# 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.
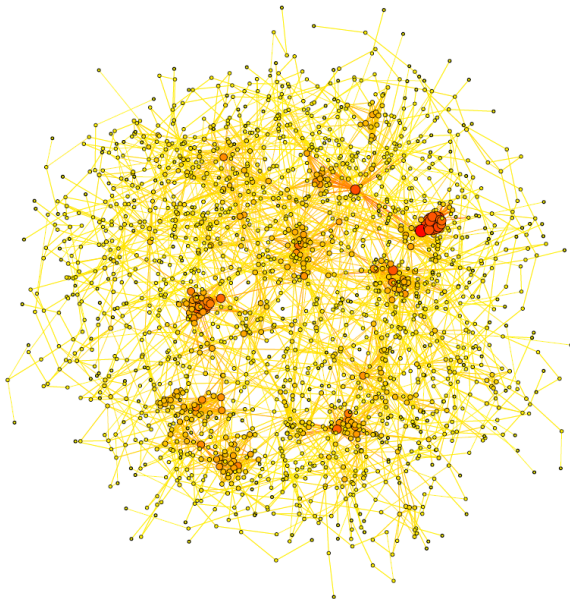
Figure: Online social network.

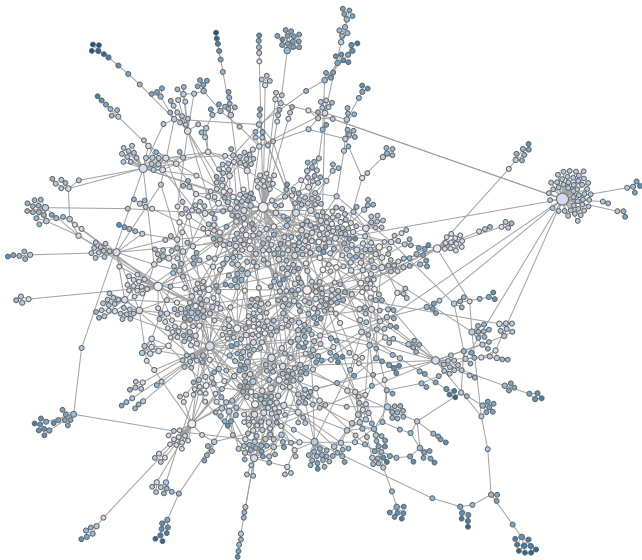Figure: Network of the internet.

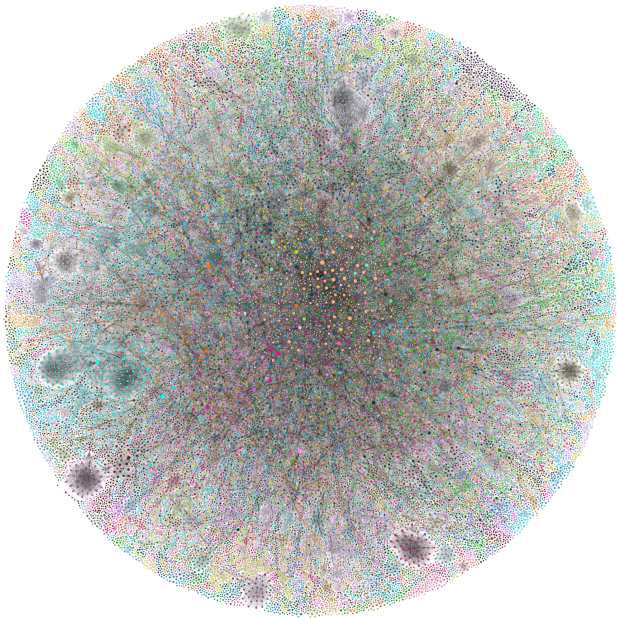Figure: Protein interaction network.

Figure: Economic network of Sweden's interlocked corporations.

# Course information

- Lectures: Fridays, 9:00 to 10:45 in Gorlaeus BM1.33
- Lab sessions: Fridays, 11:00 to 12:45 in Gorlaeus DM0.09 an DM0.17
- Prerequisites: CS bachelor with courses on topics such as algorithms, data structures and data mining
- Course website:
  `https://liacs.leidenuniv.nl/~takesfw/SNACS`
- Mandatory registration via uSis/Brightspace; course name
  `2526-S1 Social Network Analysis for Com...` or:
  `https://brightspace.universiteitleiden.nl/d2l/home/388357`

# Course format

- 6 ECTS
- 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 open materials), 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 LIACS 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 $\geq 5.5$
- Sufficient subgrades for the 3 items above carry to a next year
- 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

# Course staff

- dr. Frank Takes (room BE 3.07)
  `f.w.takes@liacs.leidenuniv.nl`
- Rachel de Jong MSc (room BE 3.03)
  `r.g.de.jong@liacs.leidenuniv.nl`
- Assistants:
    - Gamal Adel Elgamal MSc (room BE 2.23)
    - Bart Holterman
    - Thanos Kalligeris
    - Bart Westhoff
- Course email address: `snacs@liacs.leidenuniv.nl`

# Can I use Generative AI for ...

- **Coding/programming**: GenAI can write code for you, but it rarely provides complete code that immediately works. You are expected to have fluent coding skills, and you need to develop critical thinking and debugging skills.

- **For writing (including editing)**: GenAI can check your grammar and spelling, but you have to write your own text in assignments and papers. Handing in an AI-generated assignment or paper is plagiarism, because it is not your own work.

- **For learning and understanding**: GenAI can try to explain concepts to you, but explanations may contain factual errors. Always check the original sources.

- **For answering assignment questions**: GenAI can answer many questions, but the answers may be wrong. Moreover, using GenAI does not help your learning process, and may prevent you from mastering the required levels of abstraction.

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- Individual assignments must be made alone

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- Have some fun.