Network Type I	Size of ensemble	Nodes	Edges K $[10^3]$
Brain DSI	6	1000	14.4 ± 0.5
Erdös-Rényi	50	1000	14.4 ± 0.45
Regular Lattice	50	1000	14.3 ± 0.6
Fractal Hierarchical	50	1000	14.4 ± 0.6
Small World	50	1000	14.4 ± 0.46
Network Type II			
Brain fMRI	29	90	4.05 ± 0
Erdös-Rényi	50	90	0.524 ± 0.025
Regular Lattice	50	90	0.526 ± 0.026
Fractal Hierarchical	50	90	0.526 ± 0.030
Small World	50	90	0.523 ± 0.032

Table 1. Description of Network Ensembles. The number of networks (size) in the ensemble, number of nodes, number of edges K given in units of $[10^3]$ edges for the two types of ensembles studied. Network Type I contains the brain DSI, Erdös-Rényi, Regular Lattice, Fractal Hierarchical, and Small World networks with $N = 1000$ nodes. Network Type II contains the brain fMRI, Erdös-Rényi, Regular Lattice, Fractal Hierarchical, and Small World networks with $N = 90$ nodes.