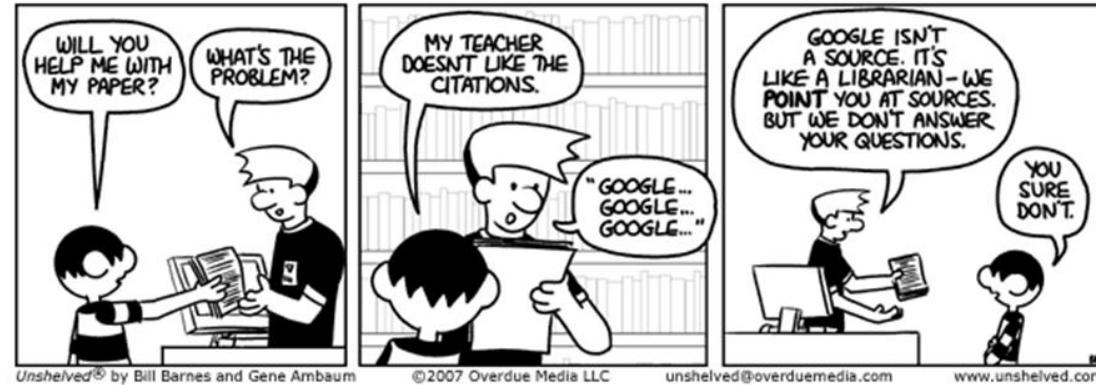


Journal Club and Research Seminar



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Some administrative stuff ...

- Lecture every alternate week: Tue 9:15-10:45 AM
- 1 credit (SWS) course
- Not a „Soft Skills“ course
- OPAL course:
<https://bildungspotrait.sachsen.de/opal/auth/RepositoryEntry/18720948225>
- All students must register to the OPAL course
- All information will be provided only via OPAL (no personal emails)
- Exam: final grade is cumulative over two semesters



Why Journal Club?

- Being up-to-date with the current state-of-the-art is a basic necessity for being competitive, both in industry and academia
- This requires us to have both breadth of knowledge and depth of expertise! (not just superficial knowledge, or niche expertise)
- Very demanding: many emerging fields are increasingly interdisciplinary
- Particular challenges in science: methods and tools may not be widely accessible; difficult to evaluate scientific literature due to lack of expertise
- “Journal Club” is a common practice in many groups to keep oneself up-to-date with scientific literature
- Basic idea: Bring in the expertise of many scientists in order to offset the lack of one’s own expertise

Why Journal Club?

- “Journal Club” is a common practice in many groups to keep oneself up-to-date with scientific literature
- Here: Students get to know how to “read” scientific literature
- You will be expected to read and review 2~3 papers
- In the next semester, you are required to review an entire field, i.e. summarize the current state-of-the-art

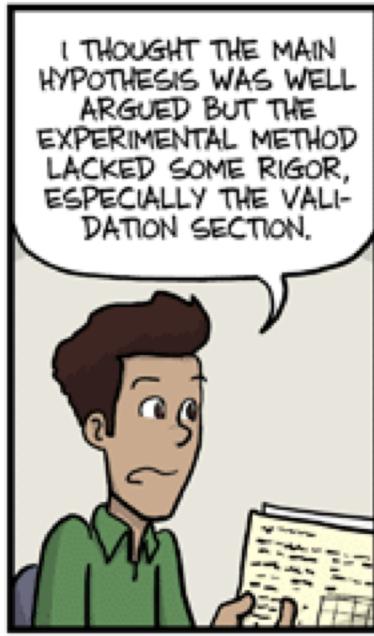
Some tips ...

- First determine the kind of article you are reading
(Letter, Regular article, Review etc.)
- Is the field of study an area of expertise of the author(s)?
- How well is the paper written? (grammar, language and structure)
- What is the quality of the journal where the article is published?
- What is(are) the main question(s) that the paper seeks to answer?
- What are the methods/tools used? Do you know about the strengths and weaknesses of the methods? How well was the data analyzed? How good was the quality of interpretation?
- Are there any limitations/drawbacks/failures in the paper?
- Did the paper sufficiently answer the questions that the authors aimed to?
- What is the overall significance of the paper for the field of study?

Some tips ...

- Reading a paper is not about criticism!
- It is easy to find faults in any paper (or for that matter in any work)
- Finding the good things is much more challenging
- Start with the title and abstract → this should more or less establish the setting for you
- Expect to spend SEVERAL HOURS on a single paper! The paper you are reading was probably a result of years of hard work. Devote enough time to understand what the strengths and weaknesses of the paper are
- Make notes as you read the paper. Make sure that you clearly identify text from the paper (otherwise plagiarism!)
- Compare the paper to other similar papers
- Summarize your findings!
(Writing helps provide clarity to your own thoughts)





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This is not what your review should look like!!

For second meeting

- Dislocation – grain boundary interactions
- Prepare a 2~3 slide summary of the paper
 - Two line summary of the work
 - Details on the methods/tools/equipment used
 - Main findings (observations), insights, interpretations etc
 - Are there better methods?
Discuss limitations, drawbacks of current methods
 - Have the scientific questions raised initially been answered?
 - What was good about the paper?
 - Your thoughts (subjective)