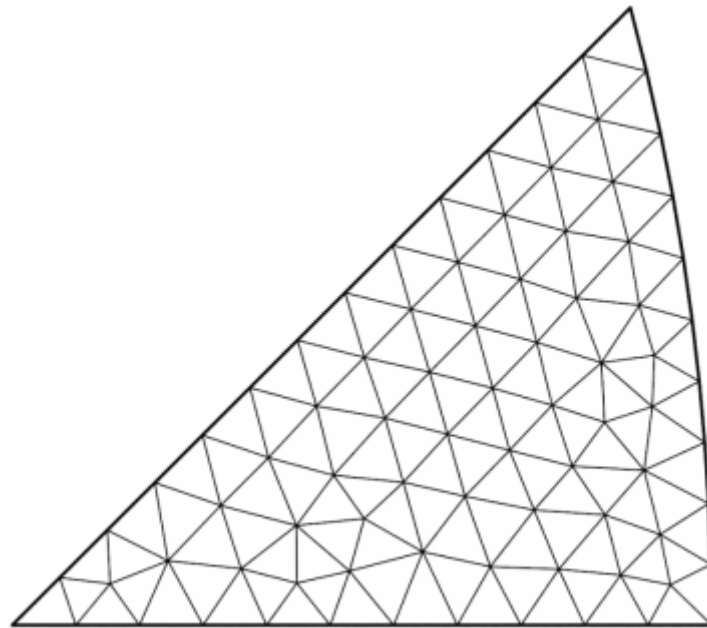


Générer un maillage du triangle stéréographique standard et y tracer un champ scalaire

```
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 -showeltld all -dataeltldrad 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
```

Convertir un fichier .per en format Zebulon

```
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

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Last update: **03/07/2018 13:14**

