How to Review a Paper

What's the point behind peer reviewing?

- Maintain standards of quality

- Improve performance

- Provide credibility to results

Elements of a Review

- Short summary of the text

- Contribution statement

- Strengths and weaknesses

- Typical questions to ask

  - How relevant is this work?

  - How is the argument flow?

  - What is new about this work?

  - Which problem is this work trying to solve?

  - Which other works does it extend?

  - What did the authors do?

  - How did they do it?

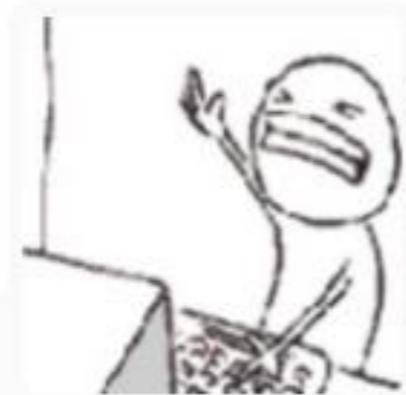 - How valid is their approach?

  - How relevant are the results?

Critical Review

- A review is NOT about personal interests or personal criticism of the author

- The review should focus on content and presentation

Ethics in Scientific Communication

- It is ok to consider a contribution to be superfluous or of no need for the scientific community.

- It is not ok to personally judge or insult the author.

REJECTED

Shit My Reviewers Say

Collecting the finest real specimens of reviewer comments since 1456

@yourpapersucks

POSTS   ASK ME ANYTHING   ABOUT/SUBMIT   ARCHIVE

REJECTED

"The paper comes with proofs, but – at a first glance – they seem to be more cute than useful."

"Recommendation: Publish elsewhere
Comments: [none]"

"Figure 6. This figure is silly."

"Why chase a gene in this ridiculous organism?"

"Unless the authors performed some clever pagan ritual before euthanizing the animals I would use 'killed' (or 'euthanized') instead of 'sacrificed"

REJECTED

"The p...
proof...
– the...
than...

"Fig...

clever pagan ritual before euthanizing the animals I would use 'killed' (or 'euthanized') instead of 'sacrificed'"

Don't do this!
The authors have put a lot of **effort** in their submission, and they might be still learning.
Be **accommodating** and **respecting**, and help them improve their work.

That's why we do reviews: to ensure **high quality**

Tasks of a Reviewer

- Analyse for

    - Correctness → did the authors design a valid study?

    - Originality → is this work novel? What's new in this work?

    - Significance → is this work useful? Does it have an impact?

    - Quality → is the analysis well done? Are the conclusions justified?

    - Improvements → Does it improve over what's already out there?

When does a paper merit publication?

- A paper merits publication if there is a scientific contribution

- Examples:

    - new and significant results

    - new knowledge through synthesis of known results

    - helpful surveys and tutorials

    - combinations of these categories

- Worth to publish: small, surprising results that stimulate a new direction for future research or has interesting applications
- Not worth to publish: results with flaws in methodology, repetition of previous work without significant improvement (debatable!)

Reviewers provide the following

- Decision in the form of a recommendation

  - accept

  - (accept with minor revision)

  - (accept with major revision)

  - reject

- Justification for the recommendation
- Ways for improvement (particularly in case of rejection)

Typical Review Report

- Overall judgement (usually scale from 1-5)

- Summary (1-5 sentences)

- Strengths and weaknesses in:

  - Originality and significance

  - Quality (methodology, precision, errors, presentation)

- Justification for the rating

A so-called "meta reviewer" revises all reviews, and summarizes them

Possible Verdicts (Smith, 1989)

- Major results - very significant

- Good, solid, interesting work; a definite contribution

- Minor, but positive, contribution to knowledge

- Elegant and technically correct but useless

- Neither elegant nor useful, but not actually wrong

- Wrong and misleading

- The paper is so badly written that a technical evaluation is impossible

Some Final Issues

- Multiple submissions at different conferences is not allowed

- Plagiarism results in immediate rejection (and possibly banning)

- Anonymity is sometimes important

- Conflict of interests: Reviewers should not review papers of people they worked with

- Reviewed papers should remain confidential

You're going to be a reviewer!

- Read the paper you are asked to review

- Write a review, guided by these slides and your own intuition on how to improve the paper you are reading

- Don't worry! Your review won't influence any grades! It will only help the authors improve their work.

- Be nice ☺