# Analysis of Large Scale Socil Networks

# Exercise Session 5: Graph Clustering 2

## Software

* MapEquation: <http://www.mapequation.org/>  
  Online app: <https://www.mapequation.org/apps/MapGenerator.html>
* iGraph in R: <http://igraph.org/r/>
* Gephi: <https://gephi.org/>

## Data Sets

* Network Scientists Collaboration (taken from mapequation.org)

## Objectives

* Learn the online MapEquation app.
* Compare different implementations of the infomap algorithm
* Compare results of different clustering algorithms

## Clustering & Visualization

*Tasks:*

1. *Use the Network Scientists 2010 data set*
2. *Run a cluster analysis using the online MapEquation app.*
3. *Export cluster solution for each member in the network*
4. *Run the infomap implementation in R on the same network*
5. *Visualize the results in a coloured plot. The map and colouring should present a clear clustering structure.*
6. *Compare the partitioning of the different solutions by using the Rand-index*
7. *Run additional community detection implementations in R or Gephi and plot and compare the results.*