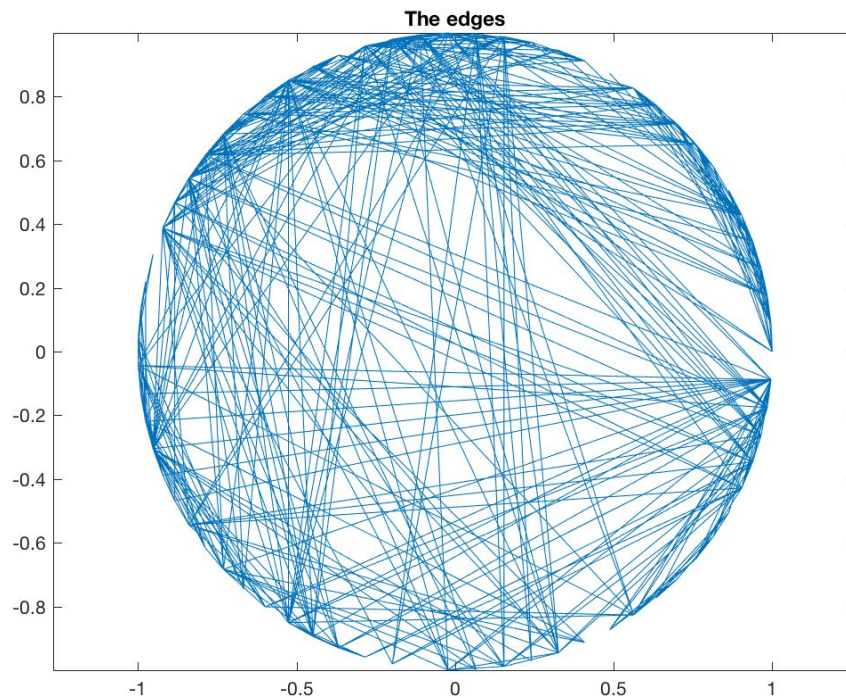# NBE-E4530 Human brain connectivity (Spring 2017)

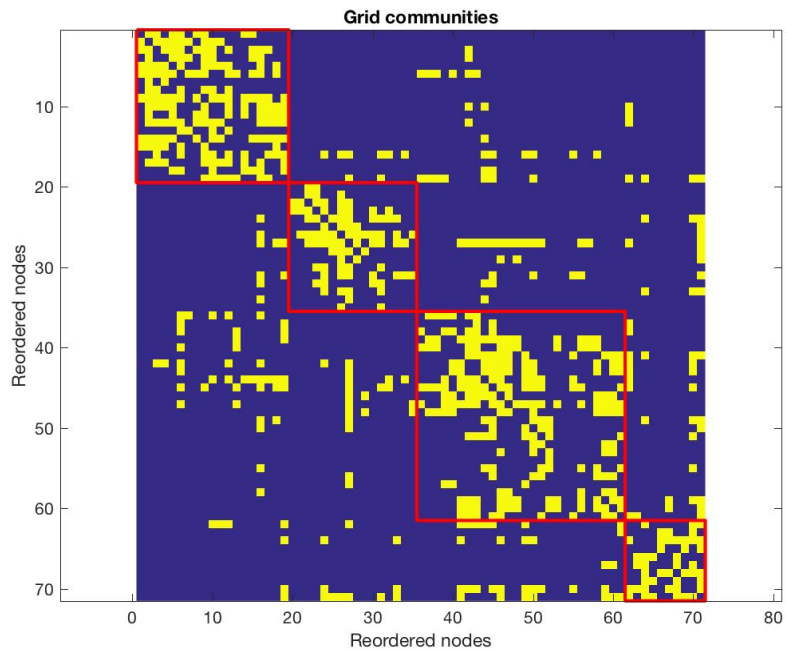## Pre-assignment 3, exercise 4

Laura Hedlund, Kaisu Ölander

We used the Macaque cortical connectivity data set in the visualizations.
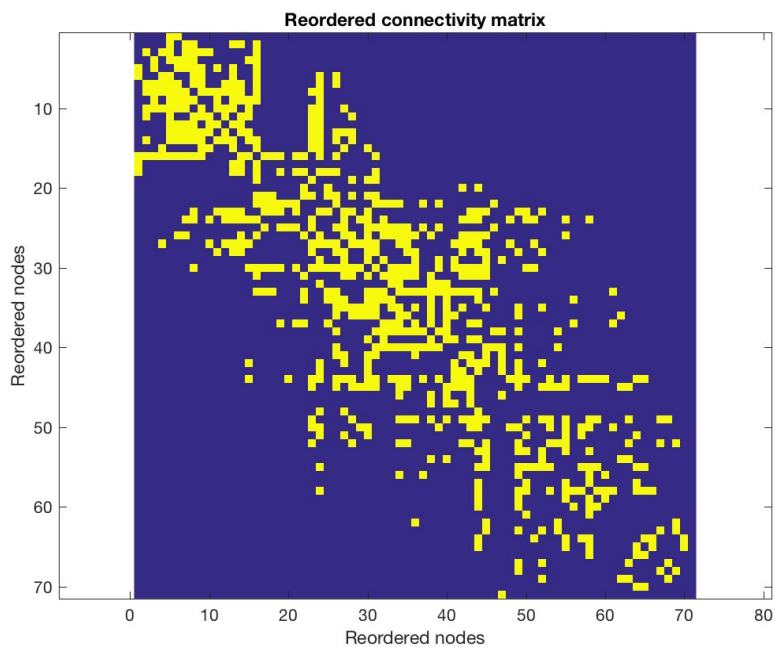
Two-dimensional network visualization

The edges between node pairs are depicted with blue lines. Nodes are on the circle.

Grid communities
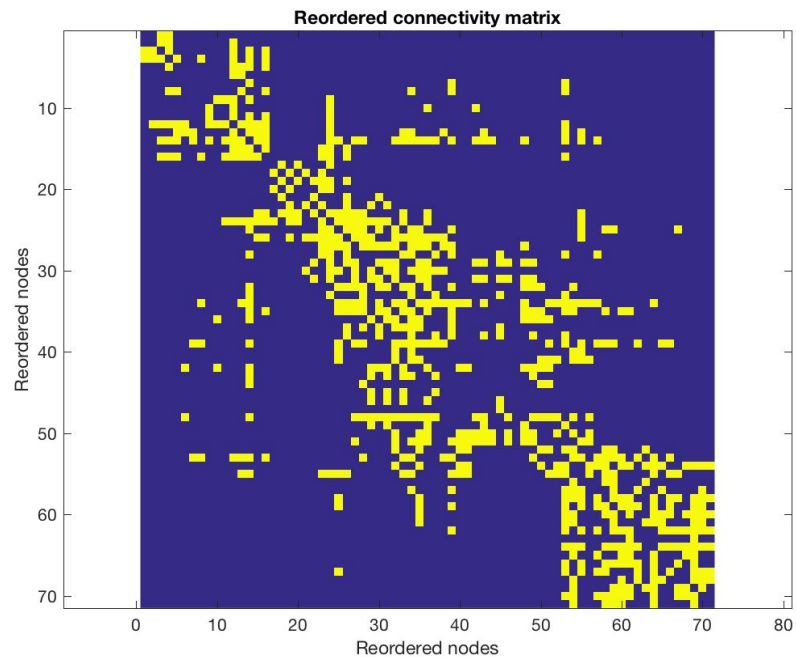

Grid communities

Nodes reordered so that nodes in a same community assignment are next to each other. Red lines depict the community boundaries.

Node reordering with simulated annealing

Reordered connectivity matrix

Nodes reordered to maximize the number of the elements along the main diagonal. The reordering is done with simulated annealing.

Node reordering by modular structure

Reordered connectivity matrix

Nodes reordered by the modular structure, in this case the community assignments.