

In [1]:

```
import pandas as pd
```

In [2]:

```
import pandas as pd  
re11 = pd.read_excel("LL1.xlsx")  
re21 = pd.read_excel("MI1.xlsx")  
re31 = pd.read_excel("DC1.xlsx")  
re41 = pd.read_excel("T1.xlsx")  
  
re = pd.merge(re11, re31, how = 'outer')  
ret = pd.merge(re21, re41, how = 'outer')  
re = pd.merge(re, ret, how = 'outer')  
writer = pd.ExcelWriter('outputRE.xlsx')  
re.to_excel(writer, sheet_name='Sheet1')  
writer.save()
```

In [6]:

```
import pandas as pd
import matplotlib
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline

#we read the table and create correlation matrix
re = pd.read_excel("outputRE.xlsx")
corr_s = re.corr(method = 'spearman')
corr_k = re.corr(method = 'kendall')
print('Spearman')
print(corr_s)
#we save the matrix into file
writer = pd.ExcelWriter('outputCORRD.xlsx')
corr_s.to_excel(writer, sheet_name='Spearman')
corr_k.to_excel(writer, sheet_name='Kendall')
writer.save()

#we build a plot using matplotlib ( google for matshow)
fig1 = plt.figure(1)
ax1 = fig1.add_subplot(111)
cax_s = ax1.matshow(corr_s, interpolation='nearest')
fig1.colorbar(cax_s)

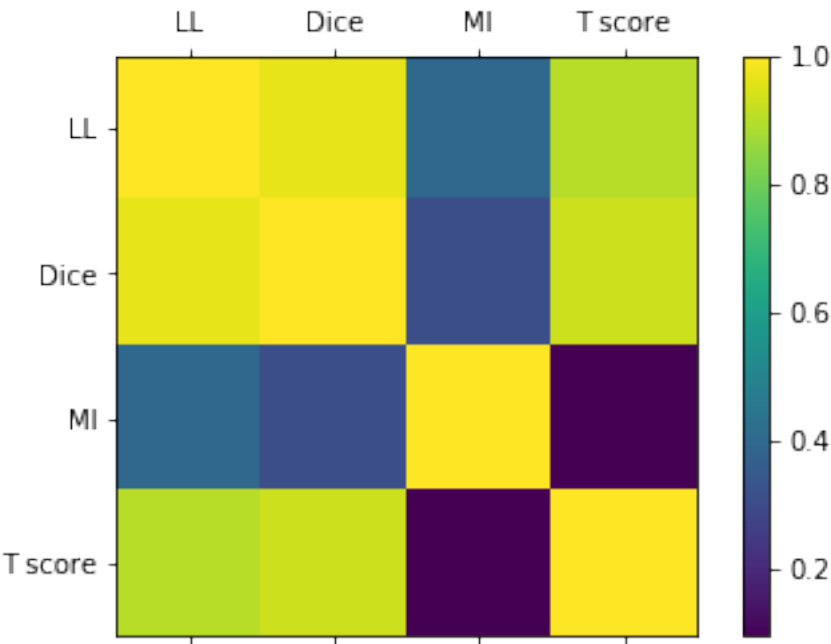
#we add labels and print
alpha = ['LL', 'Dice', 'MI', 'T score']
ax1.set_xticklabels(['']+alpha)
ax1.set_yticklabels(['']+alpha)
plt.show()

print('Kendall')
print(corr_k)

#same for the second plot
fig2 = plt.figure(2)
ax2 = fig2.add_subplot(111)
cax_k = ax2.matshow(corr_k, interpolation='nearest')
fig2.colorbar(cax_k)
alpha = ['LL', 'Dice', 'MI', 'T score']
ax2.set_xticklabels(['']+alpha)
ax2.set_yticklabels(['']+alpha)
plt.show()
```

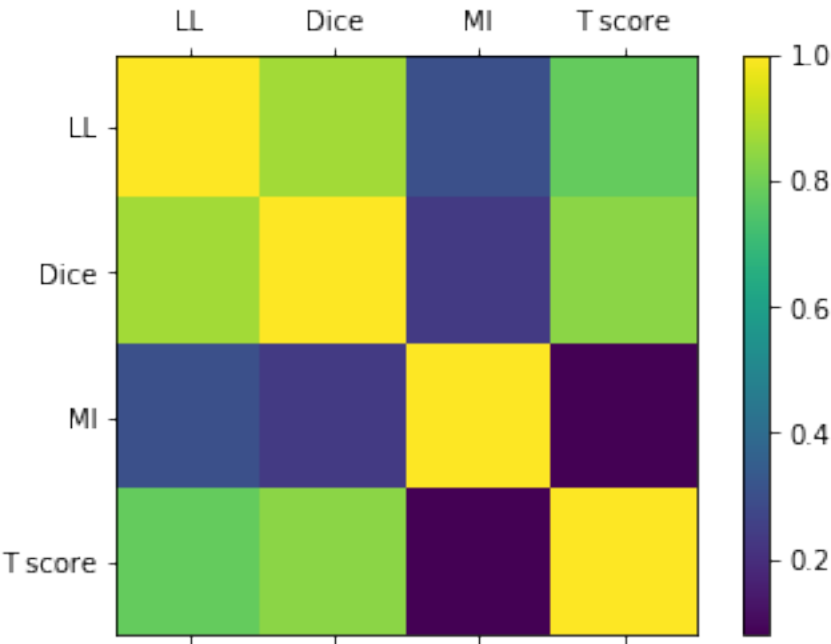
Spearman

	LL	Dice score	MI	T score
LL	1.000000	0.966278	0.399854	0.903167
Dice score	0.966278	1.000000	0.310312	0.931087
MI	0.399854	0.310312	1.000000	0.094477
T score	0.903167	0.931087	0.094477	1.000000



Kendall

	LL	Dice score	MI	T score
LL	1.000000	0.873373	0.302502	0.782676
Dice score	0.873373	1.000000	0.236769	0.838686
MI	0.302502	0.236769	1.000000	0.078456
T score	0.782676	0.838686	0.078456	1.000000



In [2]:

```
import matplotlib
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline

from pandas import DataFrame, read_csv
f = 'https://archive.ics.uci.edu/ml/machine-learning-databases/abalone/abalone.data'
df = read_csv(f)
df=df[0:10]
df
re = pd.read_excel("outputRE.xlsx")
```

Out[2]:

	M	0.455	0.365	0.095	0.514	0.2245	0.101	0.15	15
0	M	0.350	0.265	0.090	0.2255	0.0995	0.0485	0.070	7
1	F	0.530	0.420	0.135	0.6770	0.2565	0.1415	0.210	9
2	M	0.440	0.365	0.125	0.5160	0.2155	0.1140	0.155	10
3	I	0.330	0.255	0.080	0.2050	0.0895	0.0395	0.055	7
4	I	0.425	0.300	0.095	0.3515	0.1410	0.0775	0.120	8
5	F	0.530	0.415	0.150	0.7775	0.2370	0.1415	0.330	20
6	F	0.545	0.425	0.125	0.7680	0.2940	0.1495	0.260	16
7	M	0.475	0.370	0.125	0.5095	0.2165	0.1125	0.165	9
8	F	0.550	0.440	0.150	0.8945	0.3145	0.1510	0.320	19
9	F	0.525	0.380	0.140	0.6065	0.1940	0.1475	0.210	14