Reviewing

Dr Amanda Coles, King's College London, UK

Who Am I?

- Senior Lecturer (Associate Professor), King's College London;

  - https://nms.kcl.ac.uk/amanda.coles/

- ICAPS program Co-Chair 2016;

- Senior PC Member: ICAPS, IJCAI AAAI, ECAI.

- PC Member: ICAPS, IJCAI, AAAI, ECAI and various workshops.

- Member of JAIR Editorial Board: 2014-2017.

On the receiving end of quite a lot of reviews since 2005...

Why Review?

- Community Service:

  - You need someone to review your papers;

  - Make sure the conferences remain high-quality;

  - Make sure the published literature is correct/reliable;

  - Have your say!

- Personal service:

  - Reviewing papers makes you better at writing them;

  - A way to force yourself to keep up with the literature;

  - ~~Reject competing papers.~~

Peer Review Has Limitations...

- Reviewers are researchers with limited time, and their own research to do, and are not paid to do the job.
    - Conferences now typically have a lot of submissions;
- NIPS Experiment:
    - 10% of NIPS papers went through the review process twice;
    - 166 papers, the two halves of the program committee disagreed on 42 accept/reject decisions.
    - P (reject in 2nd review | accept 1st review) ~ 60%
    - A random committee would get a value of ~75% https://cacm.acm.org/blogs/blog-cacm/181996-the-nips-experiment/fulltext
- Some good news: planning/ICAPS Reviewers are Usually Good ones :)
    - Rao Kambhampati: word counts of reviews and discussions at IJCAI by discipline: http://ijcai-16-pc.blogspot.com/2016/03/

Peer Review is far from perfect, but hard to fix!

Blind/Double Blind

- Blind Review: Authors don't know who the reviewers are:
    - Avoids concerns that the authors can hold a grudge
    - Reviewers free to make honest comment;
    - In AI mostly used in Journals.
- Double blind, Reviewers also don't know who the authors are.
    - Used in most AI conferences
    - Avoids 'this must be good because x wrote it'
    - Gives new people a chance: work assessed on its merits not on the 'name' of it's authors.
- Workshops are either blind or double blind, reviewing generally more relaxed.

Conference Structure

Program Chairs

Senior Program Committee

Program Committee

Additional Reviewers

Who is the Review For?

- Senior PC Member/Conference Chair:
  - Have 20/200 papers to deal with.
    - Want a brief summary of what the paper is about;
    - Key strengths/weaknesses of the paper;
    - A recommendation: accept/reject.
- Authors (imagine it's you!):
  - Have usually put a lot of work into the paper.
    - Want feedback on the paper: especially if rejected, how could they change it so you'd say accept in the future.
    - Prove you've read it.
    - Make sure you give both good and bad comments.

Typical Structure

- A Summary Paragraph for the SPC/Conference chairs with recommendation.

- Detailed comments about the paper.

- Grammatical niggles in detailed comments or separate at the end.

- Rebuttal Questions.

What are you Looking For?

- Introduction:
    - Does the paper convince you this problem is worth solving? (e.g. delete free planning)
- Content:
    - Novelty: is it new? Does it cite related work and make clear specifically what is new?
    - How big is the contribution: small delta on existing idea or completely new technique?
    - Check soundness
    - If it doesn't make sense (and you've made the effort) that's the authors' problem not yours! Try to be specific where you got lost though.
- Results...

Results

- Domain independent planning paper, results on several domains. Be suspicious if a few domains are chosen with no particular reason for selecting those:

  - All domains from a recent competition is fine;

  - All domains that have this feature (even if not many) are fine.

  - Driverlog from IPC3, Airport from IPC4 and Woodworking from IPC7 is suspicious!

  - Don't allow claims that something tested on one domain is domain independent.

- Does the text say something useful and extra from the results tables (e.g. planner is good at driverlog because x, does badly in airport because y etc.).

- Don't reject negative results, just because they're negative.

- Do the results support the conclusions: complain about faulty claims made on the basis of results that don't back them up.

Criteria

- Is there a form?

- AAAI 2012 Criteria:
    - Relevance;
    - Significance;
    - Soundness;
    - Novelty;
    - Quality;
    - Clarity;
    - Overall

- Don't give bad marks for everything because you don't like a paper: it's okay to reject a very clear paper that's not novel.

- Confidence: this is how familiar you are with the research area, not how senior you are.

Typical Requests/Complaints

- Add more detail on x.

  - Please suggest what can be removed to do this!

- Add more results.

  - Be specific, and make sure it's a realistic request.

- The paper is unclear:

  - Where?

- Contribution is too small:

  - What needs to be done to make it big enough?

- Technical Errors:

  - Are they small enough to simply be fixed? Are they crucial to the main results?

How to be Nice

- *That said, I think the topic and ideas are potentially interesting if developed further and combined with other techniques.*

- *In summary I think this is a promising avenue of work, but it is not yet sufficiently developed for publication at ICAPS.*

- *I would suggest that the most appropriate route for popularising this tool in the community, particularly at this stage would be to demonstrate the system in the ICAPS system demo session.*

- *If you think there's a way to salvage the idea suggest it; or perhaps suggest and alternative venue.*

- *Do you have any good ideas for where the work can go in the future? You can make suggestions (although don't give away anything you were already planning to pursue yourself!).*

My Review is Anonymous, so I'm safe, Right?

- The authors will not see your name, that is true. But...

- When you submit your review it appears on easychair, with your name attached, and the other reviewers on the paper can see your name and your review.
  - As can the senior PC;
  - As can the area chairs.

- Your reputation within the community is therefore affected if you write poor quality reviews.

- You'll end up in a discussion with leaders in the field about the paper about the result of your reviews, so make sure you do a good job.

- It's okay to change your mind during the discussion (that's what it's for!), or based on other reviews (which you can see when you've submitted yours).
  - Don't feel you have to change your mind because someone is more senior!

Ethics

- **Conflict of Interest**
    - Roughly: no colleagues or frequent co-authors
    - This is different to having a pretty good guess who the author is (the community isn't so large, so...)

- **Review papers are confidential** – they contain unpublished work (someone else's intellectual property).

- Don't share them, and don't steal the ideas – forget everything you knew about the work once the review process is over.
    - Should you bid for a paper you rejected in the past?

Accept or Reject

- The level at which you accept/reject will depend on the venue: check your remit.

- For small workshops priorities are often:
    - Feedback for the author;
    - Preliminary work is okay;
    - Want papers in through the door.
    - You should aim to give feedback about how the authors could get this up to a conference standard if possible.

- For ICAPS/AAAI/IJCAI the acceptance rate is generally below the 20% mark. This must be good work, not preliminary and with some convincing results. Being **borderline** is an option.
    - It's okay to publish things that have been in workshops in future conferences;
    - The opposite is generally not true.

- Journal reviewing is very similar to conference reviewing but the reviews are generally longer and more in-depth as the papers are.
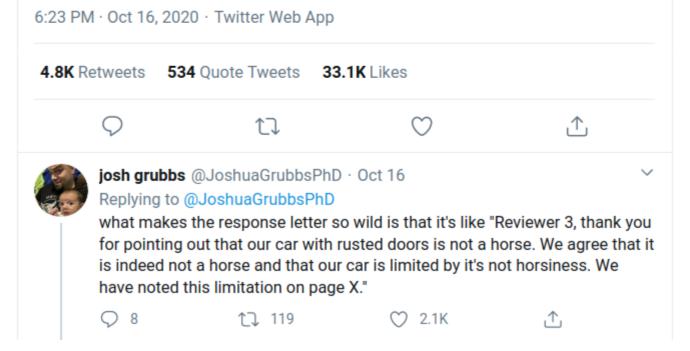
How long is a review?

- No hard-and-fast rule

    – One or two sides?

- 'Reject' reviews tend to be at the longer end: there's more to criticise

- But, still write comprehensive 'accept' reviews – even if you like the paper, you may need to persuade other reviewers, who disagree

- Don't do a short review just because it's a workshop

    – Sadly commonplace – better to not put the paper out for review...

Rebuttal Questions

josh grubbs
@JoshuaGrubbsPhD

Peer review is wild. It's like if you took your car to mechanic and one mec said: "we noticed all your doors have rusted out, you should fix those" and another said: "LOVE THE RUSTED DOORS, but have you considered adding a flame thrower?" and a third said: "it's not a horse."

6:23 PM · Oct 16, 2020 · Twitter Web App

4.8K Retweets   **534** Quote Tweets   **33.1K** Likes

josh grubbs @JoshuaGrubbsPhD · Oct 16
Replying to @JoshuaGrubbsPhD
what makes the response letter so wild is that it's like "Reviewer 3, thank you for pointing out that our car with rusted doors is not a horse. We agree that it is indeed not a horse and that our car is limited by it's not horsiness. We have noted this limitation on page X."

8   119   2.1K

Rebuttal Questions

- What would change your mind?

    - If nothing, then at least write something that gives the authors the opportunity to address your biggest concerns.

    - Even if you are recommending accept, you can still list the main questions you have.

- Responding to rebuttals:

    - **Be polite**: you're not going to change anyone's mind by being rude!

    - You have restricted space so try to find out the most important things to tackle.

    - One debatable rule (most people ignore) 'no new material may be presented in the rebuttal':

        - If you do have more results that you left out but were asked for will you omit to discuss them?

        - Is it fair to reject a paper because 'the authors didn't bother to respond'? Maybe they're just following the rules, e.g. only answer questions and there were none...

A Review isn't Always What it Seems

- Since reviews tend to point out the bad things about papers:

  - If your paper has a lot of comments about it it might still have good scores.

  - So don't give up for the rebuttal.

  - Some reviewers tend to always write negative reviews but sometimes give good scores.

  - I've had some reviews I thought were bad, but the scores turned out okay.

Summary

- Remember the author will read your review: be nice, be constructive.
  - Even if the authors don't know who you are, the other reviewers will.
- Write something short and descriptive for conference chairs/SPC at the top.
- Results are a good place to start if in doubt.
- Don't feel obliged to reject everything.
- Be Polite in Rebuttals.