Universidad Politecnica Salesiana

Simulacion

Numeros PseudoAleatorios

In [26]:

```
import cpuinfo
n = float(cpuinfo.get_cpu_info()['count'])
vel = float(cpuinfo.get_cpu_info()['hz_advertised_friendly'].split(" ")[0])
flops = n*vel*8
mflops=int(flops*1024)
```

In [27]:

```
cpu_uso=psutil.cpu_percent()
ram=psutil.virtual_memory().total
ram_uso=psutil.virtual_memory().used
cache = psutil.virtual_memory()
```

In [38]:

```
valores =[453, mflops, cpu_uso, ram, ram_uso, cache,  185925, 21041, 8265, 261119, 20127]
valor = [23,12]
def gPos(d):
    aux1 =0
    aux2 =0
    if digs%2 !=0:
        aux1 = int(d/2)
        aux2 = int(d/2)+1
    else:
        aux1 = int(d/2)
        aux2 = aux1
    return aux1,aux2

def cNume(iters, val, digs):
    semilla = int(val)
    aum = gPos(digs)

    for i in range(iters):
        xn2= semilla**2
        lon = len(str(xn2))
        ui = str(xn2)[int(lon/2)-aum[0]:int(lon/2)+aum[1]]
        rn = int(ui)/10**digs
        print(i, " ",semilla," ",xn2, " ", lon, " ",ui, " ", rn)
        semilla=int(ui)
    print("   ")
```

In [39]:

```
iters = 16
digs = 4
for i in valor:
    print("i: ",i)
    cNume(16, i, 4)
```

```
i:  23
0   23   529   3   9   0.0009
1   9   81   2   1   0.0001
2   1   1   1   1   0.0001
3   1   1   1   1   0.0001
4   1   1   1   1   0.0001
5   1   1   1   1   0.0001
6   1   1   1   1   0.0001
7   1   1   1   1   0.0001
8   1   1   1   1   0.0001
9   1   1   1   1   0.0001
10   1   1   1   1   0.0001
11   1   1   1   1   0.0001
12   1   1   1   1   0.0001
13   1   1   1   1   0.0001
14   1   1   1   1   0.0001
15   1   1   1   1   0.0001

i:  12
0   12   144   3   4   0.0004
1   4   16   2   6   0.0006
2   6   36   2   6   0.0006
3   6   36   2   6   0.0006
4   6   36   2   6   0.0006
5   6   36   2   6   0.0006
6   6   36   2   6   0.0006
7   6   36   2   6   0.0006
8   6   36   2   6   0.0006
9   6   36   2   6   0.0006
10   6   36   2   6   0.0006
11   6   36   2   6   0.0006
12   6   36   2   6   0.0006
13   6   36   2   6   0.0006
14   6   36   2   6   0.0006
15   6   36   2   6   0.0006
```

In [ ]:

```
```