

So You're Applying for a Postdoc?

Some Collected Experience

By Jen and Brett

Timelines, Links, Types of Postdocs

- Application season opens in ~November and can go through the summer
- Links
 - AAS Job Register: <https://jobregister.aas.org/>
 - Astronomy Rumor Mill: <http://www.astrobetter.com/wiki/Rumor+Mill>
- ‘Prize’ Fellowships: Hubble (inc. Sagan/Einstein), Jansky, NSF, ...
 - Yale/Caltech/Princeton/... have their own prize fellowships
 - 100% your science
- Individual PI postdocs usually include some combination of time for your own research as well as for a (funded) project
- ‘Service’ or ‘institutional’ postdocs, typically at observatories, are usually for a combination of your own science + institution-specific duties

How to Strategize Where You Apply

- There is such a thing as too many; it takes more time than you think to apply
- It's OK to have boilerplate application material (esp. regarding research), but each application should have a degree of personalization to the job
- Apply where you would love to go. Don't sell yourself short.
 - Is the project interesting? Is the location at least acceptable?
 - If you'll be miserable, it's not worth your time
- Take advantage of places where you or your letter writers have contacts
- Prize Fellowships come first and take more time: prioritize these and put your best research idea forward. Start writing at least 3 months in advance.
 - Be aware of the idiosyncrasies of some proposals. The NSF, for example, is a nightmare of absurd paperwork; it's manageable if you're expecting it, and crushing if you aren't.

Parts of a Postdoc Application

- Cover Letter
- Curriculum Vitae (CV)
- Research Summary (What you have done)
- Research Statement (What you want to do)
- Letters of Recommendation
- Occasionally: Inane Bullshit. (See Also: NSF)

Cover Letter

- Take this part seriously; your competitors will. It sticks out if you skip this.
- WRITE TO THE JOB ADVERTISEMENT
 - Sometimes HR has the job of first filtering out irrelevant applications
- Show that you've actually given some thought to why the hiring committee should take you seriously as a candidate for this position
 - A standard cover letter reads like a standard cover letter
 - If you have a personal tie to the location, it's okay to say so
 - If it is the only job you really want, it's okay to say so
- This is the only chance for them to hear *your* voice as they decide who to put on a short list; it can be a strong point in your favor to help you stand out
 - Good place to point out specific aspects of the position that make you especially qualified for it and want to work there
 - Good place to reinforce specific pieces of your CV that are very relevant to the advertisement (plus alignments with diversity or other extra initiatives)

Curriculum Vitae

- Extremely situationally dependent - see examples!
- Distill what is important
- Apply for funding as a graduate student
 - NSF GRFP, Reber, Jefferson, VSGC
 - Observing Time w/ Money (Hubble, SOFIA, JWST, Spitzer)
- Example Sections (YMMV)
 - Education
 - Research Experience
 - Observing Experience
 - Teaching, Mentoring, Outreach
 - Awards
 - Academic Societies
 - Talks/Posters
 - Non-Scientific Pursuits
 - References
 - Publications
 - Service

Research Summary

- Summarize your research accomplishments in a results-oriented way:
 - **Good:** I found correlations between interacting dwarf galaxies and enhanced star formation
 - **Meh:** I studied optical imaging of interacting dwarf galaxies
- Explain clearly your technical skills related to modeling, data reduction, etc and how they contributed to the science result
- (Context Dependent) Reference the job requirements and/or other research ongoing at the institution
- Include a one-paragraph Executive Summary at the top under the title
- Don't be afraid to use bold face (sparingly) to help drive in take-home points

Research Statement

- Clearly identify a *topical* problem, and connect it to the *big picture*
 - You are speaking to a wide audience - you may need to convince a pulsar person that your astrochemistry work is important (to astrochemistry)
- Lay out clearly what you will do to address the problem
 - This does not mean *in detail*
 - If you already will be bringing observational data, point this out!
 - Highlight the skills you bring (uniquely?) to answer these problems
- Reduce walls of text - use figures to tell your story whenever possible
- Make your document beautiful (use LaTeX)
- Cite appropriately but not excessively

Letters of Recommendation

- Start building relationships with potential letter writers now
- Ask a variety of people, so that each letter speaks to a different skill set
- Help your letter writers
 - Remind them of the good things you did that they can speak to
 - Let them know if there's something specific to an application they should write about (i.e. this job involves algorithm development, so talk about the code I wrote for you that saved you six months of work)
 - Provide a spreadsheet with basic info (deadline, submission vehicle, link to job description)
 - Remind them reasonably often and give them as much lead time as is feasible
- A good letter takes a lot of time to write and a lot of effort. Ask nicely, thank profusely, continue to build bridges for the next time you need a letter!

How to Give a Good (Job) Talk

- Be specific about your role in the project, without gory details
 - Hit your creative process highlights (key decision points) then just get to the results/insights
 - Use 'we' when appropriate, and use 'I' when it was your decision/result/insight. This stands out to an audience that hears and reads 'we' every day.
 - Highlight portions of the work that speak to relevant skills for the job
- Demonstrate your diverse capabilities
 - If you're presenting radio astronomy results, but can display and talk knowledgeably about complementary optical results in the literature, and how your results inform or enhance those - that's a big plus!
- Do your homework: who is going to be in the room? What do all those papers you cite actually say? Was there a new paper recently on astro-ph?

Inane Bullshit

- When is the application due
 - For NSF, if you're late by a minute, you can be totally excluded, zero-tolerance
- Will the system refuse to send requests to letter writers until you have submitted your application in full?
 - These same systems often have the due date for writers the same as the application - meaning you give your writers no time to submit!
- Is there a file size limit?
 - Brett once had to spend two hours getting a ten-page proposal under a 2 MB limit because that's still a thing, apparently
- Some applications want transcripts, some want you to enter your coursework by hand, others want to know every person you've collaborated with in the last 5 years.

Final (Misc) Tips

- Create a good website so you have a strong online presence (github sites are free, and have enough bandwidth for your purposes)
- Curate a Google Scholar profile - free citation tracking!
- Take advantage of every opportunity to give talks:
 - TUNA Talks @ NRAO
 - Subfield discussion groups (Astrochemistry / Galaxies / Exoplanets)
 - Visit a friend at another institution ask to give a talk while you're there
 - Apply for talks at conferences, rather than posters
- Remember: it's not you, it's them. Landing a postdoc takes skill and effort, but also a fair bit of luck. Be prepared for a lot of rejection and take extra time away from work to decompress. Don't check the Rumor Mill hourly.