Infrastructure Networks

- Air traffic control: directed network; constructed from the USA's FAA (Federal Aviation Administration) National Flight Data Center (NFDC), Preferred Routes Database. Nodes in this network represent airports or service centers and links are created from strings of preferred routes recommended by the NFDC.
    - data location: http://konect.uni-koblenz.de/networks/maayan-faa
    - nodes: airport/service center
    - edges: preferred routes

- Power grid: undirected network; contains information about the power grid of the Western States of the United States of America. An edge represents a power supply line. A node is either a generator, a transformator or a substation.
    - data location: http://konect.uni-koblenz.de/networks/opsahl-powergrid
    - nodes: generator/transformator/substation
    - edges: supply line

- Streets/Roads: undirected network; this is the international E-road network, a road network located mostly in Europe. Nodes represent cities and an edge between two nodes denotes that they are connected by an E-road.
    - data location: http://konect.uni-koblenz.de/networks/subelj_euroroad
    - nodes: European cities
    - edges: e-road

Social Networks

- Crime interaction: bipartite network; persons who appeared in at least one crime case as either a suspect, a victim, a witness or both a suspect and victim at the same time. A left node represents a person and a right node represents a crime. An edge between two nodes shows that the left node was involved in the crime represented by the right node.
    - data location: http://konect.uni-koblenz.de/networks/moreno_crime
    - nodes: persons & crimes
    - edges: involvements

- Facebook: undirected network; contains friendship data of Facebook users. A node represents a user and an edge represents a friendship between two users. The dataset is obviously not complete and contains a very small subset of the total Facebook friendship graph.
    - data location: http://konect.uni-koblenz.de/networks/facebook-wosn-links
    - nodes: Facebook users
    - edges: friendship

- Physicians: directed network; captures innovation spread among 246 physicians in for towns in Illinois, Peoria, Bloomington, Quincy and Galesburg; data collected in 1966. A node represents a physician and an edge between two physicians shows that the left physician told that the right physician is his friend or that he turns to the right physician if he needs advice or is interested in a discussion. There always only exists one edge between two nodes even if more than one of the listed conditions are true.
    - data location: http://konect.uni-koblenz.de/networks/moreno_innovation
    - nodes: physicians
    - edges: trust

Technological Networks

- Gnutella p2p: A sequence of snapshots of the Gnutella peer-to-peer file sharing network from August 2002. There are total of 9 snapshots of Gnutella network collected in August 2002. Nodes represent hosts in the Gnutella network topology and edges represent connections between the Gnutella hosts.
    - data location: https://snap.stanford.edu/data/p2p-Gnutella08.html
    - nodes: hosts
    - edges: connections

- Internet topology: undirected network; This is the network of connections between autonomous systems of the Internet. The nodes are autonomous systems (AS), i.e. collections of connected IP routing prefixes controlled by independent network operators. Edges are connections between autonomous systems. Multiple edges may connect two nodes, each representing an individual connection in time. Edges are annotated with the timepoint of the connection.
    - data location: http://konect.uni-koblenz.de/networks/topology
    - nodes: autonomous systems (AS)
    - edges: connections

- Hyperlink: directed network; contains front-page hyperlinks between blogs in the context of the 2004 US election. A node represents a blog and an edge represents a hyperlink between two blogs.
    - data location: http://konect.uni-koblenz.de/networks/moreno_blogs
    - nodes: autonomous systems (AS)
    - edges: communications

Biological Networks

- **Protein interaction:** undirected network; contains protein interactions contained in yeast. Research showed that proteins with a high degree were more important for the survival of the yeast than others. A node represents a protein and an edge represents a metabolic interaction between two proteins. The network contains loops.
    - data location: http://konect.uni-koblenz.de/networks/moreno_propro
    - nodes: proteins
    - edges: interactions

Lexical Networks

- **David Copperfield:** undirected network; common noun and adjective adjacencies for the novel "David Copperfield" by English 19th century writer Charles Dickens. A node represents either a noun or an adjective. An edge connects two words that occur in adjacent positions. The network is not bipartite, i.e., there are edges connecting adjectives with adjectives, nouns with nouns and adjectives with nouns.
    - data location: http://konect.uni-koblenz.de/networks/adjnoun_adjacency
    - nodes: words
    - edges: adjacency