

DEMYSTIFYING THE POSTDOC APPLICATION PROCESS*

(* IN MY HUMBLE AND BIASED OPINION, WITH
MY GOAL BEING GETTING YOU A FACULTY
JOB AT A TOP RESEARCH INSTITUTE)

OUTLINE

- ✻ **Some initial thoughts on the whole process**
- ✻ **Finding PD positions to apply for**
- ✻ **Different kinds of fellowships/positions**
- ✻ **Strategy/resources**
- ✻ **Other general advice**
- ✻ **How to write a good application**

SOME INITIAL THOUGHTS

- ✻ Finding a good PD can, in many ways, be compared to dating
 - ❖ You are looking for the right “match”
 - ❖ You are being judged, at the same time that you are judging
 - ❖ First impressions are very important
 - ❖ You don't want to seem desperate, but you don't want to seem uninterested either
 - ❖ If you treat possible candidates badly, you can get a bad reputation...people do talk to each other!
 - ❖ There is no accounting for taste ⇨ luckily not everyone wants what you want

SOME INITIAL THOUGHTS II

- ✿ EU/world mobility is *really* changing things!
 - ❖ You can no longer count on easily finding a PD in your home country, because it's increasingly more common to move ➡ more competition = tougher
 - ❖ Argues for widening your scope: consider *all* the options, everywhere you'd be interested in going
- ✿ You should apply for as much as you can, at various levels of competitiveness
 - ❖ Always have a few “safety” positions on your list
 - ❖ What you're sure you won't take today may look appealing when you are facing unemployment. Don't be stubborn, think of it as insurance!
- 👉 (I cannot emphasize enough how many times I have seen people ignore this advice and really regret it!!)

MORE INITIAL THOUGHTS

- ✿ The job application process is very time consuming
 - ❖ This isn't something you can just do in a day (emotional=harder)
- ✿ If you want to get a permanent job in Europe, you almost always will need to do PD outside your country (and pay attention to which countries are considered good in your subfield)
 - ❖ This can be difficult if you have a 2+ body situation, you need to think about it ahead of time, discuss with partner well in advance
- ✿ It is not usually a statement about your abilities to get rejected, you need to be prepared to try again
 - ❖ In some ways it may feel like the “moment of truth”, but like anything else, timing is everything...some years what you do may be “hot”, other years “not”
 - ❖ Especially with fellowships, often it takes 2-3 attempts. There is absolutely no shame in reapplying. Like anything, practice makes perfect!

FINDING PD POSITIONS

- Typically the main advertising “season” for PDs is the Fall for jobs starting the next Fall, but can be year round depending on the type of position
 - The best positions are generally competitive fellowships, where you get more independence, usually more money, and definitely more prestige. These are often on fixed “fall-to-fall” schedules so start searching soon!
 - Jobs offered on someone’s private grant or paid from a large experiment come with more strings/less flexibility
 - Important point: the more independent you are, the more attractive you look to the next position...

FINDING PD POSITIONS II

- Where to look? (Almost all jobs in astronomy will be in the AAS register)
 - AAS job register (<http://members.aas.org/JobReg/JobRegister.cfm>), for astronomy-related positions
 - EU EURAXESS “mobility portal” (<http://ec.europa.eu/euraxess/index.cfm/jobs/index>)
 - Websites of specific institutes or national professional societies
 - Word of mouth/ads sent around or posted at your institute (i.e., read before deleting!)

PLAN WELL

☼ Get organized to be ready for the “top” hunting season, that peaks in the Fall

- ➔ TIMING IS EVERYTHING!! PLAN AHEAD!! If you are graduating in 2011, this Fall is when you should be seriously looking
- ➔ To compare, over 100 postings on AAS for PhDs/PDs in September 2009
- ➔ In April, only 32 posts, mostly off personal grants
- ➔ This leads directly into the next point...

DIFFERENT KINDS OF POSITIONS

- There are several categories of PD positions roughly in order of prestige:
 - Named Fellowships (often country specific or EU wide but not institute specific)
 - Named Fellowships (institute specific)
 - Fixed-term research positions, institute specific, often seen as “junior faculty” type positions (rare in US, but more common in EU)
 - EU Initial Training Network type positions
 - “Obscure” Fellowships (usually institute specific)
 - Fixed-term research positions off someone’s or some project’s grant money (project specific)

NAMED PD FELLOWSHIPS

☼ First type: non-institute specific (most but not all I'm sure), not in any particular order

- ❖ EU Marie Curie, various fellowships (EU citizens -- anything -- <http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.FP7CallsPage> , see “People” tab -- various deadlines, due mostly August/September 2010)
- ❖ ESA Postdoc Research Fellowship program (ESTEC or ESAC, Madrid) (ESA member countries, plus few others -- anything space related -- <http://www.rssd.esa.int/fellowship> -- 1/10/10)
- ❖ ESO Postdoc Research Fellowship program (Garching, DE or Chile) (EU member countries? -- Optical/IR -- <https://www.eso.org/sci/activities/ESOfellowship.html> -- 15/10/10)
- ❖ Humboldt (Germany -- any field, <http://www.humboldt-foundation.de/web/home.html>, multiple deadlines)
- ❖ STFC (UK -- anything -- <http://www.scitech.ac.uk/Grants/Fells/SciTech/PDoc/Contents.aspx> -- 15/10/10)

NAMED PD FELLOWSHIPS

- ☼ More first type: non-institute specific (most but not all I'm sure), not in any order, including US-specific ones
 - ❖ NWO Veni (NL -- anything -- http://www.nwo.nl/subsidiewijzer.nsf/pages/NWOP_5VTGL4 Eng -- 7/1/10)
 - ❖ NWO Rubicon (NL/Other -- anything -- http://www.nwo.nl/nwohome.nsf/pages/NWOP_6H2G7R Eng -- 3 times/yr) -- limited to 1-2 yrs
 - ❖ Einstein (X-ray/ γ ray, accretion theory, particle astrophysics, cosmology, dark energy, gravity waves -- <http://cxc.harvard.edu/fellows/> -- 5/11/10?)
 - ❖ Hubble (IR/O/UV/theory -- <http://www.stsci.edu/institute/org/spd/hubble-fellowship> -- 5/11/10?)
 - ❖ Carl Sagan (exoplanets -- <http://nexsci.caltech.edu/sagan/fellowship.shtml> -- 5/11/10?)
 - ❖ NSF (need to be US citizen/resident--anything -- http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5291&org=NSF -- 13/10/10)
 - ❖ Jansky (radio, theory, some are NRAO specific -- http://www.nrao.edu/administration/directors_office/jansky-postdocs.shtml -- 5/11/10?)

NAMED PD FELLOWSHIPS

- ✿ For US non-institute specific -- many of these ask you to pick 3 candidate institutes
 - ❖ Everyone wants to go to take their fellowships to Harvard/CfA, MIT, Caltech, U Chicago, UC Berkeley, Princeton, Yale, etc., but many fellowships also have a policy of one new fellow/institute/year (or less)!
 - ❖ Thus...if you pick institutes (note: they have to be justifiable, i.e., don't pick just for this reason!) that are not in that list, you automatically increase your chances, if you have already made the short list!
 - ❖ There are many great universities that are rated for astronomy/physics at the same level as the fancy schools. Ultimately you will succeed anywhere you know someone good you'd like to collaborate with, that has an active and lively research environment.

NAMED PD FELLOWSHIPS

- ❁ **Second type: institute specific (just some examples)**
 - ❖ Miller Fellowships (UC Berkeley -- anything -- <http://millerinstitute.berkeley.edu/page.php?nav=11> -- 9/9/10)
 - ❖ CfA Multiple Fellowships (CfA -- astro -- <http://www.cfa.harvard.edu/opportunities/postdocs.html> -- 30/10-1/12/10?)
 - ❖ Pappalardo Fellowship (MIT-- physics -- <http://web.mit.edu/physics/research/pappalardo/pappalardo.html> -- must be nominated starting 7/10)
 - ❖ CITA Fellowship (Canada-CITA--theoretical astro, multiple fellowships -- http://www.cita.utoronto.ca/index.php/working_cita/cita_postdoctoral_fellowships -- 15/11/10?)
 - ❖ Caltech Prize Fellowships (Caltech --physics/astro--<http://www.pma.caltech.edu/GSR/positionsavail.html>-- 1/12/10?)
 - ❖ NASA postdoctoral program (any US nat'l lab-- anything -- <http://nasa.orau.org/postdoc/> -- 3x/year, nxt 1/7/10,1/11/10,1/3/11,)
 - ❖ Max Planck Institutes (Germany -- anything -- <http://www.mpg.de/english/careerOpportunities/index.html> -- varies by institute)
 - ❖ Perimeter Institute (Canada -- fund. phys. -- http://www.perimeterinstitute.ca/Scientific/Applications/Postdoctoral_Researcher/ -- 15/11/10?)

NEW: ASIA

- ✻ Asia is throwing a lot of money at research, and there are some very good opportunities to go work in China (Shanghai, Beijing--New Kavli Institute), Taiwan, Japan etc.
- ✻ There are some interesting joint fellowships between MPG and China, for instance

OTHER GENERAL ADVICE (PD)

☼ Some other things to keep in mind:

- ❖ Not all Fellowships are the same...if no one's heard of it, it won't do you as much good, so know what you're being offered (ask external people)
- ❖ Working for someone off their personal grant is less desirable because you have less control, however it can be equally productive if...
 1. You like the person/get along with them (very important!)
 2. You like the research topic
 3. You are at a good institute with other people to interact with
 4. There are sufficient resources (decent office/computer/facilities)
 5. Travel budget-- very important!! Ask for specifics
 6. You have some percentage (usually ~40% of the time IF you fulfill your other duties) to do your own research

STRATEGY (PD)

☼ Half the game is knowing how to play...

- ❖ Start your application “season” in the early Fall (August)
- ❖ “US standard decision time” is February 15!!
- ❖ This gives you a shot at a “second wave” often due in the spring, plus you may have feedback on applications
- ❖ Always apply for as many fellowships as you qualify for, in any land you’d be willing to live! They come with research budgets, freedom and prestige so they should be your first target
- ❖ Always apply for as many non-fellowship jobs as you qualify for, but ONLY those you would actually consider taking!!! But think carefully about “what if”, too....(ie., what if I don’t get the one I want...)
- ❖ Do not take a job that involves having to teach too much, unless you want a teaching-oriented faculty job

MORE STRATEGY (ASTRO)

- ☼ To get your name “out there” by decision-making time, you should plan lecture tours in the Fall, and attend conferences
 - ❖ If you are applying for any jobs in the US, you should seriously consider the winter meeting (always early January) of the American Astronomical Society (www.aas.org, look at their career services page)
 - ❖ This is the largest meeting of international astronomers besides the IAU general assembly (which isn't annual)
 - ❖ Most people get 5 minute talks or posters, but PhD students who are graduating can get 15 minute thesis talks! Audience sizes can be 200+ depending on your luck, with lots of well known folk.
 - ❖ Many people/fellowships conduct interviews at the AAS. I hired my current postdoc based on his AAS talk and subsequent interview!
 - ❖ Mention on job apps that you will be there, in case someone just might want to meet you in person.
 - ❖ If you do go, you should arrange your US lecture tour after as long as you have spent the money to get that far!!!

OTHER GENERAL ADVICE

☼ Some other things to keep in mind:

- ❖ It is always ok to ask questions about advertised jobs, just don't pester people...make sure they are good, serious questions
- ❖ Do NOT get hung up on the idea that you can or should only do what you did for your Masters/PhD!! Masters is basic training and I strongly believe you can switch between subtopics in Physics at this stage (but it will take some extra work!) And your first PD especially can be almost seen as a 2nd PhD. It's a very good opportunity to widen your scope, learn something new, move to a different subfield, etc. Drastic changes in fields are much harder.
- ❖ The risk of staying in the exact same area is becoming "locked in" or "too narrow"...better scientists are often those that understand several aspects of the field and have a broader view
- ❖ It is very important to demonstrate independence from advisor, so whatever you do, make sure to lead a project slightly different than what your PhD advisor does, somewhere along the PD way

OTHER THINGS TO BE AWARE OF FOR USA

☼ Be aware of differences in work culture and living culture

- ❖ In the US there is some “official” vacation time (4 wks?) but no one really pays attention to that as long as you get your work done. Don't ask about vacation...it comes off badly
- ❖ That said, it would be very unusual for a postdoc to take off for a month if working off someone's else's grant
- ❖ Insurance is not automatic (yet...now in transition!), usually there is a choice of plans so find out how it works, and if the job includes any benefits. Usually a basic plan is ~\$150/month without dental, but all is in flux this year (2010)
- ❖ Very few cities are accessible only by public transport or bike...need to keep that in mind when factoring costs, not to mention housing. But PDs generally are better paid than in Europe (in units, i.e., typical is ~\$50-60k + research budget)

WRITING A GOOD APPLICATION

- Applying for jobs is **VERY** time consuming because you absolutely *cannot* send out the same one for all jobs! Be prepared to spend a lot of time on it
- Applications usually consist of
 - Cover letter
 - CV
 - Research Statement (and essay, for fellowships)
 - 2-3 letters of reference
- General tone should be “confident yet reasonable”: don’t brag, but don’t underplay your talents either

WRITING A GOOD APPLICATION

- **Cover letter**

- ◆ **Believe it, this is important! It's the first impression**
- ◆ **Make sure it's tailored to the right person at the right institute! And do not write "Dear Sir(s)". Unless you want to piss off any female that might hire you...**
- ◆ **Explain *very briefly* who you are, what your background/interests are, and why you are applying for this particular job. Make clear how your interests overlap with those of the person or institute advertising the job**
- ◆ **Usually you also put the names/contact info of your letters of rec**
- ◆ **Sound enthusiastic!**

WRITING A GOOD APPLICATION

● CV general structure

- ◆ **Basic info:** Name, current position and contact info, citizenship (DoB and marital status not done in US but normal in EU)
- ◆ **Education section:** start with university degrees only. Write your degree name in native tongue, then translate to system where you are applying, i.e.: “U Antarctica, Diploma Bovinus scientiae (equiv. to Bachelors Degree)”
- ◆ **List PhD thesis title and advisor**
- ◆ **List all awards/major grants**
- ◆ **List all research jobs/experience**
- ◆ **List recent invited talks/colloquia if you have any, schools etc. if you are masters student**
- ◆ **List all skills (computer programming etc)**
- ◆ **List all languages and level of fluency**
- ◆ **In the US it is *not* common to list external interests or at least not too many. I recommend against it, frankly.**

WRITING A GOOD APPLICATION

- Research statement

- ◆ Follow application instructions very carefully, when in doubt, shorter (~1 page) is better
- ◆ **Tailor it!** Emphasize aspects of your work that *fit* the job you're applying for. Mention specific people/projects/names @ the institute, and sound like you mean it!
- ◆ Why? It shows that you've done your homework. Many people don't bother, so it will make yours stand out in the pile
- ◆ A nice figure says 1000 words. Make very nice, clear, easy to parse, shiny, colorful figures.

RESOURCES FOR WRITING FELLOWSHIP APPLICATIONS

- Thanks to Selma de Mink (prior “graduate”!) for these tips:
 - ◆ Most universities also offer local courses, some of which can be quite useful (ask people who took them, though)
 - ◆ Search the web: “How to win a Hubble Fellowship” gives good tips that can be applied to other named fellowships:
<http://www.stsci.edu/institute/org/spd/hubble-fellowship/howtowin>

WRITING A GOOD APPLICATION

- Letters of reference/recommendation
 - ◆ This is probably one of the most important, yet tricky aspects
 - ◆ Ideally you want very positive letters from people who know you and your work well, but who also have name recognition in the place you are applying
 - ◆ There are two camps: 1) those who think any letter from someone famous is more important than a good letter from someone not famous, and 2) those who think a really good letter is better than a bad one from someone famous
 - ◆ Part of the problem is that committees will likely be made of a mix of people who fall into both camps
 - ◆ **Strategy:** do a little of both, have a **pool** of letter writers (>3) if you can, that you can swap around depending on the job
 - ◆ Or in your cover letter, you can say “here are my 3 references” and list them, then say “for additional references, you could contact”... and list a couple others. But no more than 4-5 total, and really only do this if you have good reason.

WRITING A GOOD APPLICATION

- **More on letters of reference/recommendation**
 - ◆ You really want to know what kind of letters you are getting.
 - ◆ There are some tricks. First, when you ask, you put it in a polite way like “Would you feel comfortable writing me a strong/good letter of recommendation”? This is different than asking “Can you write me a letter?” Watch the reaction carefully!
 - ◆ Second, with people you know well, try to encourage them to tailor the letters. I got letters with “To whom it may concern” and “I’m sure they’ll do great at your university”. Not good!
 - ◆ Even if you have three famous people whom you kind of know, better to make sure one of your letters is from someone who really knows you personally
 - ◆ For the US, the style is different. Europeans tend to be more understated, which in the US might be interpreted as a weak letter. Make sure your writers know the US system!

WRITING A GOOD APPLICATION

- Even more on letters of reference/recommendation
 - ◆ Your advisor should be prepared to have a very frank discussion about how you are doing, and your career prospects. So if you are not sure where you stand with this person, you should sit down and figure it out, *well before deadlines*
 - ◆ It is your responsibility to pursue this talk! They probably will not volunteer it, especially if it's bad news, but better to know.
 - ◆ This also provides an opportunity for you to fix a problem that may stand between you and a good letter, like finishing a paper or something that your advisor/boss is cranky about, but that is also why you can't do this last minute.
 - ◆ My advice: pursue this talk ***AT LEAST*** 1 year before you graduate

NEGOTIATION (PD)

- ☼ Once you get an offer, you can often negotiate a few things
 - ❖ When you start, what sort of facilities/computer you get
 - ❖ For a job off someone else's grant, need to discuss the issues about percentage time for your own work, travel money, and in some cases salary (US does not have fixed scales for non-governmental jobs!!)
 - ❖ If you have multiple offers, it's ok to tell people that you need time to decide etc...up until Feb 15 is "acceptable" by the honor code for US postdocs, so if they try to pressure you that's not a good sign about them.
 - ❖ Sometimes it can pay to tell someone their job is your top choice, but you have to use your judgement...base it on rapport
 - ❖ But...don't be unpleasant/arrogant about it. My rule is treat everyone as a potential future colleague...how do you want them to see you? So be honest and respectful. Even when you turn them down...

FEEDBACK

- ✻ Finally: if you apply for a job/fellowship that you really wanted, and you didn't get it, it can be ok to ask for feedback on your application
 - ❖ I would only do this if you knew you were on the shortlist, since otherwise they may not have paid as much attention to your individual application
 - ❖ You can politely ask “if you feel comfortable, I would really appreciate some feedback on my application to help improve my chances for other positions” etc. You may not get anything back, but often you do!
 - ❖ In the rare case where you know someone on the committee, you can sometimes find out more sensitive things like, did your letter writers write letters as good as you thought they would? Sadly, this often turns out to be an issue, which is why I stress being very thoughtful about your letters.

NEW TIPS (FOR MODERN TIMES)

- ✿ Google yourself. Seriously. Because we (the people you applied to) definitely will!!
- ✿ I cannot tell you how many weird/not so good things I found about potential applicants on the web.
- ✿ I.e., hide your weird issues behind the privacy settings of things like Facebook, Twitter, Hyves, whatever. Sometimes it really is too much info, and can seriously hurt your application!
- ✿ If using a non-institute email, make sure it's professional (i.e., don't send application from something like "partygirl21@gmail.com")

SNEAKY RUMOR PAGE

- ✻ To keep track of the job results, keep your eye on the “astro job rumors wiki”!
- ✻ <http://cdm.berkeley.edu/doku.php?id=astrophysicsjobs>

HELP ME IMPROVE THIS!!

- ✻ If you have any tips, or feel there were omissions, or would have liked to hear more about something else, etc, please let me know! This is the 4th time I've done this so any information/feedback helps! This version includes many changes/additions from input received.