

“How to write scientific papers and get them accepted reasonably often”

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Overview



- Why write papers ?
- What kind of papers ?
- How to write papers
- How journals respond and what to do

Why write papers ?



- You like writing and its indoor work with no heavy lifting
- You need to for your career
- You have a burning new idea you want to share
- You are being made to because you are a research student

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What kind of papers ?



- Journals v. Conference
 - Best, easiest, most worthwhile ?
- Quantity v. Quality
- How many authors and which order :-) ?
 - If you're a biologist use the telephone directory
 - Alpher, Bethe and Gamow :-(

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How to write papers



- Understand the journal you are writing for and its limits
- Practice, practice, practice
- Get structure right
- Get colleagues to review
- What writing software to use ?

How to write papers



- Understand the journal you are writing for and its limits
 - They're all different – word limits, picture limits ...
 - The style varies. Read a few to see how the journal 'works'.

How to write papers



- Practice, practice, practice
 - What can I say ? Writing is an acquired skill which improves with practice.
 - Don't be afraid to rewrite – consider it a challenge not a chore. **NEVER** go with the first or even second version.

How to write papers



■ Get structure right

- Abstract
- Review field and state problem carefully
 - Recent references best
 - Quote reviewers if you have some idea who they are. (Sometimes they ask !)
- Present your solution
 - Data is wonderful. Data with sound analysis is even better. Its much harder to reject a paper with a good dataset.
- Good conclusions are important
 - State carefully what you've found with limitations
 - Suggestions for further work

How to write papers



- Get colleagues to review
 - Its hard to improve a paper on your own
 - Make sure all your co-authors read it
 - If you are a sole author, be prepared to use the reviewers for one journal to help you improve it for the next

How to write papers



- What writing software to use ?
 - **Requiring money:** Most journals have standardised on .pdf files. Microsoft don't like .pdf files but Acrobat is pretty good so you can use Word (although equation handling is awful and you have to buy bibliographic reference software). Mathematica is good for generating pictures.
 - **Free :-):** Latex and its Linux front end Kile are excellent for equations and references. It also takes postscript pictures so Xfig for figures and gnuplot for scientific data plotting.

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How journals respond and what to do



- The review process
 - Quantity v. Quality revisited – there's no such thing as a free lunch. Compare IEEE journals (~12 (7+5) reviewers, with 2-3 in others, but everybody knows this)
 - It can take an age: 1-2 years not uncommon
- It got accepted
- It didn't get accepted

It got accepted



- Unconditionally – you’ll be lucky
- Subject to minor revisions – maybe
- Subject to major revisions – probably

Note: Even if you get it in, the best journals will often completely rewrite it under the guise of *editing for house style*. Don’t be hurt and check that editing does not change meaning. This is a vulnerability in the peer-review system.

It didn't get accepted



- Rejected – very likely
- Rejected with a barrage of insults – occasional

You have several choices ...

- Argue with editor. Rarely worth it.
- Take comments into consideration and try another journal, or if all else fails ...
 - Get yourself a writing site and put it there.
- Do not give up if you believe in your work

Conclusions



- Whether you want to remain an academic or make your way in life in other ways, independently reviewed work is a BIG HELP. (Employers like the implied writing and organisational skills)
- On balance quality is probably better than quantity but this is a personal view

Reference



My writing site:-

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