

Dear all,

Regarding the increasing interest on network structure and small world theories we are organizing, a journal club like, discussion on the two papers joint in this mail.

Our primary interest will focus on the importance of the relay areas in the brain network for the emergence of the small world characteristic. These two papers are written with the main aim to identify hubs in the brain and assume a position where:

"There are small worlds inside big brains" i.e. the brain should be a system of many elements (edges) organized in multiple small clusters. There should be profuse interconnections within clusters and some important edges (Hubs or relay areas) should be on the basis of the inter cluster connections.

This position may be put under question if in the brain there are lot of non hub areas that are important in maintaining the system connected (and with preservation with short path lengths).

Keywords:

Small world, scale free, hub, shortest path lengths, betweenness.

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Network structure of cerebral cortex shapes functional connectivity on multiple time scales

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