Supplementary materials 1

*Centrality Indices*

Since a graph had been abstracted and formatted from data, we constructed graphs at voxel level. Then we calculated the temporal Pearson’s correlation () of times series between the *i-* and *j-*th voxels and constructed a correlation matrix R = (), 1≤*i*, *j*≤N (N is the number of voxels). Next, we used *P* = 0.0001 (uncorrected) as a statistical significance threshold of correlation . Finally, we set up an adjacency matrix of a binary graph (1a) or a weighted graph (1b) as following:

 (1a)

(1b)

1. *Degree Centrality (DC)*

DC, the most local centrality measure, is computed as in the following equation:

1. *Subgraph Centrality (SC)*

A network comprises of subgraphs and SC is used to measure the participation of a node in all subgraphs (Estrada & Rodríguez-Velázquez, 2005). is the *i*-th of the *j*-th eigenvector and is the eigenvalue corresponding to the *j-*th eigenvector. SC is categorized into mesoscale centrality.

1. *Eigenvector Centrality (EC)*

The first eigenvector of the adjacency matrix is the one that corresponds to the largest eigenvalue and what we called EC. EC is a global centrality which captures the global features.

1. *Page-rank Centrality (PC)*

PC is a variant of EC and thus a global centrality as well. It introduces a small probability (1-d=0.15) for random damping to handle walking traps on a graph (Boldi, Santini, & Vigna, 2009).