

GIGA Workshop “Analysis of Social Networks”
PD Dr. Lothar Krempel
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Course Outline - Analysis of Social Networks

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The seminar provides a one-day introduction into the formal representation of networks, elementary concepts and central topics of Social Network Analysis. We will use “Pajek”, a free program for the analysis of large networks, for first steps in the computational analysis and visualization of networks using classical datasets. Topics include:

- from ego to Social Networks
- elementary graph theoretic concepts (links, paths, cycles - different types of graphs: signed, binary, undirected and directed, valued graphs)
- centrality metrics (degree, closeness, betweenness)
- concepts to identify dense areas in networks (clusters, cliques and communities)
- positions and roles (block models, structural equivalence)
- two-mode networks

Seminar participants are invited to present their own network projects on the second day. This will give the opportunity to discuss related work and open questions in class.

Recommended Reading

- Scott, John (2010): Social Network Analysis. London: Sage
is an elementary introduction .. also very well suited for self study
- Henning, Marina et al (2012): Studying Social Networks. A Guide to Empirical Research
provides a good introduction to the process of empirical network research