

Summary of "The Connectome Visualisation Utility"

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1 SUMMARY

BrainNet Viewer is a visualization tool for human brain connectomics. This tool provides many visualizations using a ball-and-stick model. So, each visualization is composed by nodes that are representing brain regions and sticks which represent the connections between the regions. Moreover, BraiNet can display also the brain surface. Each combination of these three elements (nodes, edges and surface) can be displayed.

The dimension of the nodes can be linked to some measures performed on the network such nodal strength and nodal efficiency, but it still unclear what the degree of freedom is given to the user. Both structural and functional networks can be visualized thanks to this tool.

The most interesting feature this tool provide, is the possibility to show the brain surface and the connectome at the same time. Another feature that appears in this tool, which is unfrequent in connector visualization tools, is the possibility to color edges according to their distance. Thanks to this, it has been possible to see that in vast majority of the case long connections link homologous regions in two different hemispheres. Figures 1 and 2 show some screenshots from the working tool.

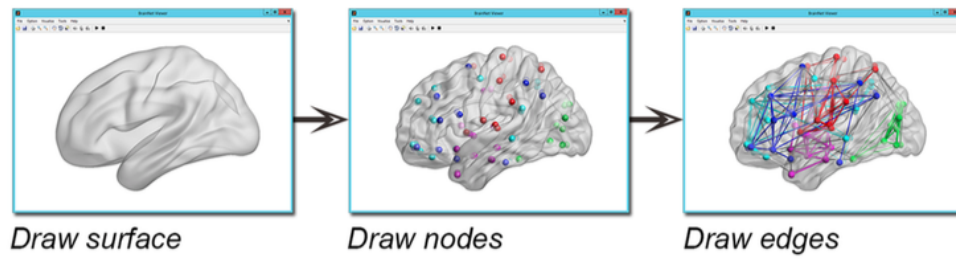


Figure 1: This figure represent the three possible ways in which it is possible to represent the brain connector.

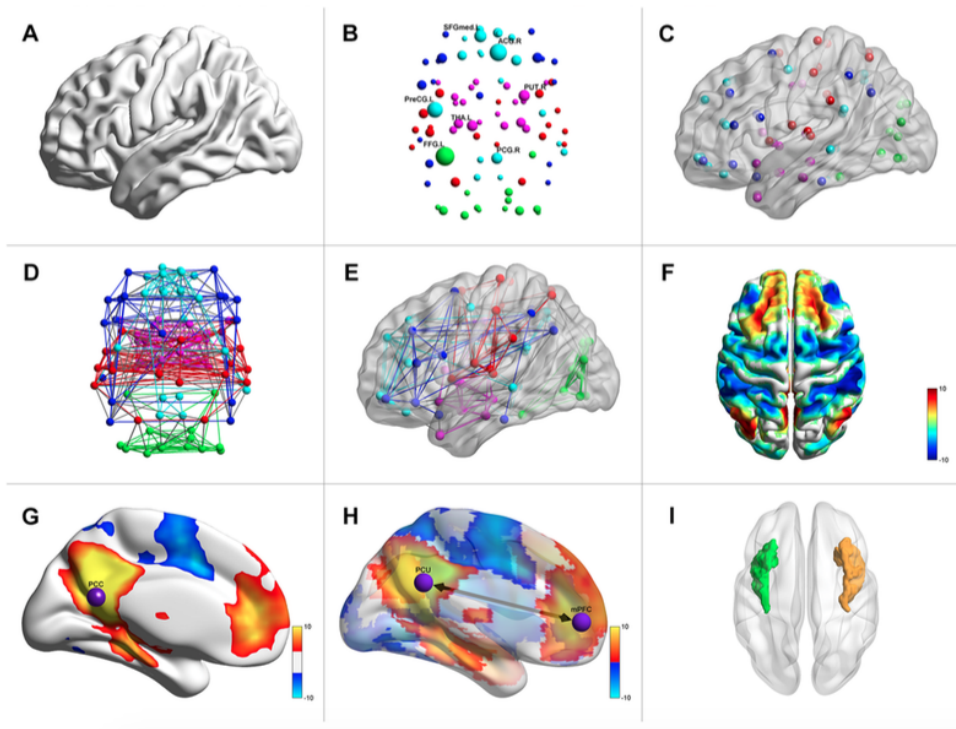


Figure 2: Some screenshots of the working tool. The combination of the three kinds of visualization make the tool very flexible.