

Publishing Your Research

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Computing Research Association
Widening Participation



Link to captions

<https://bit.ly/3PYcqIB>



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Publishing Your Research

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Slides modified from previous GC presenters – thank you!



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Quick show of hands...

- 1) Have you read a paper in your field?



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- 2) Have you given feedback on a colleague's paper?



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Quick show of hands...

- 1) Have you read a paper in your field?
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- 3) Have you co-authored a paper submission?



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Quick show of hands...

- 1) Have you read a paper in your field?
- 2) Have you given feedback on a colleague's paper?
- 3) Have you co-authored a paper submission?
- 4) Have you co-authored an accepted paper?



High-level Topics in Slide Deck:

The Why, What, and Where of Writing Papers

The How of Writing a Paper

Your Paper's Journey

Slides will be posted on the [Grad Cohort website](#)



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Let's Brainstorm First!

PollEv.com/ellas181



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The Publishing Process:

The Why, What, and Where of Writing Papers



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The “Writing Bug”



It feels good:

- to share what you’ve done
- for others to be interested in your work
- to show how you’ve advanced state of the art!



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The “Writing Bug”



So keep doing it, as much as you can??



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The “Writing Bug”



So keep doing it, as much as you can??

- **Quality!**
- Quantity varies by area
- Citations matter as career progresses
- Venues matter



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Types of Publications

- Poster
- Position / vision paper
- Implementation paper
 - Source code
- Research paper
- Experiences paper



Where and What Depend on Why

- Research prestige
- Practitioner engagement
- Feedback
- Visibility
- Community engagement, so your work is used and benefits others



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Where and What Depend on Why

- Research prestige (e.g., NIPS, CHI, INFOCOM)
- Practitioner engagement (e.g., USENIX)
- Feedback (e.g., posters, workshops)
- Visibility (e.g., arXiv.org)
- Community engagement, so your work is used and benefits others (e.g., open source)



Where and What Depend on Why

- Research prestige
- Practitioner engagement
- Feedback
- Visibility
- Community engagement, so your work is used and benefits others

OR maybe choose venue based on:

- Maturity of the work
- Rigor of reviewing
- Opp. for networking



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Where and What Depend on Why

- Research prestige
- Practitioner engagement
- Feedback
- Visibility
- Community engagement, so your work is used and benefits others

**Talk to
your advisor**



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The Writing Process:

The How of Writing a Paper

Good writing makes a difference!

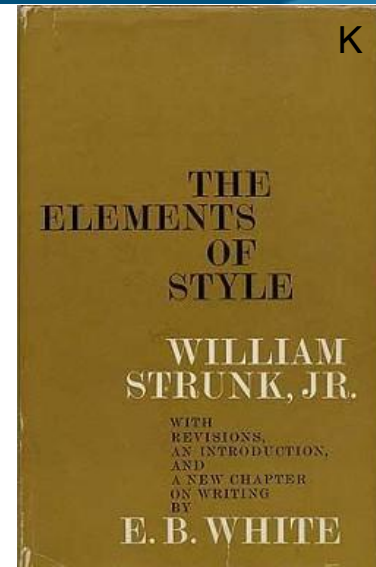


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Writing Resources

- Writing courses at your university
- Reference books (Strunk & White)
- Professional or pro bono proofreaders
- Tips on technical writing:
 - Hints for Technical Paper Writing, Armando Fox,
https://people.eecs.berkeley.edu/~fox/paper_writing.html#hints
 - How and How Not to Write a Good Systems Paper, by SOSF-9 chairs Roy Levin and Dave Redell,
https://www.usenix.org/legacy/publications/library/proceedings/dsl97/good_paper.html
 - How to Get a Paper Accepted at OOPSLA, panel at OOPSLA 1993,
<https://dl.acm.org/doi/pdf/10.1145/165854.165934>



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Know Your Audience

- Read lots of papers from the target venue
- Attend the venue (if a conference or workshop)
- Review for the venue if possible
 - assist your advisor in reviewing
 - ask ask your advisor to recommend you as a reviewer
- Program Committees
 - Some conferences offer “shadow PCs” for senior students and young PhDs
 - Senior students may serve if advisor nominates



A Recipe

- Prepare the raw ingredients:
 - Figure out your paper's story
 - Do (another) literature search
 - Create an outline
- Repeat until fully baked:
 - The more iterations, the stronger the paper
 - Get feedback from non-author colleagues
 - Revise based on the feedback



Authors

- Be explicit (and generous) about authorship (who AND in what order)
being clear early on avoids conflicts
- Agree on division of labor
- Agree on internal deadlines (for outline, drafts of sections, full draft, feedback, etc.)



Create an Outline

- Iterate and agree on the outline with your co-authors before you start writing
- You don't need to fill in the sections in order
 - Sections I find easier to write first: Related Work, Methods, Results
 - Sections I often save until later: Introduction, Discussion
 - Writing the Abstract first can help frame the paper (though I often write this last!)



Revise, Revise, Revise

- The paper will (and should) evolve
- Writing a paper can help you see the work in a new light
- Feedback from peers may suggest a new way to frame the problem you're solving or identify new contributions
- Feedback may lead to changes in the outline, the figures, even the authorship



Key points to convey

- What is the problem?
- Why is it important?
- What have others done about it?
- What are you doing about it? (What is novel/different from others?)
- What are the takeaways? What should the world learn from your work?



Obeying Double-Anonymous Rules

- Many conferences use double-anonymous reviewing
- Do include references to your previous related work, but use 3rd person (“Smith showed...”)
- If you used a special resource from your school, lab, industry, don’t call it by name.
- If you are giving code, scripts, etc., to reviewers, place at an anonymous location (github, dropbox) and remove anything in the code that identify you.



ChatGPT

- Some conferences (e.g., ICML) allows ChatGPT-like tools “for editing or polishing author-written text”
- They ban “text `produced entirely’ by AI.”
- Check the rules of the conference
- Safer to not use unless explicitly allowed
- If you use it to help with literature review, **check its output carefully**. Read the papers yourself!



Exercise: Pair up and Critique an Abstract

(example thanks to ChatGPT)



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Title: AI Techniques in Healthcare

Abstract: This paper explores various AI techniques used in healthcare. It discusses machine learning, deep learning, and natural language processing. The paper also briefly touches on their applications in medical diagnosis, patient monitoring, and drug discovery. Through a review of existing literature, the advantages and challenges of implementing AI in healthcare are examined. The paper concludes by suggesting that AI has the potential to revolutionize healthcare but requires further research and collaboration between medical and AI experts.



A few issues ...

- Lacks specificity and focus
- Fails to articulate a clear objective or contribution
- No details on the methodology / approach taken
- Too vague
- Isn't engaging
- Missing key conclusion(s)



Title: Enhancing Medical Diagnosis Accuracy Through AI-Enabled Decision Support Systems

Abstract: This paper presents a systematic review and analysis of AI-driven decision support systems in medical diagnosis, with a focus on enhancing diagnostic accuracy and clinical decision-making. Leveraging machine learning, deep learning, and natural language processing techniques, we examine their applications across various medical domains, including radiology, pathology, and genomics. Through a comprehensive evaluation of existing literature and real-world case studies, we identify key challenges and opportunities in deploying AI in clinical settings. Our findings underscore the potential of AI-enabled systems to improve diagnostic accuracy, reduce medical errors, and optimize patient outcomes. Moreover, we discuss the importance of addressing regulatory, ethical, and interpretability concerns to foster trust and adoption of AI-driven healthcare technologies. This research contributes to advancing the state-of-the-art in AI-driven healthcare and provides actionable insights for clinicians, researchers, and policymakers.

The Submission Process:

Your paper's journey



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Conference vs. Journal

- Submission deadline vs no deadline
- Shorter paper length vs longer
- Travel/registration costs for conferences
- Review cycle often longer for journals



Possible Outcomes

- Conference
 - Accept or Reject
 - Rebuttal may be possible
- Journal
 - Accept (rare on 1st submission)
 - Minor Revision (possibly with accept)
 - Major Revision (be attentive to suggestions; maybe only one shot)
 - Reject (review may specify “submit as new” or “hopeless”)



When to submit?

- Better to push for a fixed deadline or wait until the work is “ready”?
 - Can be stressful if you don’t feel your work is mature enough by the deadline
 - Deadlines can be great forcing functions for focus and making progress
- Some conferences are shifting to a journal-like reviewing model
 - Multiple submission deadlines per year
 - Examples: VLDB, NSDI, ASPLOS, SIGMOD
 - You can choose a deadline when your work is ready
 - Accept-with-revisions outcome enables a round of revisions for work that might otherwise have been rejected



The Submission Process

- Abstract Pre-Registration
- Keywords = Reviewer Matching
- Conflicts on the PC (exact criteria vary)
- You may need to explicitly mark the paper ready to review
- Page limits and formatting rules are typically strictly enforced
- Suggestions:
 - Take advantage of reviewing site format checks on an early draft
 - Upload a close-to-final version before the submission deadline



Author Responses / Rebuttals

- Primary goals:
 - Correct any factual errors or misunderstandings in reviews
 - Answer reviewer questions on which their decision may hinge
 - Convince reviewers that you will incorporate their feedback
- Pro tips:
 - Sleep on it!
 - Prioritize reviewers' comments (e.g., points raised by multiple reviewers) and group by themes
 - As with all writing, start early, get feedback, iterate
 - What if your scores are very low or high?



If Your Paper is Accepted

- Congratulations!
- You may need to work with a shepherd
- Copyright
 - Online web form usually
 - Must complete to get DOI and sometimes footnote content about rights to use
 - Non-academic co-authors can be a complication



If Your Paper isn't Accepted

- Yes, it will sting – give yourself time to process
 - Even established researchers have work rejected
- Reviewer comments are intended to help prepare the next version of your paper
 - What didn't reviewers understand? How to make it clearer?
- Rejection may be a good thing in the end



Things to Avoid

- Plagiarism (including self-plagiarism)
- Dual submissions
- Submitting without knowledge of advisor/co-authors
- Least Publishable Unit (LPU)
- Complaining about reviews on social media
- All-nighters (start early, iterate often!)



Exercise: Create an Action Plan

How will you become more successful in publishing your work?

Write down 2-3 TODO items post Grad Cohort



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Summary

- Publishing gives you the chance to share the great work you are doing
- Where to publish depends on your goals: feedback, community engagement, research prestige
- Many resources available to help with writing and submission process
- Start early, ask for feedback and iterate



Any remaining questions?



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