Reviewing

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Who Am I?

- Senior Lecturer (Associate Professor), King's College London;
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- ICAPS program Co-Chair 2016;
- Senior PC Member: ICAPS, IJCAI AAAI, ECAI.
- PC Member: ICAPS, IJCAI, AAAI, ECAI and various workshops.

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.
  - $P(\text{reject in 2nd review} | \text{accept 1st review}) \approx 60\%$
  - A random committee would get a value of $\approx 75\%$
- 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/](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

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."

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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 2,100
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.