

Neural Network Dynamics Explored Through a Simple Excitable Model

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Brain networks have a number of conspicuous topological features, such as characteristic local circuits (motifs and cycles), hub nodes and modules at different scales of network organization. How do such network features shape network dynamics, for instance, the self-sustained activation patterns observed during the 'resting state' of the brain? I will give a short overview of the structural organization of brain networks and present recent findings from the simulation of network dynamics with the help of a simple excitable model.