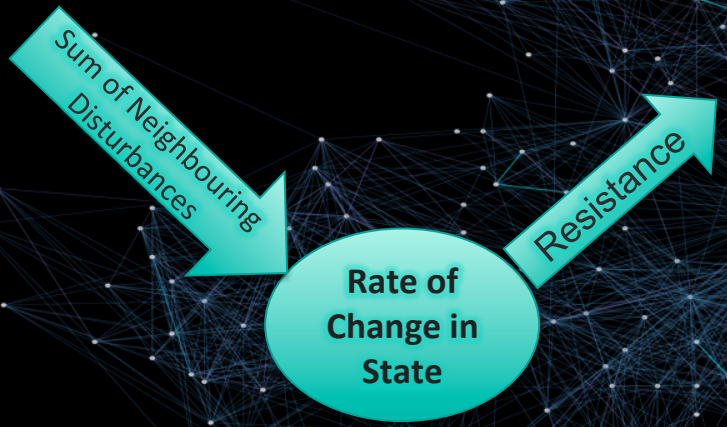
Robustness Analysis of Social Networks under Different Attack Models

General Model



$$\frac{dx_i}{dt} = -\frac{x_i}{\tau_i} + \Theta\left(\sum_{i \neq j} \frac{M_{ji} x_j (t - t_{ji})}{f(O_j)} e^{-\beta t_{ji}}\right)$$

Problem Specific Model

- Based on N - 1 contingency analysis
- Various attack models
- Determination of Robustness of networks

References:
Efficient Response to Cascading Disaster Spreading, Dirk Helbing et al 2008
http://www.ml.sun.ac.za/wp-content/uploads/2009/08/social_graph.png