Reviewing

To do ...

The Piled Higher & Deeper
Paper Review Worksheet
Stuck reviewing papers for your advisor? Just add up the points using this helpful grade sheet to determine your recommendation.
No reading necessary!

Paper title uses witty pun, colon or begins with "On..." (+10 pt)	
Paper has pretty graphics and/or 3D plots (+10 pt)	
Paper has lots of equations (+10 pt) (add +5 if they look like gibberish to you)	
Author is a labmate (+10 pt)	
Author is on your thesis committee (+60 pt)	
Paper is on same topic as your thesis (-30 pt)	
Paper cites your work (+20 pt)	
Paper scooped your results (-1000 pt)	
TOTAL	

Points	Recommendation
< 0	Recommend, but write scathing review that'll take them months to rebuff.
0-120	Recommend, but insist your work be cited more prominently.
>120	Recommended and deserving of an award

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"Goto statement considered … ", Dijkstra

The author is a proponent of the so called "structured programming" style, in which, if I get it right, gotos are replaced by indentation. Structured programming is a nice academic exercise, … More than 10 years of industrial experience with Fortran have proved conclusively to everybody concerned that, in the real world, the goto is useful and necessary: its presence might cause some inconveniences in debugging, but it is a de facto standard and we must live with it. Publishing this would waste valuable paper …

Confidential Comments to the Editor

The author should withdraw the paper and submit it someplace where it will not be peer reviewed. A letter to the editor would be a perfect choice: Nobody will notice it there!

S. Santini, We Are Sorry to Inform You ...,
https://ieeexplore.ieee.org/document/1556500

How to review a paper

- What are the differences between reading and reviewing?
  - Reading: information gathering, typically for the benefit of your own research benefit
    (You are a scientist.)
  - Reviewing: goal is to (1) determine a paper's suitability for some conference (2) provide feedback to authors to improve paper
    (You are a teacher/evaluator.)

Consider the audience

- Will this generate discussion?

- Is this a paper that's going to send people to the hallway?

- Will the people who commonly read these proceedings benefit from the contributions?
  - Would people who read other proceedings benefit more from the paper?

Consider the standards

- Workshops are typically more permissive as far as accepting "vision" without completed, supported work
  - More emphasis on "fostering discussion"

- Conference: Depends on quality of papers in the reviewers' piles and selectivity

- Journals often have the highest standards, especially since the review process is iterative

Consider the purpose

- ## Survey
  - – Is the overview complete?

- ## Tutorial
  - – Is the description correct and clearly described?

- ## Proposal
  - – Does the research agenda that is advocated make sense? Is it worthwhile?

How to write the review itself

- ## Start with a summary
  - Demonstrates to the authors (and to you!) that you understand the main point of the paper
  - A neutral description of what the paper is about, where the authors come from, why the problem is important and what they have done

- ## State what you think the contributions are
  - Could it be they are not stated
  - That the contributions stated are flawed

How to write the review itself

- ….
- Discuss how authors do or do not deliver on the claims/contributions of paper
- Discuss positive aspects (if any)…try to find something
- Provide high-level suggestions for improvement
- End with nits (spelling, punctuation, etc.)

Sample categories from a review form

- Reviewer confidence
- Summary
- Novelty
- Clarity
- Relevance ("Scope")
- Strengths / Weaknesses

Summary

- Please summarize the paper in a few sentences. Try to address these questions:
  - What type of paper is it?
  - What is the context for this paper?
  - Is it correct?
  - What are its contributions?
  - Is it comprehensible?

Detailed comments

- Be positive in your reviews
  - "The scheme is bad"
  - "The scheme would be stronger if it dealt with case X"
- Missing prior work?
  - Give a full citation to the work that should be cited
- Please address any of the following that apply
  - Incorrect assumptions
  - Insufficient evaluation
  - Instances where the solution may not work correctly
  - Portions of the paper that you found hard to read or understand

Detailed comments

- Please address any of the following that apply:
  - …
  - Whether the focus of the work is too narrow, leading to incremental gains
  - Whether the proofs are correct
  - Whether the statistical analysis is correct
  - Whether the claims made match the contributions
  - Whether the authors use an appropriate data set
  - Whether the system leaves out important components
  - Whether the solution is deployable.

Grading criteria

- 1. Impact
- 2. Novelty
- 3. Clarity
  - Problem stated clearly
  - Solution and evidence for its quality (e.g. experiments) stated clearly, ideally reproducible
  - Novelty stated clearly

- This is how your work will be "scored", and how you'll score others' work.

©

Basic methodology

- As soon as you get them,
  - Print them out and numbered them (e.g., *conf-#*)
- If different length, group them
- Read all in the set, making notes on the side (make a note if you need to follow a reference)
  - Try to make a "one bit" decision here
  - I carry them around through the day
- Start from the top of the pile and write a full review
  - This is an intensive, on the computer session
  - Use offline review option, upload and file later

General tips on tone and content

- Be polite and respectful
- Provide suggestions for how to improve the paper
  - You may see the paper again!
  - If the paper is accepted, the flaws should be fixed
- Be positive
- The point is not to shoot the paper down

Common mistake: Being too critical

- Don't miss the forest for the trees!
  - Papers are never perfect
  - Your job is to determine whether a paper's flaws invalidate the contributions (and whether the contributions are significant)

- Being too critical can prevent important research results from being published

Other mistakes and no-nos

- Insulting the authors
  - Criticize the paper, not the authors
  - "The paper did not address…"
- Revealing your own research agenda
- Distributing submitted papers
- Spending too much time reviewing a paper
  - Rule of thumb: Don't spend more time reviewing a paper than the authors did writing it!
  - If a paper is sloppy or flawed, don't waste your time
- …