PAPER1\_NETWORK\_INFERENCE\_USING\_MIR.m

* The code contains a function to compute the normalized MIR for different size of grids (from 10x10 to 20x20 in steps of 1x1) and to infer network structure.

Function:: [MIR\_MATRIX,MIR\_LINK\_NORM,LINKS]=NETWORK\_INFERENCE\_USING\_MIR(DATA0)

Input: DATA0 -> Time-series in matrix format, each column represents a different time-series where each row represents the different observations per unit of time.

Output: MIR\_MATRIX-> Symmetric matrix where each element (I,j) represents the Normalized MIR value that is computed between the time series i and j.

 MIR\_LINK\_NORM -> same as in MIR\_Matrix but in a vector format. Each element represents the value of Normalized MIR per link

 LINKS -> Matrix. Column 1 = 1st column associated with DATA0 for the computation of MIR. Column 2 = 2nd column taken from DATA0 for the computation of MIR. 3rd column = Link.

PAPER1\_PARAMETER\_SPACE\_CONECSTREGTHvsDATASIZE.m

* Create Picture 3(a) of paper

PAPER1\_PARAMETER\_SPACE\_COUPLING\_STREGTH\_vs\_NOISE.m

* Create Picture 3(b) of paper