# Social Network Analysis for Computer Scientists

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## Peer Review Session

# In the next weeks . . .

- Write code
- Run experiments
- Evaluate results
- Process feedback from today
- Write remaining sections of the paper
- Nov 27: optional intermediary paper check deadline
- In two weeks: code review session
- In little over four weeks: hard project deadline
- Report any questions, issues, difficulties or problems
- Today: peer review

# Peer review

- **Peer review**: evaluation of work by one or more individuals with similar competence
- Single blind: reviewer name unknown to authors
- Double blind: reviewer and author unknown to both
- As a scientist, on average, for each paper that you write, you need to do $X$ reviews assuming that you want $X$ reviews of your work
- For each existing paper, on average $X = 3$ reviews were written
- There are over 100 million peer reviewed papers, so easily 300 million reviews were written!

# Peer review

**Van:** em.son.0.86579b.fec6ccfb@editorialmanager.com <em.son.0.86579b.fec6ccfb@editorialmanager.com> namens Social Networks <em@editorialmanager.com>
**Verzonden:** donderdag 28 september 2023 17:01
**Aan:** Takes, F.W. (Frank) <f.w.takes@liacs.leidenuniv.nl>
**Onderwerp:** Invitation to review for Social Networks

Manuscript Number: SON-D-23-00[redacted]

Dear Dr. Takes,

I would like to invite you to review the above referenced manuscript, as I believe it falls within your expertise and interest. The abstract and the PDF for this manuscript is included below.
You should treat this invitation, the manuscript and your review (as well as other reviewer comments shared with you) as confidential. You must not share your review or information about the review process with anyone without the agreement of the editors and authors involved, irrespective of the publication outcome. If the manuscript is rejected by this journal and the author agrees that the submission be transferred to another Elsevier journal via the Article Transfer Service, we may securely transfer your reviewer comments and name/contact details to the receiving journal editor for their peer review purposes.
Please respond to this invitation at your earliest opportunity.

If you would like to review this paper, please click this link:
Agree to Review

If you have a conflict of interest or do not wish to review this paper, please click this link:
Decline to Review

If you decline to review, I would appreciate your suggestions for alternate reviewers.

If, for any reason, the above links do not work, please log in as a reviewer at https://www.editorialmanager.com/son/.

Since timely reviews are of utmost importance to authors, I would appreciate receiving your review within 28 days of accepting this invitation

# Paper structure

1. Introduction
2. Related Work
3. Preliminaries / Problem Statement
4. Approach / Algorithms / Methodology
5. Datasets
6. Experiments and Results
7. Conclusion and Future Work
8. References

# Introduction

- Is the context clearly sketched?
- Is the problem well described?
- Why do we study this problem?
- What applications does it have?
- How is this paper going to contribute to previous work?
- Is the structure of the rest of the paper clearly described?

# Preliminaries / Problem Statement

- Are definitions in words given?
- Are relevant formal definitions given? (if applicable)
- How difficult is this problem? (perhaps in terms of time and space complexity)
- Can you give best-case and worst-case examples?
- How can we verify that we have correctly solved the problem?

# Approach / Algorithms / Methodology

- Are the algorithms well-explained?
- What type of algorithms are discussed (exact/approximate?)
- Are the algorithms time and memory efficient?
- What about scalability of the methods?
- Are any parameters involved? If so, how are they set or tuned?
- Is the technique domain-(in)dependent?

# Data and Experiments

- Is the data relevant and sufficient?
- Why is this data good for these experiments?
- Is the data "diverse" in relevant dimensions?
- Is the data possibly biased and how may this affect the experimental results?
- What do you measure in each experiment?
  quality, running time, error, correlation, . . . ?
- What do you see in your results, and what might it mean?
- Be critical; discuss the limitations of your analyses

# Conclusion, Abstract and Other things

- Conclusion gives an answer to the problem statement, informed by the results of applying the methodology to the data, in words
- The end of the conclusion should provide some suggestions for future work, extending or broadening the current work
- The abstract is important and should give a short recap of the entire paper, with particular focus on what problem is solved, how it is solved, and what the main results and implications of that result are

- Formula correctness, LaTeX
- Grammar, interpunction ., and spellling
- Figures, diagrams, axis descriptions, captions, etc.
- Complete and consistent references

# Finally

- Find the other team and sit together in BW 0.08, BW 0.19, BW 0.20 and other empty rooms around

1. **Introduce** yourself and your work to the other team; mention what you have done, and not yet done
2. **Read** each other's paper; feel free to make some notes on the work
3. ...
4. **Give feedback** to each other; in words and on paper
5. **Write** a short half-page bullet-point report about the given feedback
6. **Hand in** the report in via Brightspace

Please be constructive!

Group 1 - Anomaly detection (A)
Group 2 - Anomaly detection (B)
Group 3 - Anomaly detection (C)

Group 4 - Anonymity in networks (A)
Group 5 - Anonymity in networks (B)
Group 6 - Anonymity in networks (C)

Group 7 - Centrality estimation (A)
Group 8 - Centrality estimation (B)
Group 9 - Centrality estimation (C)

Group 13 - Core/periphery structure (A)
Group 14 - Core/periphery structure (B)
Group 15 - Core/periphery structure (C)

Group 34 - Sampling from networks (A)

Group 19 - Graph evolution rules (A)
Group 20 - Graph evolution rules (B)
Group 21 - Graph evolution rules (C)

Group 22 - Influence spread and virality (A)
Group 23 - Influence spread and virality (B)
Group 24 - Influence spread and virality (C)

Group 16 - Graph compression (A)
Group 17 - Graph compression (B)
Group 18 - Graph compression (C)

Group 10 - Community detection (A)
Group 11 - Community detection (B)
Group 12 - Community detection (C)

Group 28 - Network motifs (A)
Group 29 - Network motifs (B)
Group 30 - Network motifs (C)

Group 37 - Shortest paths (A)
Group 38 - Shortest paths (B)
Group 39 - Shortest paths (C)

Group 31 - Network embeddings (A)
Group 32 - Network embeddings (B)
Group 33 - Network embeddings (C)

Group 35 - Sampling from networks (B)

Group 40 - Temporal network analysis (A)
Group 41 - Temporal network analysis (B)
Group 36 - Sampling from networks (C)

Group 25 - Link prediction (A)
Group 26 - Link prediction (B)
Group 27 - Link prediction (C)

Group 43 - Visualization algorithms (A)
Group 44 - Visualization algorithms (B)
Group 45 - Visualization algorithms (C)