How to Apply for Stuff

Rodrigo Nemmen
IAG USP

Apr. 29th 2014

How to Apply for Postdoctoral Jobs

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Disclaimers

My own, *biased*, opinion on these matters

Goal: get a faculty job at a top research institute/ university

I have more experience with the US scenario (*NASA Postdoctoral Fellowship)*. Prof. Paula Coelho: *Marie Curie Fellowship*

What this is *not* about: how to: graduate school
how to: faculty jobs

Acknowledgement

Prof. Sera Markoff (Univ. of Amsterdam)

"Please encourage talented MSc and PhDs to apply for PhDs and Postdocs in the Netherlands! Everyone speaks English on the streets and in the institute, and PhDs are paid positions with full social benefits, for 4 years, so very nice!"

Outline

Why give a talk like this? Why apply?

Where? How? When?

General advice / strategies

After applying: interviews, rumor mill, negotiation

Group discussion

Why give a talk like this?

Coming from US: these things are not being discussed enough here

Lots of anxiety involved in the process → procrastination

Demystify the process: rough idea of various aspects involved. Encourage to begin early!

Why apply for postdocs abroad?

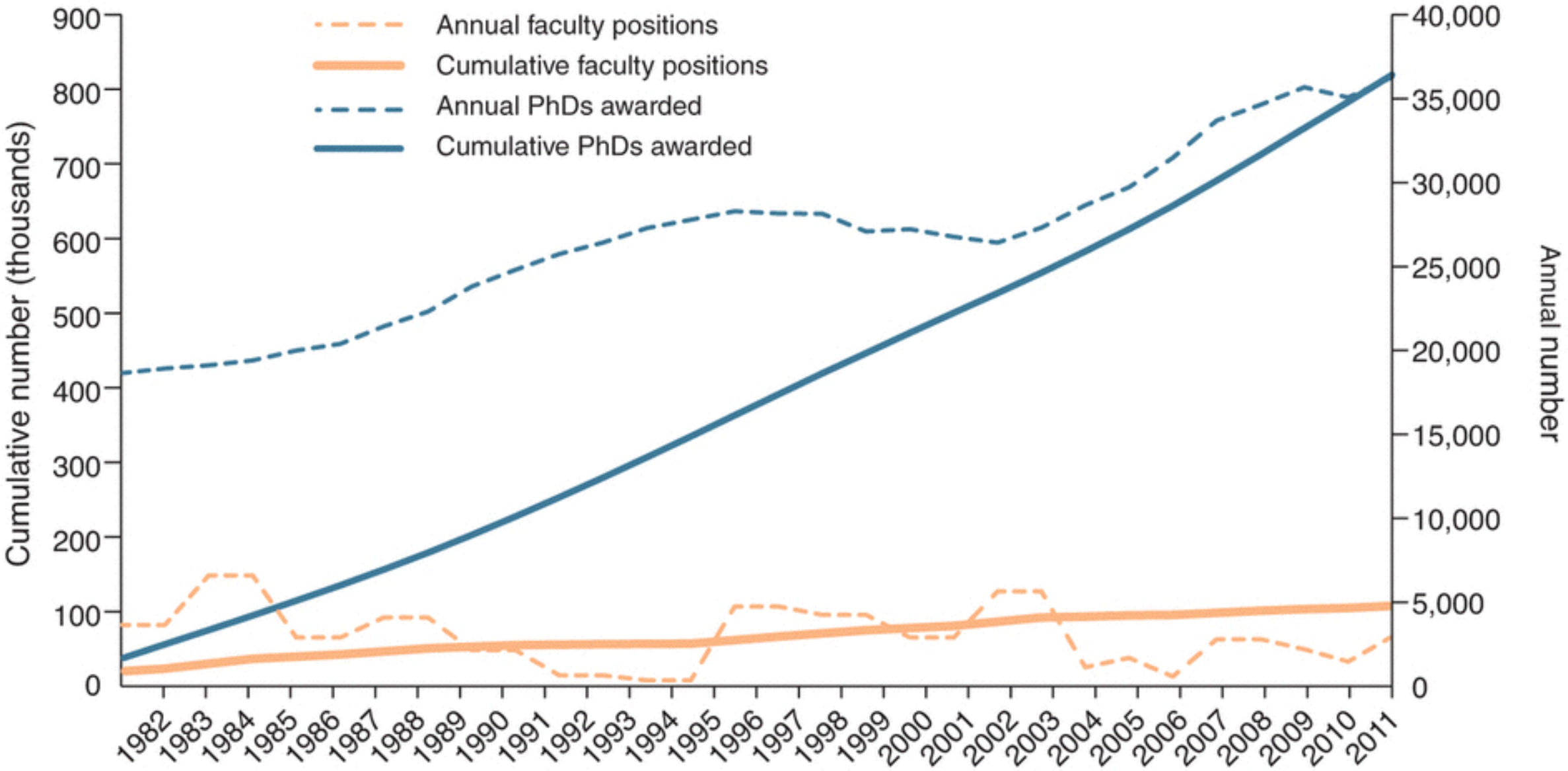
Science is an international endeavor: need to spend time in different institutes and countries, to *broaden your scientific views*

+collaborators, +publications

Increase your chances of getting a faculty job in Brasil and elsewhere

If you don't try, the answer will always be *no*

plus: travel, new friends etc :)



via “how to stand out in academic research"

Where?

Types of postdocs in Brasil

Bolsas CNPq
Bolsas FAPESP (individual ou temático)
Bolsas CsF (posdoc fora, Jovem Talento)

Need: **project + Lattes**

Types of postdocs abroad

Named fellowships (countrywide)
Named fellowships (institute specific)

Positions funded off grant money (project specific)

“Created” fellowships (institute specific, often based off specific projects but recast as fellowships)

Where to find available opportunities

AAS Job Register
http://jobregister.aas.org
all astronomy positions from phd to faculty

Non-academic jobs

this is a really nice site for Astronomers (and probably physicists too!) looking for nonacademic jobs:

- **http://www.jobsforastronomers.com/**

- **There's also a LinkedIn group for "Astronomers Beyond Academia: http://linkd.in/Uzn7wL**

S. Markoff's slides

Named Fellowships, countrywide

Hubble ("HST" related science)
Einstein (high-energy science)
Sagan (planets)
Jansky (radio)

Deadlines: Nov. 1st

Salaries: US$67k / year

Marie Curie (all EU)
ESA Fellowship (all EU)
STFC (UK)
NWO Veni (Netherlands)

Jan.

Named Fellowships, institute-specific

NASA Postdoctoral Program (NPP)

Deadlines: March 1st, July 1st, Nov. 1st

Caltech
MIT: Pappalardo
Harvard: CfA / ITC Fellowships

Yale
Berkeley
Princeton

Salaries: ~$60-67k / year

ESO Fellowship (Germany or Chile)
Max Planck Institute
CITA
Perimeter
JAXA (Japan)
Shanghai
Taiwan

Other general advice (PD)

- **Some other things to keep in mind:**
  - **There is an explosion in "fellowships" these days, and they are not equally prestigious or free in terms of research. Be sure to know what you're being offered (ask external people)**
  - **The majority of positions out there will involve working for someone off their personal grant. Generally gives you less control over the research, but will be equally productive if...**
    1. **You like the person/get along with them (very important!)**
    2. **You like the research topic and you can *demonstrate initiative*!**
    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**

Sera Markoff's slides

How to apply

Applications usually consist of

- Cover letter
- CV
- Research statement and/or project (for fellowships)
- 2-3 recommendation letters

Tone: confident and reasonable, don’t underplay your skills

How to: Cover letter

Mostly for jobs with individuals. Deserves some effort

Tailored to the right person at the right institute! Do not write “Dear Sir(s)”.

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!

Put more effort in if it is not obvious why you fit the job

Usually you also put the names/contact info of your letters of recommendation

Sound enthusiastic!

Example of cover letter

November 13th [redacted]

Dear Prof. [redacted],

I am responding to the AAS Job Register advertisement for the Theoretical Astrophysics Center Postdoctoral Fellowship (JRID43073). I am currently a [redacted] at [redacted] working under the supervision of [redacted]. I am also a member of the [redacted].

As you may note from my CV and research statement, my research is focused on [redacted]. As a [redacted] who works intensely with data analysis and astrostatistics, I have a number of different projects that make use of observations in [redacted]

I would like to draw attention to one of my papers, recently accepted for publication in [redacted]. In this work – of which I was project lead and first author – my colleagues and I made use of [redacted]

Finally, in addition to my research interests, I also enjoy participating in science education outreach activities with both aspiring students and the general public.

Thank you for your time and consideration. I look forward to hearing from you soon.

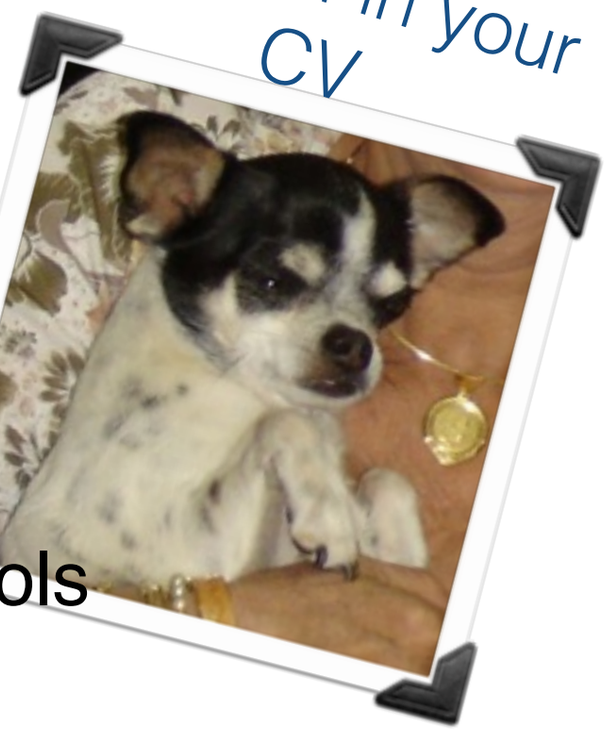
Sincerely,

Dr. [redacted]

How to: CV

Basic info: Name, current position and contact info, citizenship
Education section: start with university degrees only. Write your degree name in native tongue, then translate to system where you are applying, i.e.: “Univ. Gaudéria, Diploma Churrascus Aopontus (equiv. to Bachelors Degree)”

don’t put a photo of yourself in your CV



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 MSc student
List all skills (computer programming etc)
List all languages and level of fluency

Avoid listing external interests: e.g. “Guitar Hero god”

Example: CV

How to: research statement

Follow application instructions very carefully, when in doubt, shorter (~1 page) is better

Tailor it! (at least for the jobs you really want!) 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 figure is worth ~1000 words. Make very nice, clear, easy to parse, colorful figures

Show awareness of the type of position it is

Example: Research statement

[redacted] Research Statement

Introduction: Black holes capture the imagination of the public. Indeed, we now know that a black hole lurks in the center of our own galaxy, and in the past few years we have discovered over one million black holes. These are not just any black holes, but super-massive black holes (with masses of more than 100 million Suns) in the form of "quasars". A quasar is a galaxy that is home to a super-massive central black hole that is actively growing by accreting new material. Its falling material creates an "accretion disk" that, due to friction, gets so hot that it emits radiation from optical to X-ray wavelengths. This compact accretion disk outshines the rest of the galaxy and makes it look like a star (thus the name "quasi-stellar").

In recent years, the community has come to realize that quasars are not simply unusual galaxies, but rather *represent a stage in the life of every massive galaxy* (Hopkins et al. 2006). The quasar stage acts to regulate both the growth of galaxies and their central, supermassive black holes via coupling ("feed back") between quasar-related processes (e.g., Richards et al. 2011, Paper 1) and gas in the large-scale galaxy. This process eventually leaves the galaxy with a remnant massive (but inactive) black hole. The brightness of the galaxy during the quasar phase enables astronomers to learn an enormous amount about the Universe—in particular about the formation and evolution of galaxies—through *statistical investigations of vast numbers of quasars*.

Past Work: The Sloan Digital Sky Survey (SDSS) project has done for ground-based astronomy what the *Hubble Space Telescope* has done for space-based. In the early days of the project, I was responsible for finalizing the algorithm that SDSS uses to identify candidate quasars (Richards et al. 2002) and to characterize quasar properties (e.g., Richards et al. 2001a). The quality of this work was crucial to bringing the largest homogeneous sample of quasars from ∼ 1000 prior to the start of the SDSS to over 100,000 (Schneider, Richards, et al. 2010) and beyond (Pâris et al. 2012). Our resulting analysis of the quasar "luminosity function" (Richards et al. 2006, Paper 2) has had a significant impact on the field.

With the knowledge and data gained from SDSS and in collaboration with computer scientists, we have

How to: Letters of recommendation

Who will write your letters? People that know you (professionally speaking) reasonably well. Your advisor(s), co-authors of papers, people you worked with

Who will you ask?

Importance of: networking, writing papers together, collaborating

Positive, good letters! (it does not help having Prof. Sunyaev writing you a bad letter)

Let them know well in advance (at least a month beforehand, people are busy!)

Get to know if they will write good letters

How to apply: Some thoughts

Job application process is very time consuming

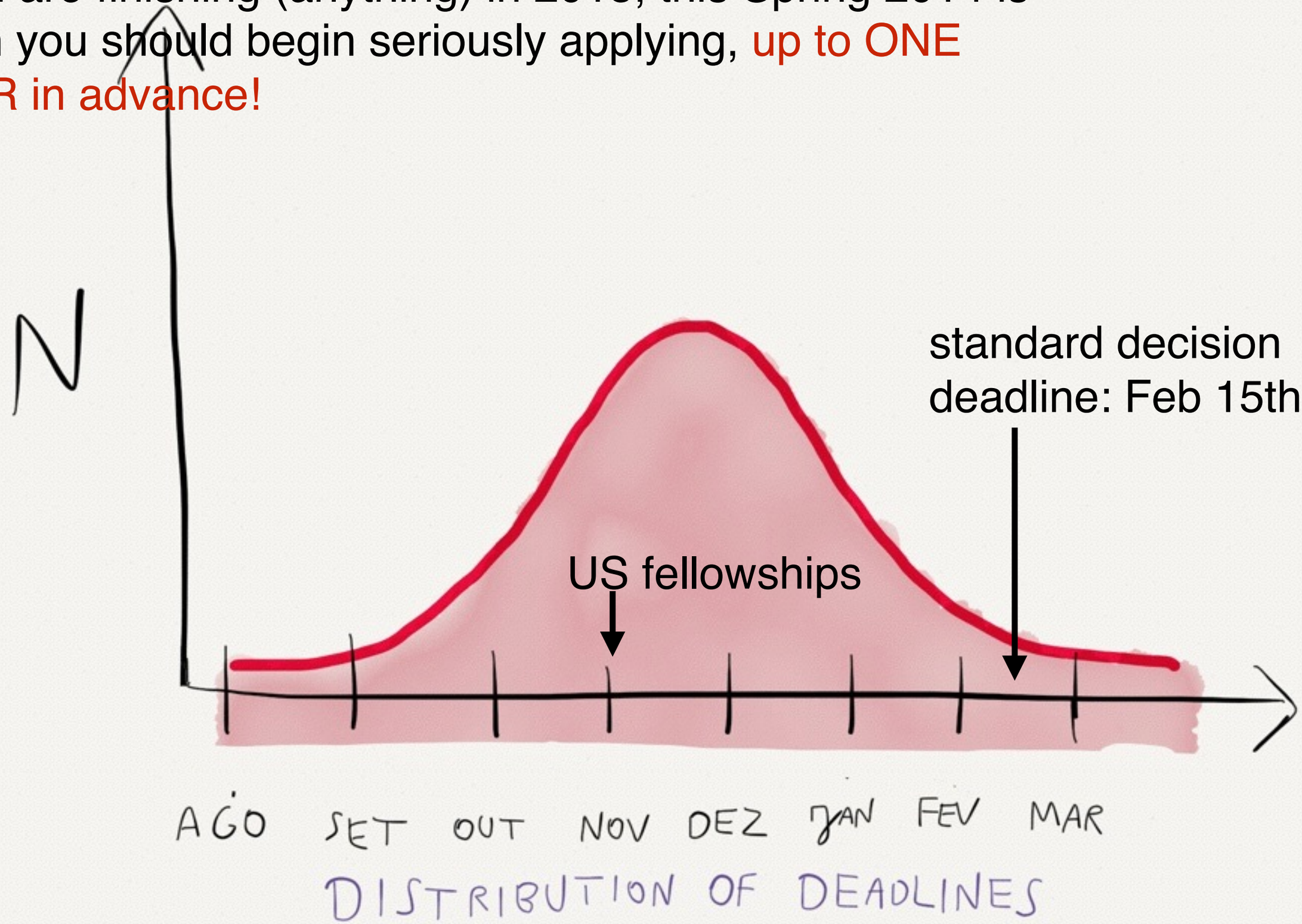
It is not something you can do in a day, or even a week (emotional=harder)

You have to frame your proposal differently in each case, do some customizing

Get feedback on your application material!

When to apply?

If you are finishing (anything) in 2015, this Spring 2014 is when you should begin seriously applying, up to ONE YEAR in advance!



After applying

Interviewing: at conferences (AAS)
or they will fly you to the institute in some cases
or Skype

Astro rumor mill
http://www.astrobetter.com/wiki/tiki-index.php?page=Rumor+Mill

Negotiation

(Cached)

Backlinks...

ASTROPHYSICS JOBS RUMOR MILL - POSTDOC & TERM

Recent revisions - Faculty & Staff Page - Previous Years

To edit the page anonymously, do not be logged in.

Recent revisions can be seen by clicking the History button at the bottom of the page. If you register for an account on the wiki and login, you can also Monitor the page by clicking on the eyeball in the upper right and receive email notifications of changes. (An RSS feed of recent changes is in progress.)

You can add new rows by right clicking within the table.

Please include a link to the job when adding it to the list.

If possible, include names and dates when offers are made and accepted, since this helps to differentiate wrong rumors from right ones. Use **boldface** to indicate when a position has been accepted.

An old revision should not be restored at any time! Unless, of course, you manage to make so many errors while editing the page that you can't fix them all one by one. Then you can go back by **one** revision. If you go back by more you've also erased other people's rumors inadvertently.

If a rumor you put on keeps getting removed by someone else (and that rumor is not about you) please respect that person's wishes—they might have reasons to keep it private and/or your rumor might be wrong.

Prior experience shows that the rumor page is not 100% accurate. If you need to make an important time-critical decision based on the status of a job opening, we strongly encourage you to get your information from the official search committee, not this page.

We have chosen to adopt a hands-off policy for the Rumor Mill; however, you may contact admin at astrobetter.com for technical difficulties.

Postdoc or term positions

Last changes

1. Rumor Mill Faculty-Staff
2. Rumor Mill
3. Long-Slit Spectra Reduction
4. Setup a New Mac for Astronomy
5. Simulations

...more

Postdoc or term positions

Place/Institution (alphabetical)	People (in boldface if accepted)
Academia Sinica (Taiwan, ad)	Offered to Rubab Khan (declined), Radek Wojtak, Cristian Eduard Rusu (declined)
AIP Potsdam Schwarzschild Fellowship (extragalactic only, ad)	due Dec. 15, 2013. Offer made to **Else Starkenburg**
AMNH Fellowship (ad)	due Oct 25, 2013. 128 expressions of interest received. 2 picked. Rejections sent.
Argonne National Laboratory post-docs in physical cosmology (ad); regular post-docs, up to two positions available (ad)	Shortlist notified. LSS/CMB offer made to **Samuel Flender.** LSS/surveys offer made to **Vinu Vikram**.
University of Alabama in Huntsville (ad)	due Dec. 1, 2013
Univeristy of Arizona, Theory Fellowship (ad)	Some requests for phone interviews made, including James Owen and Eric Lopez. Some rejections sent. Offer made and accepted.
Univeristy of Arizona (/w Rieke, ad)	offers made to **Lisa May Walker**, Christina Williams
Univeristy of Arizona (/w Smith, ad)	due Dec. 31, 2013
Univeristy of Arizona (/w Matheson and Saha, ad)	due Dec. 31, 2013
Arizona State (theoretical cosmology)	due Jan 20th
Arizona State SESE Exploration Fellowship (ad)	offer made to Jenna Kloosterman (declined)
ASTRON Fellowhips	Shortlist notified. Interviews underway. Some rejections sent. Offer made to **Kelley Hess (joint with Kapteyn/Groningen)**
ASTRON, RadioLife (w/ Morganti, ad)	Offer made to **Jeremy Harwood**
Banting Postdoctoral Fellowship (ad)	Offers to be made by March 31, 2014

Key points

Initiative/resourcefulness/be proactive

Your connections matter (a lot): network!!

Start everything early: *at least a month* before first deadline

Self-critique

Do not rule out jobs based on location or too early

General advice

Marketing

Do a “estágio-sanduíche" or something similar, if possible: great for networking

Attend conferences! Get your name out there.

Give good talks: very important

Consider going to the January AAS meeting of the year you are graduating

2-body system: start discussing well in advance

Prepare for the job market while you're in

GRAD SCHOOL

by Ainsley Seago, adapted from text by Karen Kelsky

GET OUT OF THE NEST.

DO NOT SETTLE IN TO YOUR GRADUATE DEPARTMENT LIKE A LITTLE HAMSTER BURROWING IN THE PINE SHAVINGS.

STAY ALERT FOR THE NEXT OPPORTUNITY TO TRAVEL, PRESENT A PAPER, GO TO A RELEVANT WORKSHOP, ATTEND A NATIONAL CONFERENCE, OR MEET A SCHOLAR IN YOUR FIELD.

STUDY THE JOB MARKET.

ATTEND EVERY JOB TALK IN YOUR DEPARTMENT AND AFFILIATED DEPARTMENTS RELIGIOUSLY.

IT MATTERS NOT IF THESE ARE IN YOUR FIELD OR SUBFIELD. GO TO ALL.

IT TAKES GRANTS TO GET GRANTS.

A $500 TRAVEL GRANT SITUATES YOU FOR A $1000 CONFERENCE GRANT, WHICH SITUATES YOU FOR A $3000 SUMMER RESEARCH FELLOWSHIP, WHICH PUTS YOU IN THE RUNNING FOR A $10,000 FIELDWORK GRANT, WHICH THEN MAKES YOU COMPETITIVE FOR A $30,000 DISSERTATION WRITING GRANT... BUT FIRST YOU GOTTA APPLY.

STOP. COLLABORATE & LISTEN
(TO SENIOR COLLEAGUES)

MAKE STRONG CONNECTIONS TO YOUR ADVISOR AND OTHER FACULTY MEMBERS IN YOUR DEPARTMENT (AND BEYOND). SEEKING ADVICE AND MENTORSHIP WILL HELP YOU; RESEARCH COLLABORATIONS ARE EVEN BETTER.

JOINT PROJECTS AND PUBLICATIONS WITH FACULTY COLLEAGUES LEAD TO INVALUABLE CONNECTIONS AND EXCELLENT RECOMMENDATION LETTERS.

DON'T GET DISTRACTED

AS A TA, PRACTICE EFFICIENCY IN TEACHING AND DO NOT VOLUNTEER LABOR BEYOND THE HOURS PAID. YOU ARE NOT A VOLUNTEER; THE UNIVERSITY IS NOT A CHARITY.

EXPERIMENT AND EXPLORE IN YOUR RESEARCH AREA, BUT BEWARE THE INSIDIOUS TEMPTATION TO START COUNTLESS NEW PROJECTS WHILE YOUR OLD ONES REMAIN UNFINISHED.

LEARN REAL STATS.

$$P(\text{🐻}|D) = \frac{P(D|\text{🐻})}{P(D)} \cdot P(\text{🐻})$$

TAKE AT LEAST ONE ADVANCED, RIGOROUS COURSE IN STATISTICS. BECOME COMFORTABLE PERFORMING STATISTICAL ANALYSES IN R, EVEN IF THIS IS BEYOND THE LEVEL OF STATS NEEDED FOR YOUR RESEARCH.

THIS WILL MAKE YOUR LIFE SO MUCH BETTER AND WILL MAKE YOU MUCH MORE EMPLOYABLE (BOTH WITHIN AND OUTSIDE ACADEMIA).

ASK FOR EXAMPLES

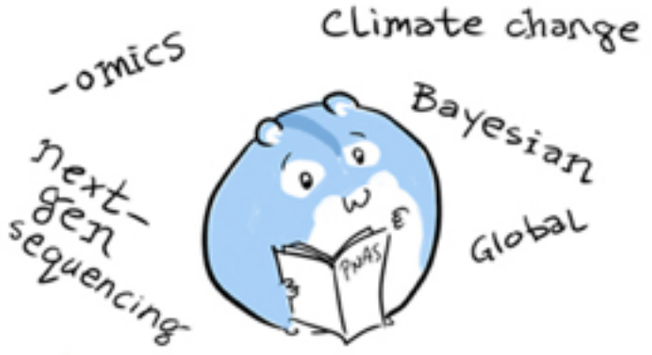
NOW IS THE TIME TO PAY ATTENTION TO OTHER PEOPLE'S WORK. ASK YOUR ADVISOR, POSTDOCS, OR OTHER FRIENDS IF YOU CAN READ THEIR SUCCESSFUL GRANT PROPOSALS OR JOB APPLICATIONS. IT'S HARD TO WRITE A WINNING GRANT UNLESS YOU KNOW WHAT ONE LOOKS LIKE. WHEN YOU GET FUNDED, RETURN THE FAVOR FOR OTHERS.

PUBLISH, PUBLISH, PUBLISH.

ONE PUBLISHED PAPER IS WORTH TEN UNPUBLISHED DISSERTATION CHAPTERS THAT WILL NEVER SEE THE LIGHT OF DAY.

FOR BEST RESULTS, BREAK YOUR DISSERTATION INTO FOUR OR FIVE PAPERS, PUBLISH AS YOU GO, AND COMPILE THE WHOLE THING TOGETHER AT THE END.

BE TREND-CONSCIOUS



EVERY YEAR, READ THE JOB ADS IN YOUR FIELD IN THE CHRONICLE AND THE WEBSITE OF YOUR DISCIPLINARY ORGANIZATION(S). TRACK THE PREDOMINANT AND EMERGING EMPHASES OF THE LISTED JOBS.

BE FAMILIAR WITH THESE TRENDS AND BE PREPARED TO RELATE YOUR OWN WORK TO THEM IN SOME WAY.

EXTRA BONUS ADVICE: Back up your files. Live frugally. Remember to have fun once in a while

Courses: proposal writing, selling yourself, networking, presenting

Google: "how to win a hubble fellowship" , "research statement", "CV" etc
Be inspired by successful people

Apply to as many positions as you can

Make a professional website

Google yourself and careful with what shows up

On the issue of Rejections vs number of applications