# STFC Summer School 2012

Careers Session

Kathy Romer

# Overview

1. Introductory Ramble
2. Getting a postdoc position
3. Getting a different type of job
4. Case studies

# Introductory Remarks

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  - Never had a proper job outside astronomy
  - Part of an “astronomy couple” (with kids)

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  - Observational cosmology, primarily X-ray clusters.

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  - Work experience is vital to get a good “graduate” job: you have now “ticked that box”!
    - You will gather skills (expected and unexpected and often unnoticed) that will help you get a job and succeed at it
    - You will gather experiences (expected and unexpected) that will support you in your life (work and personal)
    - Keep track of skills and experiences as you go along (most people don’t)

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  - For some of you this will be your last (mind bending) academic experience
  - As academic experiences go, you can't beat Astronomy
  - For those of you destined to get a faculty job, be kind to your "future self" and enjoy the freedom of being about to spend 8+ hours a day doing the thing you love (rather than the things that pay the bills).

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- E.g. what are we having this session for? Its sunny outside and the pub is open.

# Getting a Postdoc Postion

(in my sub field)

- One first author paper makes you “credible”
- Two gets you a better than 50% chance
- Three of more makes you a “shoe in”

- If you are part of a large collaboration, then you will have more papers, but your role might not be immediately obvious

# Getting a Postdoc Postion

You can increase your odds by….

- Taking advantage of collaborators etc.
- Taking advantage of leadership opportunities
- Staying friends with your supervisor
- Socializing at conferences; buy people drinks
- Recognizing Lady Luck when she comes knocking
- Kiss “up the chain”, as well as down

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- Often, and increasingly, “deserving” PhD graduates actively decide that don’t want a postdoc (regardless of their relience, savings, partner)

# Getting a Fellowship

- Fellowships are Postdocs “supersized” (because you are your own boss).
- It is almost unheard of these days for new PhD’s to get a fellowship.
- Fellowships are rarely given to people who don’t deserve them, but often people who deserve them don’t get one.

# Getting a permanent academic job

- It does happen, but not often enough to be completely fair (I count myself as very lucky, and still rather vulnerable)
- So you'd be sensible to keep other options in "play" (although most don't)

# Break to write down a question/chat

- E.g. where are jobs advertised?
- Almost all jobs are in the monthly AAS jobs register even if they are advertised elsewhere too (you don't need to be an AAS member to search it)

# Getting a different type of job

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- I don’t have any relevant experience, but I do know that….
  - The job market is healthy
  - Having a PhD doesn’t hinder you (and usually helps)
  - All Uni’s have Careers Services
  - You won’t get a job unless you apply

# Getting a different type of job

- Careers Services
  - Run courses specifically for sciences
  - Run courses specifically for PhD students
  - Long for you to come to talk to them 1-2-1
  - Offer help even after you graduate
  - Will help with CV's, cover letters, on line tests
  - Will help with your postdoc applications (but generally this is best done within your research group)

# Getting a different type of job

- Other stuff
  - Science headhunter firms long to have your CV on record
  - You might end up on a graduate scheme being paid the same as someone with a BSc
  - Some people come back to academia (less common in astronomy than in applied physics)

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  - Very wide range: teaching, medicine, R&D, IT, entrepreneurship, science communication, management, civil service, and….

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- Careers
  - Very wide range: teaching, medicine, R&D, IT, entrepreneurship, science communication, management, civil service, and finance
    - Finance is the largest sub category and is particularly attractive to people who've done complex modeling as part of their PhD

# Break to write down a question/chat

- Please pass question sheets to the front

# Case Studies

- Not Postdocs
  - Medical Physics (Sussex BSc and PhD)
  - Finance (Imperial PhD)
  - Software development (Sussex MSc and PhD)
  - Technology Consultancy (Sussex MSc and PhD)
- Postdocs
  - Sussex (x2)
  - Berkeley (Sussex PhD)
  - Cape Town (Sussex MSc)
  - Edinburgh (ex-Sussex pdra)
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# Consultanacy

- Roughly how many years ago did you submit your PhD thesis?
- **3 years**
- If you consider yourself as employed, who is your employer, what (if its not obvious) field is that in?
- **Deloitte, I work in Technology Consultancy (not the Audit part of the firm) who I've been with for 3 years since submitting.**

- Did you ever engage in paid postdoctoral work in something related to your thesis? If so, for how long? **No**
- Do you ever miss astronomy research? If so, is it in a wistful ("better to have loved that lost") kind of a way, or more bitterly ("I put my time in, its not fair that I didn't get a decent postdoc/faculty position")? Related: have you considered coming back into astronomy? Are you aware that there are special fellowships available for people who want to return to the field?

- **I miss the environment and subject matter (and the people of course) but I don't miss the day-to-day research and certainly have no bitterness about post-doc positions. I would certainly be interested in a career further down the road which got me back into Astronomy or some aspect of the space industry but not specifically research.**

- What were your primary reasons for not staying in astronomy?
- **I had 2 aims during my PhD - make my contribution to science and understand the big questions facing astronomy research, both of which I achieved. Also I felt astronomy research was not what I wanted to spend my career doing despite loving the subject**.

- Did you find it hard to make the transition from academic research into a "real" job? Both in terms of securing a job in the first place and then dealing with what (I am assuming) is a very different work environment.

- **The difference in working environment and mentality of people was definitely the hardest part of the transition but having a different perspective and the experience of working in an academic environment can provide a very sobering comparison at times. Securing the job was definitely helped by having the PhD as there are lots of transferable skills to pull-out.**

- Do you enjoy your job? Elaborate if you wish.
- **The job is fundamentally rooted in problem solving and learning about technology (IT primarily) so I enjoy it.  There is too much Powerpoint and Excel though.**

- If you are on a graduate scheme (or equivalent), are you treated any differently to people coming in directly from an undergraduate degree, e.g. in terms of starting salary, level of responsibility, promotion prospects? If you aren't treated any differently, does that make you wish you hadn't bothered with a PhD?

- **The grad scheme at Deloitte treats everyone the same but my skills from my PhD and added maturity being a few years older than those fresh out of undergrad has enabled me to progress faster than normal.**

- Can you come up with any advantages (and/or disadvantages) of your job compared to an astronomy postdoc/faculty position?
- **The environment I work in now is much more structured which enables me to develop a good set of management skills. My job enables to see how lots of different businesses are structured and operate. I guess another advantage is that I have a permanent position which most post-docs aren't.**

- What careers advice do you have for people starting their PhD's in astronomy?
- **My main piece of advice is to enjoy it. PhDs will learn tons of useful transferable skills regardless of what their thesis is. If they know by their 3rd year that they want to leave academia, I recommend researching jobs early. Big firms have set in-take procedures with new grads usually starting in Sep but this usually means applying by the previous Nov/Dec.**

- Was there a time after your thesis submission when you weren't getting paid (either because you were busy with corrections, or actively looking for work)? If so, for how long and how did you manage financially during that time?
- **It took a lot of organization but I started my job 2 days after submission.**

- Was there a time before your thesis submission when you weren't getting paid (e.g. because your were writing up after your funding ran out)? If so, for how long and how did you manage financially during that time?
- **I had 6 months without funding before submission. I relied on savings and then I got a part time job for 4 months at a local pub until I submitted.**

# Any questions related to this?

- (Kathy to hand out the printouts)

# Postdoc

- Roughly how many years ago did you submit your PhD thesis? **- 3.5 years**
- Did you get your PhD from a UK university?
- **Yes, Imperial College London.**

- Did you find it hard to make the transition from being a student into being a postdoc? I mean in terms of dealing with what (I am assuming) is a very different work environment, e.g. having to write grants, or supervise students.

- **I don't remember having many difficulties in changing from a student to a postdoc. The big difference in my view is that as a student I had more time to work on a project, while as a postdoc I had specific responsibilities and as a result less time to work on a project that I am interested in. Sometimes that leads to slightly rushed publications and not totally satisfactory.**

- Roughly how many jobs did you apply for before you got your first proper* postdoc?
- **8 applications.**

- (*i.e. a post lasting over a year, that was advertised in the AAS job register - as opposed to your supervisor, say, finding a few months of funding from an expiring grant)

- Have you ever been in a position where you had a choice of postdoc offers to accept? If so, what considerations went into making your choice?
- **Yes. Research excellence, potential for collaboration or opportunities to join good projects, atmosphere (e.g. are people friendly and ready to help you) and diversity of the research group are very important factors in my decision.**

- Looking back at your first postdoc application process, what would have made it go more or less* smoothly

- (*e.g. if  your supervisor's best friend hadn't needed a postdoc at short notice just at the time you were finishing up).

- **I think having a higher impact paper or more first-author papers would help, as well as going to conferences to present your research.**
- **But I think as long as you have a decent number of first-author papers, you don't gain much more by publishing more and a higher impact paper would help more.**

- **In my case, I wish I had spend longer doing my PhD as I did not have a master before I started my PhD. So, I felt other people were more advanced than I was especially that my major was in physics and I had almost zero knowledge of astronomy.**
- **I also moved from China to the UK. As a result, I was not making enough progress directly towards my PhD because my English needed improving.**

- Do you enjoy* your job? Elaborate if you wish

- (*when I was a postdoc I remember it as having both highs and lows, but not much in between. Plus there was a great deal of anxiety for the future!)

- **I enjoy my job very much overall. In my first postdoc, I had to commute a lot and really hated that.**
- **Occasionally I wish there are more people at work who can directly help me on my research projects (or more discussions at least). But I had the opportunity to work on an exciting project and a strong international team.**
- **My line manager was very supportive and always give me lots of freedom in what I want to work on.**

- Do you feel there are any advantages (and/or disadvantages) to your chosen career path* compared to a job in the real world?

- (*i.e. postdoc*N, then - fingers crossed - a faculty post.)

- **There are certainly many advantages in being an academic. Most importantly I feel what I do is worthwhile. In other words, I think I am doing something deeply interesting, creative and important.**

- **There are also disadvantages. The lack of job security and stability is probably the biggest problem. I have seen my friends leaving academia just because of that.**
- **The salary is not great but not terrible.**
- **As a woman, I also feel there is not enough support when you are planning to have a family. You are expected to compete for your next job as normal and your potential employer will not take into account that you had to take some time off to have a family.**

- Why do you think you are you still in astronomy (when so many other astronomy PhD graduates end up working in the "real world")?
- **Ultimately I am still in astronomy because I am very interested in this subject and I think I can be successful if I do my best. In addition I like being in an academic environment and being surrounded by clever people.**

- What careers advice do you have for people starting their PhD's in astronomy?
- **Work on projects that you are interested in. Don't be afraid of asking questions. Talk to lots of people about your projects and their projects. Read a lot and work hard. Most importantly enjoy doing research.**

- Was there a time after your thesis submission when you weren't getting paid (either because you were busy with corrections, or actively looking for work)? If so, for how long and how did you manage financially during that time?
- **Yes. I went over my 3 years funding limit by 2 months and my viva happened 1 month after that I submitted my thesis. I supported myself during that extra 3 months through my savings before my funding ran out.**

# Any questions?

- Discussion to be led by Marisa and Donough

- (at some point answers to your written questions will be emailed to the group)