

Einführung in Methoden komplexer Systeme

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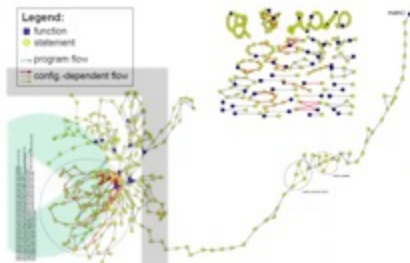
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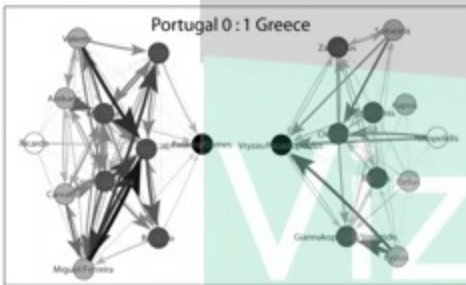




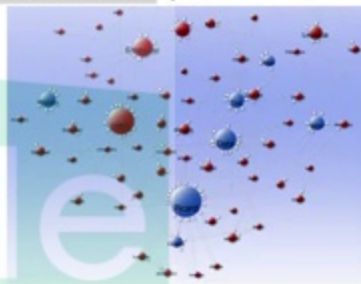
Flight Networks



Software Graph



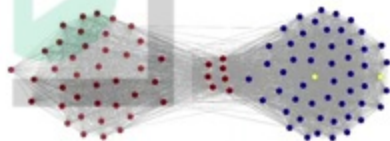
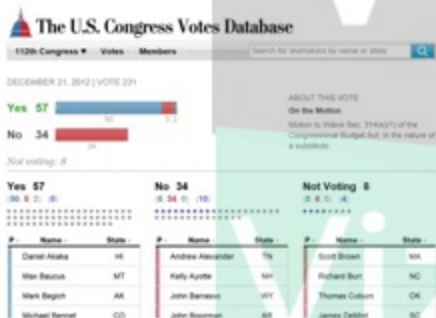
Soccer Networks



Star-Trek Network

Social Network Analysis

112th Congress (2012), 100 Senators, 251 Vote



min 125 shared votes

Networks, why do we care?

Takes context into account

More than entities and attributes:
How are the nodes related to each other?

Seemingly autonomous entities are
embedded in relations and interactions

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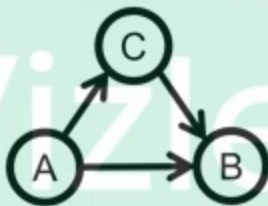
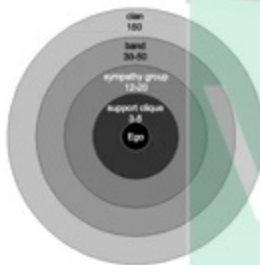
Social Forces

Why do people communicate/connect?

What are the characteristics of “social” networks?

Strength of ties

Network structures tell stories



Diffusion Processes

Epidemic concepts and models

How does this structure affect the diffusion of information, opinions, and messages?

Simulation of social dynamics

Viral marketing?





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