

1: Configure a temporary address for import the TCLR modle

In [1]:

```
import sys
# Configure a temporary address
# locdir is the address of your computer where the folder 'TreeClassifierforLinearRegression' is located
locdir = 'D:\\TCLRUPLOAD\\Source code'
sys.path.append(locdir)
import TCLRmodel.TCLRalgorithm as TCLR
```

Tree Classifier for Linear Regression (TCLR) V1.0.0
TCLR Algorithm is developed by Prof.T-Y Zhang, Mr. Bin Cao et al.

Reference : Domain knowledge guided interpretive machine learning
—— Formula discovery for the oxidation behavior of Ferritic-Martensitic steels in supercritical water.
2022, Nature Communications, journal paper.

2: Set the parameters

In [2]:

```
dataSet = "testdata.csv"
# :param dataSet: the input dataset
correlation = 'PearsonR(+)'
# :param correlation : {'PearsonR(+)', 'PearsonR(-)', 'MIC', 'R2'}, default PearsonR(+)
# * PearsonR: (+) (-). for linear relationship
# * MIC for no-linear relationship
# * R2 for no-linear relationship,
minsize = 3
# :param minsize : a int number, the minimum number of data in each leave.
threshold = 0.9
# :param threshold : a float, less than or equal to 1, default 0.95 for PearsonR.
# To avoid overfitting, threshold = 0.5 is suggested for MIC 0.5.
mininc = 0.01
# :param mininc :Minimum expected gain of objective function
```

3: Analysis dataset by TCLR

In [3]:

```
TCLR.start(dataSet, correlation, minsize, threshold, mininc)
```

Out[3]:

True

In []: