TIPS FOR SUCCESSFUL PUBLISHING

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**WHY AM I HERE?**

**HIGHEST-CITED PUBLICATION ON ARXIV IN 2011–2012**
*(WRITTEN WITH 2 CO-AUTHORS)*

*(NOW SURPASSED BY HIGGS BOSON DISCOVERY & PLANCK SATELLITE RESULTS)*

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**Papers commonly cited by ATLAS and CMS**

As of 2012-02-18, from 'papers', excluding self-citations

- Pythia 6.4 MC
- GEANT4
- Anti-k jet alg.
- CT10 PDFs
- MSTW2008 PDFs
- CTEQ6.6 PDFs
- Herwig 6 MC
- RPP2010
- ALPGEN
- LO* PDFs
- MC@NLO
- JIMMY
- MadGraph4
- POWHEG (2007)
- FEWZ NNLO
- CT10 PDFs
- MC@NLO heavy-flavour
- FastJet
- Z1 UE Tune
- Pythia 8.1

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**PETER SKANDS - SCHOOL OF PHYSICS AND ASTRONOMY**
#1 COLLABORATE AND LEARN

Seek every opportunity to go to the best places in the field; work with the best; learn from the best

- Publish with the best; they will mentor you on what they consider a good paper, how to write it, publish it
- The strength of their reputation will help cross thresholds while yours is developing ➤ kick off a strong publication record

Your peers will notice whom you publish with, and future employers & funding agencies will appreciate whom you have worked with / whom you get reference letters from

- Everyone appreciates good writing skills! (Practice makes perfect!) No unique recipe ➤ room to develop your own style.
#2 A GOOD PAPER IS CREATIVE, USEFUL, AND RIGOROUS

New & worth sharing ➤ worth reading ➤ worth citing

- Solid and honest scientific analysis, including discussion of uncertainties.
- All claims fully backed up by proof/references (especially controversial ones!)
- Make it easy for people to understand what you have done, and to use it
  - Establish clear narrative and key new idea(s) in abstract/intro
  - Consider how your work is likely to be used. What can you provide to help people apply or test your ideas/methods/solutions? Supplementary code, documentation, instructions, pieces of good/helpful advice?

Note: tempting to ‘sit’ on an idea and keep working at it until it can solve all the world’s problems. My advice: divide and conquer!

- Publish in stages (provided each piece still above ‘quality journal’ threshold)
Peer review isn’t perfect (but the best we have)

- Referees (even editors!) can be bigots, snobs
- Your work won’t always be evaluated on strictly objective scientific grounds
- Anticipate bias and prejudice. Construct your arguments accordingly
- Don’t take it personally. Plenty of high-quality journals out there
If you’re at a university like Monash, with a well-funded library, you may not realise the incredible cost and profits of some academic journals. Think public health care; even though you don’t see the bill, you (taxpayers) still pay. Recall that we write the papers and we do the peer review! (Often we even do much of the typesetting)

Example: Elsevier is the largest publisher of scholarly journals in the world. According to The Economist, Elsevier made $1.1 billion in profit in 2010 with a profit margin of 36%, which grew to a reported profit margin of 39% in 2013, and 37% in 2014.

In 2012, more than 15,000 academics signed a petition stating that they would snub the Elsevier journals that failed to “radically change how they operate”. The protest failed to gain enough support to trouble Elsevier; last year the company received article submissions from 1.8m authors.
NOTE ON IMPACT FACTORS (IF), AND RELATED METRICS

I encourage you to be leaders, not followers. If you revolutionise the field, it is not you who should be thanking the journal, but the other way around.

- The quality of your research should be unassailable, no matter where you publish ➤ Publishable in any ‘good’ journal in your field

You should nonetheless be aware of the need of administrators (including potential future employers, promotion committees, grant agencies) to focus on a few very simple metrics to evaluate academic performance + impact, and some consequences this may have for you

- IF of journals you have published in may be used as a proxy for your research quality/impact
- The IFs of journals mostly measures short-term impact (# citations in the first 1 to 5 years)
- The focus on short term ➤ market for ‘sensationalist’ (or ‘ambulance chasing’) papers, with short shelf lives. (May be a good fit for you if you are a fountain of ideas.) E.g., letter journals renowned for high short-term IFs (ignoring much worse long-term ones).
- Thorough lasting research takes longer (lower output rate) and may be published in - well, not crap journals - but just standard high-quality ‘good’ ones ➤ Competitive if long shelf life