



Work and life in a (somewhat special) research lab



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Who am I

- ▶ Undergrad ECE, National Technical University of Athens
- ▶ PhD from University of Pennsylvania, 2008
 - ▶ 5 wonderful years in Philadelphia and Penn PL club
 - ▶ PhD work: programming languages, type systems, type inference, dependent types
- ▶ 2-yr postdoc at Microsoft Research Cambridge (MSRC)
- ▶ Now permanent researcher at MSRC

Why apply for postdoc?

- ▶ Probably better if you don't have to
 - ▶ Get tenure-track or researcher job, use postdoc to network, find out about grant applications, get students, (Nate's path)
- ▶ ... but you may have to (even if you're stellar!)
 - ▶ It's life: **market fluctuates**, work may **not be ready or good enough** for prime-time, **not enough publicity or networking** (so it quite helps to know what you can go for)
 - ▶ You may feel like moving on to a different place
- ▶ You may want to for your own reasons

A postdoc of the second kind gives you

- ▶ Time until market picks up again
- ▶ Time to polish, publish, and sell your existing work
- ▶ Time and the opportunity to produce new work
- ▶ A chance to collaborate with more/new people and network
 - ▶ **Our community does help young people (*I wish I knew this when I was graduating!*) but you have to proactively try and get involved, give talks, get invited to committees during your PhD and postdoc. Be famous!**
- ▶ Time for thorough job search in case your last PhD year was still too busy with research

- ▶ But also more stress, as in a typical 2-yr period you have to:
 - ▶ Get accustomed and move in (4-6 months)
 - ▶ Do some actual work (6-10 months)
 - ▶ Apply for new jobs and interview (whatever remains!)

Two postdoc paths

Pursue or (maybe even start) a long-term agenda and convince everyone it's amazing and they should hire you for this agenda which will save the world

OR

Diversify with collaborations and start publishing outside your comfort zone (**good work, not junk!**) to show you are an amazing problem solver and your work is of broader interest to the world (but don't forget to show some vision please)

I think both may work but it depends on your target ...

What's a postdoc in MSRC like

- ▶ You are on your own (as you should!), contract is fixed 2 yrs
- ▶ You are expected to **publish**, *debugging Windows drivers is **not** part of the job* (I got asked in one interview!), though no-one will say no if you do 😊
- ▶ Someone has “sponsored you” but no-one is forcing you, it's good to show you can work independently
- ▶ You have access to interns and travel grants
- ▶ You don't worry about money and administration

- ▶ In my case, since I was in **The** MSRC PPT group, I saw this as a rare opportunity to actively seek (in a case, almost force!) collaborations with PPT members:
 - ▶ co-authored multiple papers with 3 people while still a post-doc – which **did help** my FTE application
 - ▶ did not manage to establish connections with the rest of the lab due to plain lack of time – which **hurt** my FTE application

What happens after an MSRC postdoc

- ▶ You apply for a permanent position at a lab or a university or try to get another postdoc
 - ▶ Remember: even if you're stellar, you may have to get another postdoc
- ▶ Does an “industrial” MSRC postdoc reduce one's chances for an academic position?
 - ▶ Emphatically: **NO**
 - ▶ The job is academic in nature, in my case I applied in very few places (~10), got an interview at MIT (NB: Penn ~> MIT), a Researcher job at MSRC and two more prestigious offers after my postdoc, that I would surely not get directly after my PhD. So, evidence shows a postdoc at MSRC **increases** your chances
- ▶ Does a postdoc in Europe disconnect me from the US job market?
 - ▶ No, if you do it in a good place and work with recognizable people

Being a Researcher at MSRC

- ▶ You are on your own 😊 (which now includes your own office)
- ▶ You don't worry about money and grants 😊
- ▶ You can have interns (often multiple per year) and travel grants 😊
- ▶ You have access to postdocs, hired regularly (2-4 a year in PPT) on a group basis (so you don't "own" nor "manage" postdoc labor) 😊
- ▶ You have somewhat limited access to research software engineers to help you with prototypes – depending on projects and budget
- ▶ You don't worry about teaching
 - ▶ But maybe want to keep an eye for teaching in nearby universities as visiting researcher to stay in touch and remain competitive in case you want to return to a University
- ▶ A **problem**: there is no mechanism for long-term students 😞
 - ▶ This hurts
 - ▶ Sometimes you can find your way: co-advise students with your friends who have university positions, you can help by sponsoring them with MSR PhD fellowships, work with postdocs

The amazing place called MSRC

- ▶ As long as you publish and are famous, you can pretty much work on whatever you want, not directly related to MS
 - ▶ semantics, Coq, GHC, Haskell, intuitionistic type theory ...
 - ▶ depends on the group – PPT in Cambridge has been so great precisely because it allows this kind of work and the people there take their freedom seriously to work on hard and deep problems
- ▶ But if you get bored and want to work on other areas everyone will encourage you to do it – MSRC really really values collaborations and technology transfers:
 - ▶ You can work on static analyses for MapReduce with the systems group
 - ▶ You can work on probabilistic languages with the Infer.NET people
 - ▶ You can work on SMT solving with the constraint reasoning group
 - ▶ You can collaborate with your friends from MSR Redmond
 - ▶ You can even forget about shape analysis and go do Bing stuff!
- ▶ And everyone will be happy and like you more!
- ▶ And in 6 months time you can find something amazing and new!

The future

- ▶ What do I worry about?
 - ▶ Historically research labs come and go ..
 - ▶ Is there a career choice between:
 - ▶ Corporate path: stop worrying about students / teaching and focus on making a good name inside your company ... or
 - ▶ Academic path: try to stay competitive for academic positions (tricky without students esp. for the associate professor level)
- ▶ Somewhat stressful to be playing at both arenas at the same time, it's really as busy as having two jobs! But I am loving both of them 😊

Keep calm and carry on

And consider working with us!

http://research.microsoft.com/en-us/jobs/fulltime/apply_researcher.aspx

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