



MEDNARODNA PODIPLOMSKA ŠOLA JOŽEFA STEFANA
JOŽEF STEFAN INTERNATIONAL POSTGRADUATE SCHOOL

Knowledge Management

Social Network Analysis
Lecture & Practice
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Overview

- Goal
- Course Details
- Requirements
- Pajek
- Social Networking Analysis with Pajek
- Project Introduction
- Practical Session



Goal

- Learn about social network analysis in a practical way
- Learn about Pajek



Course Details

- Book:
 - Exploratory Social Network Analysis with Pajek
 - W. Nooy, A. Mrvar, V. Batagelj;
 - Cambridge University Press (2005)
 - Available in [COBISS](#)
- Teaching Assistants: Jure.Ferlez@ijs.si,
Peter.Ljubic@gmail.com
- Every group must finish the SNA project



Requirements

1. Social Network Analysis project
 1. Perform the analysis with Pajek, on one of the two problem domains
 2. Power point presentation of the analysis results (template: [.pot](#))
 3. Oral presentation of analysis results, each student should present part of the results
 4. Written report (printed and electronic copy) in Information Society paper format
(4 pages, double column, possibly with appendices, template: http://is.ijs.si/main_eng.html)



Pajek

- Introduce Pajek software



Social Networking Analysis

- Introduce main analysis concepts:
 - COHESION
 - BROKERAGE
 - RANKING



Project Introduction 1

- Co-authorship data
- Goal: analyze the social network between scientists
- Show and Explain
 - How many communities of scientists are there? How connected is everyone with everyone?
 - COHESION ANALYSIS
 - If there was an outstanding Idea, which scientists would probably hear about it last? Who would be the best person for the idea to start to quickly spread among scientists? Which scientists trade ideas between themselves? Which only trade ideas in one direction?
 - BROKERAGE ANALYSIS
 - Who are most prestigious scientists? Is there a census on the most prestigious people in the network?
 - RANKING ANALYSIS



Project Introduction 2

- Co-authorship data:
 - Papers on questionnaire design (Vehovar data)
 - 1st group
 - Papers on ILP (ILP data)
 - 2nd group
- Process data to get
 - Undirected weighted co-authorship network
 - Directed most two active co-authors network



Practical Session

- Lets try things by our selves
- Pajek
- Data