Anecdotes from the Postdoc Limbo
(And Some Unsolicited Advice)

Career Not Unemployed Seminar

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Themes and General Atmosphere

• Give you *honest* account
• My viewpoint is highly *biased*
• Please *interrupt* / ask *questions* / colloquial
• Encourage you to attend other seminars / speak to other postdocs
• Speak to advisers (but be careful!)
Outline

1. Why a Postdoc?
2. What Postdoc Life is Like
3. How I landed a postdoc
4. General Observations
Brief Bio

• Graduated from UIUC in 2015 (Abbamonte Group)
• Transition year at Argonne/UIUC (X-ray/Neutron Group)
• Now at MIT (Gedik Group)
Quick Intro to Argonne

- Staff ~3500
- Budget ~ $760 million
- Area ~ 7 km²
- Synchrotron Source for X-ray Experiments (APS)
Quick Intro to MIT

• Private institution

• Demographics
  • Undergrads: ~4500
  • Grad Students: ~ 6800
  • Academic Staff ~ 1200
Why a Postdoc?

• Continue doing basic science (curiosity)
  • Learn about a different branch of CMP
• Space to be creative
• Flexible schedule
• Leaves possibility of academic position open
  • Unconventional paths possible, but less likely
Things to Consider

• What do you want to achieve during a postdoc?
  • Do something completely new / switch fields?
  • Do something somewhat related?

• Group / Adviser

• Institution atmosphere

• Family / Geography

• Cost of Living

• Your happiness and long-term contentment
How is a Postdoc Different from Grad School?

• In many cases it isn’t
• More responsibility / freedom
• A little more money ($20k vs. ~$60k)
• Proposal writing
• Time: less of it to work on a long term project
Truth about Physics Postdocs

The stark truth is that in most cases a postdoc is not a ticket to a permanent academic job. The Institute’s poll found that although three out of five physics postdocs wanted a permanent faculty position, only one in five had secured such a post 5–10 years later. A similar fraction were still stuck in postdoc positions.

- Institute of Physics
Myths about Postdocs

• Postdocs are the only way to continue doing research
• There aren’t other interesting jobs out there
• Alternative options:
  • Teaching at a four-year college (increasingly require postdocs, but more important is a dedication to education)
  • Other countries have different systems
  • Lots of jobs in tech / finance that are interesting and important
Near-Graduation Uncertainty

• Job in Silicon Valley (Lam Research / Plasma Etching)
  • Cited Personal Reasons

• Position at Argonne / Transition year
  • Conflict with Adviser

• Geographic Location ➔ Chicago

• Possibility of MIT postdoc after a year
Postdoc Life at Argonne: The Good

• Large scale problems are solvable
• Pace is a little slower
• Schedule is very flexible
• Scientists doing science / Diverse science
• Pay is typically higher than university
• Time for hobbies, activities outside of work
  • Speaker-building, Tennis, Blogging
Postdoc Life at Argonne: The Bad

• Bureaucracy / Red Tape
• Hierarchical Structure
• Few graduate students/postdocs
  • Not as vibrant as atmosphere at university
• Politics (?)
Postdoc Life at MIT: The Good

- Vibrant department
  - Lots of seminars, talks, young people
- Money for research
- Feels like you’re doing cutting-edge science
- Growth → Smart people, up your game
- Location / Lots of companies, job opportunities
Postdoc Life at MIT: The Bad

• Hours are long – typically work 9am-7pm
  • No longer time for speaker-building, less time for blogging, etc.
• Cost of Living (1BR is typically $2000++)
• Pressure is more intense (for publications, etc.)
How I Went About Getting Postdoc

• Spoke to adviser
  • Told him about 2-body problem

• Suggested going to Argonne
  • Funding for one year

• Adviser asked who I’d like to work with
  • Gave him 3 names
  • He contacted one of them
  • I contacted 2 on my own
Dear Peter,

I had asked Peter Abbamonte (my advisor) to introduce me to you earlier today, but unfortunately our schedules didn't seem to want to align, as I had a Skype call with Nuh while you were touring our lab. I have been following your work for some time now and also genuinely enjoyed your seminar today.

The reason I had asked to be introduced was because I am interested in the possibility of doing a postdoc in your lab if you have a position open. I would like to branch out into optics, as it provides a good complement to electron spectroscopy. Part of my interest, in fact, stems from your on-line lecture notes on optical properties of strongly correlated systems.

If you have an opening and are interested in discussing the possibility, I can send you a CV and any further information you would like.

Thanks for your time.

Best Regards,

Anshul
Dear Anshul,

Thanks for your email. I am sorry we didn’t get a chance to meet yesterday. It was a pretty busy day and I was running from meeting to meeting all day long. As it turns out, I am looking for a postdoc or two right now. Perhaps we can set up a Skype meeting later this next week?

Could you ask Peter to send me a letter of reference?

Regards,

-P
Skype Call / Interview

- Spoke a few times
  - Why I wanted to do optics
  - Suggested ideas for experiments
  - Seemed to share a mutual enthusiasm for certain topics

- This is also an opportunity for you to interview them!
  - Share similar approach to physics
  - Share similar ideas about work culture / creative space
Offers / Salary Negotiation

• 2/3 Offers Received

• Accepted Gedik Offer
  • Choice heavily based on two-body solution
  • Salary offered low compared to Argonne → $7.5k less
  • Asked for more → Gave extra $3k
  • Worth asking for relocation in hindsight
Reflections

• Argonne vs. MIT: Switching sub-disciplines
  • Conventional spectroscopy → Non-equilibrium physics
  • New perspective
  • Expected to learn much faster than grad school

• Most people come to grad school with broad interests
  • Don’t let that dissipate
General Observations about Academic Life: The Bad

- Constantly feels like fighting an uphill battle (apart from few exceptional cases)
- Narrowing of interests / External Constraints
- Don’t forget to ask yourself:
  - “What would I research if I didn’t have to publish papers?”
- Elitism
- Backing from adviser helps a lot
General Observations about Academic Life: The Good

- Flexibility in work hours, etc.
- Pursue your own interests (w/ limitations)
- Lifelong learning / Always something new
- Be your own boss (w/ limitations)
- Search for good questions!
- Teaching / Interaction with students
Thank you!

Questions or Comments?