Social Network Analysis for Computer Scientists

Frank Takes

LIACS, Leiden University
`https://liacs.leidenuniv.nl/~takesfw/SNACS`

Lecture 0 — Course information

About this course

- **Social Network Analysis**: understanding data from a network perspective, studying interactions in social, economic, organizational, technological and other real-world networks.

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- **for Computer Scientists**: focus on methods, algorithms, data structures, mining descriptive insights and developing predictive techniques to understand real-world (social) network data.
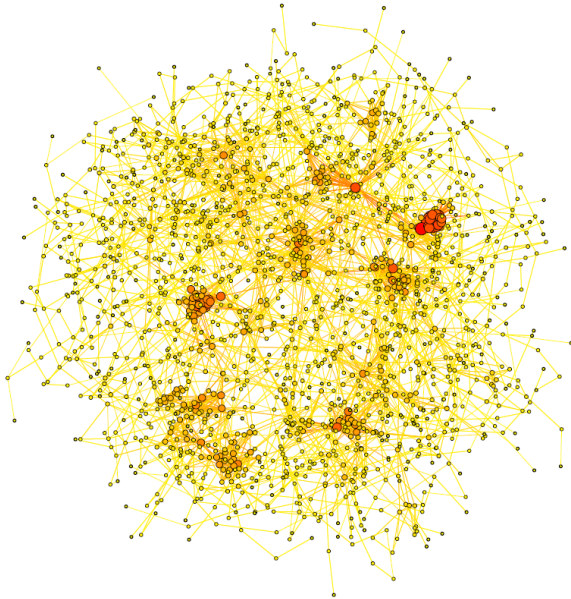
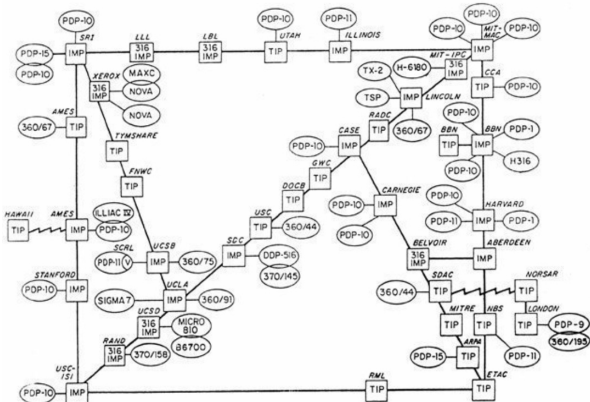Figure: Online social network.

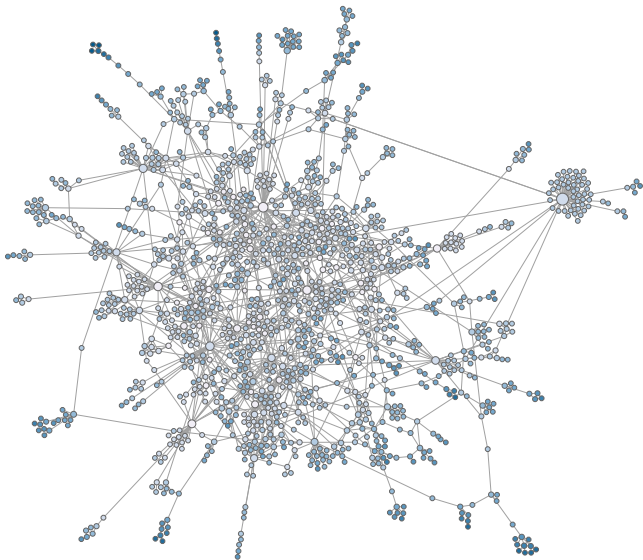Figure: Network of the internet.

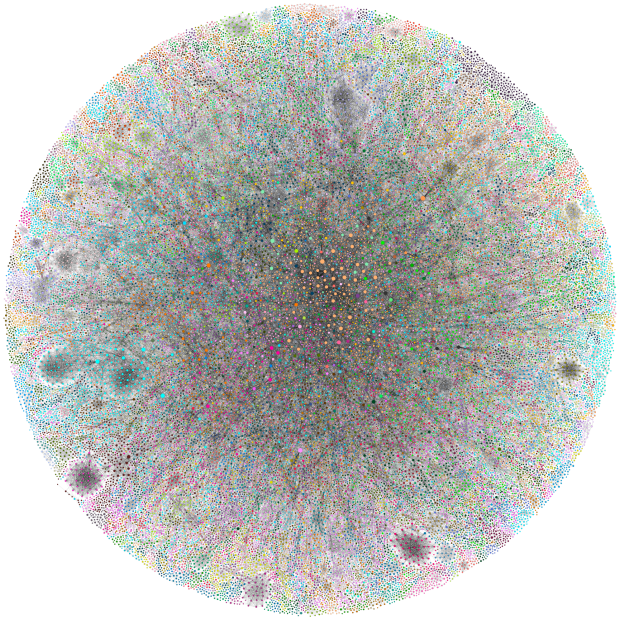Figure: Protein interaction network.

Figure: Economic network of Sweden's interlocked corporations.

Course information

- Lectures: Fridays, 11:00 to 12:45 in Gorlaeus C1
- Lab sessions: Fridays, 9:00 to 10:45, Snellius 302/304, etc.
- Prerequisites: CS bachelor with courses such as algorithms, data structures and data mining
- Course website:
  `https://liacs.leidenuniv.nl/~takesfw/SNACS`
- Mandatory registration via uSis/Brightspace; course name
  `2324-S1 Social Network Analysis for Com...` or:
  `https://brightspace.universiteitleiden.nl/d2l/home/239768`

Course format

- ca. 13 weeks: presentations by lecturer in first half of semester and by students teams in second half of semester
- No book (we use recent papers, and free textbooks), no exam
- > 4 P's
  1. **P**resentation
  2. **P**articipation (including **P**resence)
  3. **P**rogramming
  4. **P**aper (with some **P**eer review and Code review)
- On-site course without "online backup"
- For lab sessions we use the Snellius computer rooms; you can also use your laptop

Examination

- Final grade is based on 3 subgrades for:
    - Homework assignment 1 (individual)   20%
    - Homework assignment 2 (individual)   20%
    - Project (presentation and paper, in teams)   60%
- All 3 subgrades have to be ≥ 5.5
- Failed assignments can be retaken by making the extra assignment (1 failed assignment: maximum grade 8.0. 2 failed: maximum 6.0)
- Failed projects can be retaken by meeting the project retake deadline (maximum grade: 7.0)
- Final grades are rounded to nearest element in $\{1, 2, 3, 4, 5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10\}$
- Rounding based on **P**articipation
- 6 ECTS

Course team

- Lecturer: dr. Frank Takes
  `f.w.takes@liacs.leidenuniv.nl`, room 157b
- Assistant lecturer: Hanjo Boekhout MSc, room 126
- Assistants:
    - Rachel de Jong MSc, room 152
    - Marton Menyhert MSc
    - Shaoxuan (Anthony) Zhang
    - Chao Zhao
- Course email address: `snacs@liacs.leidenuniv.nl`

Before we start . . .

- All deadlines are hard and already set (see schedule on website)
- Team work should be balanced
- Individual assignments must be made alone

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- Discussion is welcome!

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- Have some fun.