I’m a Student Again: Heading to Graduate School after a Break

Claudia V. Roberts, Princeton University

Dilma Da Silva, Texas A&M University

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Computing Research Association

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What does CRA-W do?

Individual & Group Research Mentoring

Undergrads: Undergraduate Research Experiences

Undergrads: Distinguished Lecture series/role models

Grad Cohort: Group mentoring of graduate students

Grad Students: Discipline Specific Research workshops

Academics/PhD Researchers: Group mentoring for early and mid career @ CMW, Grace Hopper, and Tapia

2400+ students & PhDs a year

Stay in touch: CRA-W.org, @CRAWomen,
Facebook: CRA-W, Linked-in: CRA-Women

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Claudia V. Roberts

Photo credit: Sameer Khan

- 1st Year Ph.D. Student at Princeton University in Computer Science
  - Advisor: Arvind Narayanan
  - Research Area: Explainable AI with a focus on computer vision applications and questions of fairness in machine learning systems
- M.S.E. in Computer Science from Princeton University
- B.S. in Computer Science from Stanford University
- Worked at Apple for 4 years before going back to school for my Master's
- GEM Fellow and NDSEG Fellow
- My sister, Laura Roberts, is a 5th year PhD student in cybersecurity at Princeton!
- CrossFit Level 1 Trainer

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Dilma Da Silva

Education

BS 1986 USP-Brazil / MS 1990 USP/ PhD 1997 Georgia Tech

Professional (Academia → Industry → Academia)

- Professor at USP-Brazil 1996 -2000 (tenure 2000)
- Research Scientist at IBM TJ Watson 2000-2012
  Manager since 2007; several other leadership titles
- Principal Engineer&Manager, Qualcomm Research (2012-14)
- Professor and Department Head, Texas A&M Univ

Personal

- 2 cats, 125+ first cousins;
- Single except for 8 years
- caretaker 2010-2015
- Fun: knitting, reading, travel

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MY “BACK TO SCHOOL” STORIES

My Story - Claudia

Never thought I would go back to school after graduating from Stanford

- Working at Apple was great!
  - Amazing team
  - Great lifestyle
  - Opportunities to present in front of hundreds of people at WWDC
- Took three computer science classes while working at Apple
  - Very different experience and mindset from undergrad
  - Wanted to take higher level courses
- Worked on a very cool project while at Apple
  - Working on a problem that's never been done before is scary, exciting, rewarding
  - Read my first research paper – "I want one of these!"
- Took stock of my life
  - Wanted to re-gain control of where I was going
  - Didn't want to be a programmer all my life

My Story - Dilma

Coaching people to find their next place

- People left my group to go back to school
- Online mentoring got me to see a biased sample
  - Managing expectations is important
- Restarting brings new opportunities and challenges
  - Maturity matters
  - Adaptability is important
- Listening to a diversity of perspectives helps
- Stepping out of our comfort zones is an exercise we can start wherever we are in the process
- **Big WHY** versus **little ways**

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Let’s Discuss!

What’s holding you back from going back to school?

GRADUATE VS. UNDERGRADUATE EXPERIENCE

The Graduate School Experience vs. Undergraduate Experience

You're not a kid anymore! (and that's a good thing)

- More mature
- What what you want to achieve
- Shift in priorities
- Not scared
- Know your worth
- Don't "have" to do anything you don't want to vs. potentially a bachelor's degree
- Focus on learning vs. on grades
- Strong desire to make most of the graduate school experience (especially if you left a good job)
- Different from the chaos of undergrad i.e., all-nighters no longer the norm
- More organized and focused
- Treat graduate school like a job
  - You own your school career

MASTER’S VS. PH.D.

Professional Master's vs. Ph.D.

Master's

- 1-2 years
- Usually have to pay
- Part-time Master's is normal
- Not uncommon for your company to pay
- Online Master's program option
- Usually no teaching requirements
- Free agent
- No qualifying exam

Ph.D.

- 4-6 years
- Usually full-time
- Pay by doing research, earning fellowships, teaching
- Usually some type of teaching requirement
- Student-advisor relationship is important
- Focus on becoming part of larger academic community
- Getting your name out there is important
- Qualifying exam

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APPLYING TO GRAD SCHOOL AFTER A BREAK

Application process

Pros & Cons

- Pros: more straightforward
  - Unlike undergrad, less about being a well-rounded student and extracurricular activities
  - Less hoops
- Cons: further removed from undergrad
  - Professors might not remember you anymore
  - GRE: re-learn all those SAT words!

Where to go

- Your area of interest is a large factor
- Environment matters
- Where do the graduates go?
- Get a diverse set of opinion from former and current students and faculty
- Use GHC to find out what students love and what they don’t about their place
  - Remember experiences vary a lot in the same institutio

Application process

What you'll need

- Statement of purpose
  - Articulate why you want an advanced degree
  - Present some type of evidence that would indicate you would do well
  - Have various people you trust read over your statement
- Letters of Recommendation
  - You will need three
  - Letters from professors are preferred but from industry is fine, too, depending on how far removed you are from undergrad
  - If far removed from undergrad, take a few classes and get to know the professor
- GRE
  - Just do it
  - Many universities have GRE fee waivers. Ask!
- Application fee
  - Many universities have fee waivers. Ask!

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Application process

What you'll need

- Research Experience
  - Consider doing an undergraduate thesis if not required by your university
  - If in industry, seek to be put on a project that is more research oriented
  - Find ways to patent your work while in industry shows that you can create novel work
  - If working as part of a research lab ask if lab plans on submitting to a journal, conference, or workshop and ask what is the minimum amount of work needed to get your name on the paper
- Teaching Experience
  - Nice to have
  - Whether you TA'd a course in undergrad
  - Volunteer as a lead instructor for a group such as Black Girls Code
- Apply to fellowships
  - GEM Consortium Fellowship for Master's and Ph.D.

TIPS FOR SUCCESS

Tips for success

- Ask yourself: What are all the things that I can't do as readily in a non-school setting?
  - Summer internships aboard
  - Clubs/Activities: Prison Teaching Initiative, dance troupes, piano lessons
  - Apply to scholarships
  - Take classes for fun!
  - Teach & get feedback
  - Fund your start-up idea with university funds and resources (including human resources)
- Do all the assigned readings
- If doing Master's, considering doing the Master's thesis option
  - Unique opportunity that you can't do as readily outside the academic setting
  - Get to know a faculty member better, not just a Master's student passing through
  - Gives you an idea if you want to go for your Ph.D.
- No dead-end work, especially final class projects

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Common Concern #1

A Ph.D. will make me overqualified and I won't find a job

- Some doors might be closed, but ask yourself if those are doors you are truly interested in anymore
- Presumably pursuing graduate degree for the doors that will become open
  - Master's: more attractive candidate for manger level position or research engineering positions
  - Ph.D.: teaching positions, technical expert witnesses, advising congress on tech policy issues, consultant, industry research labs, dean of engineering at a university

Common Concern #2

Can’t you just learn on the job and become an expert that way?

- Sure! All depends on your long terms goals
- Might not always be possible if you want to enter a new field, e.g. ML, AI, CV

Take-home Exercise

Using LinkedIn, look up the credentials of people who are in positions that you aspire to be in.

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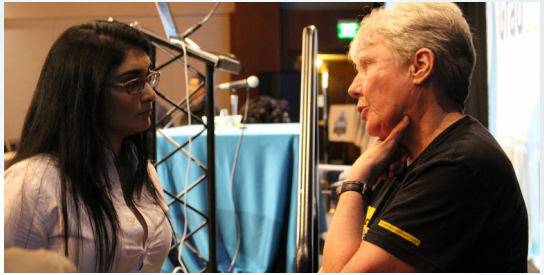
IT’S NOT TOO LATE!
Don’t assume that graduate school isn’t for you
We are here at this conference partially because we want to see more people like us as computer science professors and leading large engineering teams

THANKS! QUESTIONS?

CRA-W Events at Grace Hopper

- **Visit the CRA-W Booth in the EXPO to learn more (#5636)**
- **Attend another CRA-W Session**
  Wednesday (4) or Thursday (4)
- **Visit a CRA-W Table during Mentoring Circles** (Undergrads)



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