

Publishing your work

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What to publish

- Good ideas, better ideas, and best ideas
 - Ask yourself why other people might want to read your paper
 - Have a good taste! Have a judgment!
 - It is “easy” to publish, but impossible to unpublish
- Not a laundry list – it needs to be a coherent story, even if it has lots of mathematical formulas, equations, inequalities, etc.
- New perspectives, connections (with other areas), important applications.

How to get a good idea

- Foster your research taste – have a judgment
- Master the essence, get into details when reading important papers.
 - Understand a few key papers in a substantial way
- Aim at important and new challenging problems
 - Follow the trend (e.g., the bootstrap trend, the LASSO trend, the MCMC trend, the bioinformatics trend)
 - Follow the data/technology (e.g., bioinformatics, single-molecule analysis, neural sciences, computer vision, internet, etc.)
 - Always try to think big (big pictures, big problems, and ...)
 - Follow your heart and do what makes you happy
- Is the idea new, general, effective, surprising, and unconventional? Does it have a broader impact?
 - E.g., bootstrap, EM algorithm, data augmentation, sliced inverse regression, LASSO, LARS, FDR controls

How to start writing

- Everyone has a mental block (i.e., you are not that special), but writing is too important to skip
- Start with essentials: describing your ideas, trying to convince and attract people
 - Don't start by aiming at a perfect introduction section
 - Don't be bogged down by tedious details
- You need passion to write well!! Write it when you are still excited about it
- Try to read as a third-person and see whether the writing is self-sufficient
- Survey what other people have done
- Discuss importance and limitations
- Give a good title and write a good abstract

Trivia about writing

- Learn more about writing by paying attentions to how others write
- Have a book about writing (such as Chicago Styles, “Scientific Writings” etc.)
- Small things can be annoying (e.g., “the”, “a”, etc.)
- If you are not Shakespeare Jr., try not to be inventive at writing
- Do not “translate” phrases in your native language to English verbatim.
- Avoid redundancy and repeats;
- Discover and remove “content-less” sentences and paragraphs
- Avoid self-boasting! Avoid using emotive words! State in a “matter-of-fact” fashion.

When to stop and send the paper out

- Have a complete story
 - The main method (motivations and main challenges). Clear statement about innovations and contributions?
 - Theoretical properties (sometimes incomplete), empirical performances, and its applications;
 - Other related approaches, literature review, and performance comparisons.
 - Good enough example(s)?
 - Broader impacts, broader connections, and possible extensions
- Write things as clearly as possible (see later)
- Read it multiple times, from a third-person's point of view, until you do not have much to change

Where to send

- Choose top journals
 - If you are really confident about your ideas and approaches, always go with the top ones that are appropriate for the type of articles
 - Broader impact, not necessarily harder
- Find journals publishing “similar” articles
- Consider the audience of the journal
- Reality check (idea new enough? Proof rigorous enough? Explanations clear enough? Etc.)

When referees' reports are received

- Can you fight rejections?
 - Yes, but evaluate your positions carefully before you proceed
- Should you fight the rejection?
 - Gross errors and obvious biases by the referees?
 - Utterly lack of or mis-understanding of the main idea from the review team?
 - Obvious conflict of interest?
 - Are you angry (feeling being treated unfairly)?
- No use to fight “judgmental rejections”

When referees' reports are received

- Do not take reviewers' criticisms personally!
 - Although sometimes they sound harsh
 - Try to see if there are some good points –really try
 - Try to see if there are major flaws in reviewers' comments and the AE's comments
 - Even if they have flaws, it can still be your fault that you did not explain things clearly and succinctly.
 - **Decide whether to continue**
- Write the rebuttal letter
 - You need to be passionate in order to write good stuffs
 - Let it sit for a week, and then revise!

Revising papers

- Referee's reports are often VERY helpful, even those “nasty” ones!
 - Try to think/speculate why the reviewers got those impressions (or mis-understanding) and made those comments
 - Do not be defensive, but DO defend your position if you are sure of it and you think that the referees misunderstood. The question is HOW?
 - Try your best to “align” with the referees' positions
 - Start your argument by agreeing first!

Revising (continued)

- Do not just brush away a seemingly “stupid” comment – try to understand why certain confusions occur. Take everything positively, sometimes with a witty twist
- Pay attention to details
 - Are all questions addressed or responded?
 - Any gross errors (e.g., typos, undefined terms, misleading sentences, etc)
 - Are all sentences meaningful and useful?
- No need to be a perfectionism – there is always more to do, but you need to stop somewhere.

Finishing touches

- Write a good response letter – explain things as well as you can (there is no page limit!)
- Read the introduction and the discussion sections carefully, making them as attractive as possible
- Pay attention to examples (easy, simple, yet insightful examples are most effective)
- Make sure that the overall flow is smooth

Writing grants vs writing papers

- Focus on writing papers first!
 - You need to establish a reputation, especially for NSF
 - You need to generate some new ideas
- Getting a grant would be much easier given a few solid publications
- Writing grants does help sharpen your thinking and writing