

In [2]:

```
import os
import numpy as np

#testCase
baseFolder = "E:\\UoS\\UoS Y4\\GDP Tesla Turbine\\Simulation Code\\xyCFD\\"

xList, yList = [], []
with open(baseFolder + 'VRadGap1', 'r') as f:
    for line in f:
        line = line.strip()
        dataPoints = line.split()
        try:
            x, y = [float(x) for x in dataPoints]
            xList.append(x)
            yList.append(y)
        except:
            pass
```

In [96]:

```
def postProcess(*args):
    numberFilesRead = len(args)
    baseFolder = "E:\\UoS\\UoS Y4\\GDP Tesla Turbine\\Simulation Code\\xyCFD\\"
    bigX, bigY = [], [] # x y collections
    for i in range(len(args)):
        fileName = args[i]
        xList, yList = [], []
        with open(baseFolder + fileName, 'r') as f:
            for line in f:
                line = line.strip()
                dataPoints = line.split()
                try:
                    x, y = [float(x) for x in dataPoints]
                    xList.append(x)
                    yList.append(y)
                except:
                    pass
            bigX.append(xList)
            bigY.append(yList)
    bigX, bigY = np.array(bigX)/np.amax(bigX), np.array(bigY)
    aveX, aveY = np.average(bigX,0), np.average(bigY,0)
    return bigX, bigY, aveX, aveY
# average Function
def rakeProcess(args):
    baseFolder = "E:\\UoS\\UoS Y4\\GDP Tesla Turbine\\Simulation Code\\xyCFD\\"
    fileName = args
    storeDict = {}
    with open(baseFolder + fileName, 'r') as f:
        previousString = ""
        for line in f:
            line = line.strip()
            dataPoints = line.split()
            try:
                xyList = [float(x) for x in dataPoints]
                try:
                    storeDict[previousString].append(xyList)
                except:
                    if xyList == []:
                        pass
                    else:
                        storeDict[previousString] = [xyList]
            except:
                previousString = line[16:-2] #extracting rake line string only
    for i in storeDict:
        storeDict[i] = np.array(storeDict[i])
    return storeDict
```