

Reviewing Scientific Papers

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Why Review?

- Keep the scientific system going
- Finetune ability to spot good from bad
- Help colleagues improve their papers
- See what is going on
- Build on your CV

Reviewing 101

- What are the major results?
- Are they correct?
- Are they new?
- Are they clearly presented?
- Are they worth publishing?

Types of problems

	Technical	Presentation	Omission
Minor	Background, Related work	Typos, spelling, grammar	Missing background or related work
Moderate	No effect on key results	Understanding harder (organization, notation, repeated grammar)	Omissions outside key results
Major	Changes key results	Prevents understanding of part(s)	Omission in key results (lack of experiment control, missing proofs)
Critical	Negates key results	Prevents understanding or evaluating key results	Evaluation is impossible or too little results

Recommendation

- Often one of:
 - Accept (as is)
 - Accept with minor revisions
 - Accept with major revisions
 - Reject
- Base on key results not on presentation
 - Presentation must be good enough

Guiding Principles

- Rejection on technical grounds
- Presentation problems so results inaccessible are technical problems
- Sending authors “back to lab” always a major change
- Changes not enough, authors should know
- As a reviewer you might be wrong

Making the assessment

- Major result (<1%)
- Solid & interesting; clear contrib. (<10%)
- Minor but positive contrib. (10-30%)
- Elegant and correct but useless
- Neither elegant nor useful, but not wrong
- Wrong and misleading
- Technical evaluation impossible

Sufficient Contribution?

- New & interesting result, or
- New & insightful synthesis, or
- Useful survey or tutorial, or
- Some combination...

Contribution to field?

- *“Small results which are surprising and might spark new research should be published; papers which are mostly repetitions of other papers should not; papers which have good ideas badly expressed should not be published but the authors should be encouraged to rewrite them in a better, more comprehensible fashion”*

Review report

- To PC/editor & Author:
 - Recommendations and your reasons (brief)
 - Summary of main points (1-5 sentences)
 - Necessary and Suggested changes
- Only to PC/editor:
 - Quality and validity judgements (Technical, Pres. ...)
 - Self-evaluation: Expertise / Strength of opinion

Differences in fora

- Journal: Major revision might be ok if key results important enough
- Conference: Major revision typically means reject

Ethics of reviewing

- You should be **OBJECTIVE**
 - If not you are biased & should **NOT** review
- Conflicts of interest
 - Tell editors or PC chair
- Never rude towards authors
 - Comment on work only

Other

- Don't waste time on unpublishable papers
 - Fatal or uncorrectable flaw => reject
- What did you learn from paper?

Bad examples

- “Pretty good paper” (full review with recommendation: Reject)
- “As usual, X got it wrong” (Rude, unprofessional)
- Rejecting paper then doing a similar study

This talk was based on

- Jeff Offut, “Editorial: Standards for reviewing papers”, STVR 2007, 17:135-136
- Alan Smith, “The Task of the Referee”, IEEE Computer, April 1990, pp. 65-71

Assignment

- Three groups of PhD students
- Reviews the same 1-2 papers individually
 - Use real review forms and checklists
- Discuss them in group

Assignment groups

- Robert: Kai, Hanna, Sebastian, Jeff, Nina, Wasif, Shahid
- Paul: Martin, Christian, Marie, Niklas, Sheikh, Johan Ho., Gideon, Johan Ha.
- Lars: Dejan, Sajid, Hussein, Kamilla, Dawit

Points to discuss

- Should author reputation be considered?
- Blind/double-blind reviewing or not?