

Applying to Graduate School and Preparing a Stellar Application

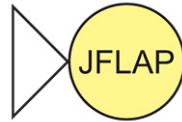


Susan H Rodger
Duke University

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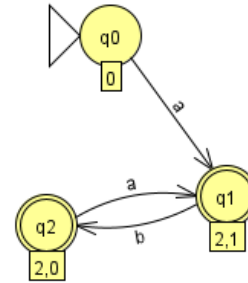


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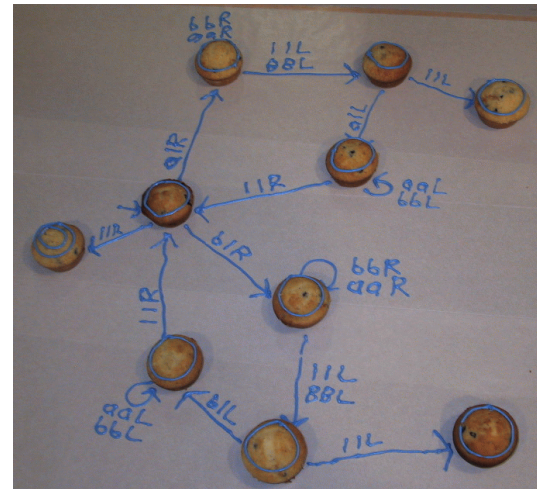
- **My path**

- BS Math/CS NCSU
- MS, PhD Purdue
- Rensselaer Poly. Inst. – Assistant Professor
- Duke University – Professor of the Practice (Pop)
 - (Assistant Pop, Associate Pop, Pop)
- Research – CS Education, Visualization, Tools learning CS, integrating computing into K12



Susan Rodger

- Fun - run/swim/hike, baking, cats, writing Wikipedia pages



- You should have something to keep your sanity!

The Application Process



Deciding Where to Apply

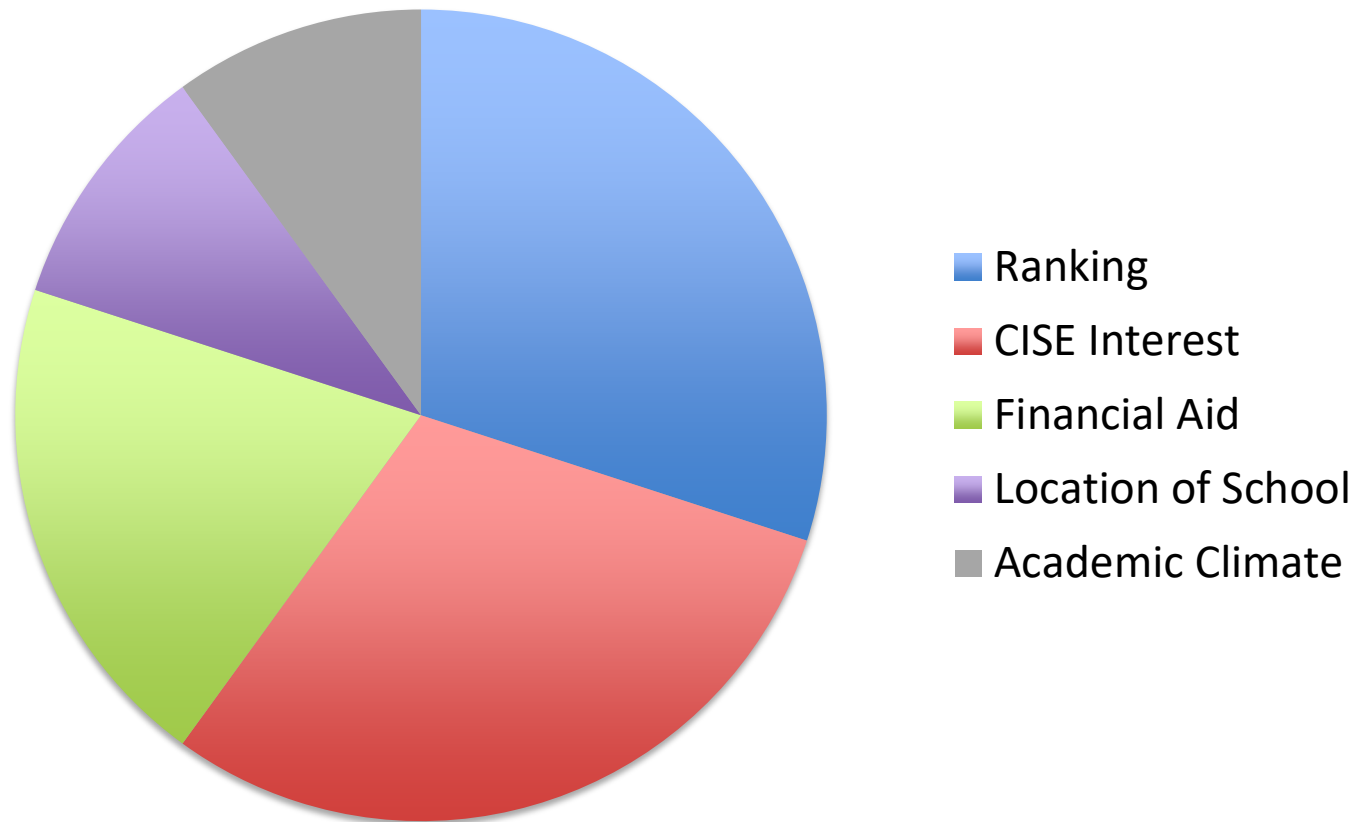
(answer these questions)

1. What areas of computing interest me?
2. What type of degree am I considering? MS? PhD? Why?
3. What type of academic climate do I want to study in?
4. Do I have any geographic preferences? Any restrictions?
5. What are my academic credentials?
(GPA, research experience, test scores, communication skills)

Where to apply?

Factors To Consider

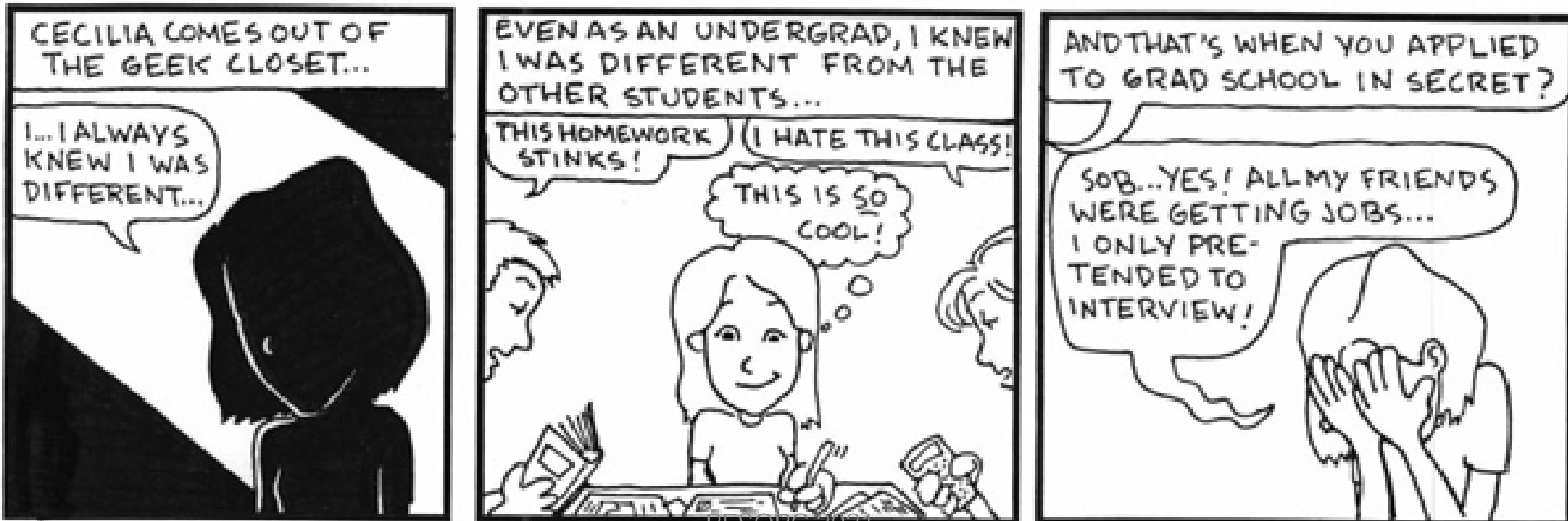
Importance to YOU?



Master's VS PhD

Masters	PhD
2-3 Years	3-7 Years
Courses + Thesis/Project	Courses + Research + Dissertation
More attractive for industry/lab	Minimum for Industry/Lab Research
Minimum for Instructor	Minimum for Academic Position
Not much opportunity to specialize	Become expert in particular research area
Often limited grad study funding	Easier to obtain RA/TA support

Is grad school for you?



How much do you want it?



A Question to YOU

1-minute to think:

Assuming you have decided to pursue a PhD degree, what do you think is the *MOST* important decision you will make *DURING* graduate school?

MOST IMPORTANT DECISION DURING GRAD SCHOOL

Choice of a dissertation advisor.

So,

Learn about the faculty:

- their areas of interest
- their research records
- their success in mentoring students
- their success in graduating female/minority students

What can I do to increase my acceptance into grad programs?

- Maintain a high GPA
- Take as many high level courses as you can, particularly within your interest area
- Gain undergraduate research experience
- Participate in internship, preferably in your area of interest
- Create connections with qualified, respected faculty

What can I do to increase my acceptance into grad programs?

- Seek *strong* recommendations from qualified, respected faculty
- Take GRE subject test early so you can retake
- Apply to multiple schools of various rankings (1-2 reach schools; 1-2 safe schools)
- Apply as a PhD student rather than an MS student

CRA-WP DREU program:

Distributed Research Experience Undergrad

(hits 4 of the 9!)

- Gain undergraduate research experience
- Participate in internship, preferably in your area of interest
- Create connections with qualified, respected faculty
- Seek *strong* recommendations from qualified, respected faculty



Preparing Application Materials

EVERY program is different, but most want:

- Application (basic contact info)
- Transcripts
- Letters of recommendation (2-3)
- Statement of Purpose (Goals/Research/Intent)
- Resume
- Test scores (GRE, TOEFL / IELTS)
- Fee
- Deadline!

Engaging Letter Writers

Typically 3 letters.

- **Who?**

“Would you be able to provide a positive recommendation?”

Research advisor, teacher of high level course, employer in CISE, REU mentor,

- **What to give them?**

- Transcript, resume, statement of purpose
- Chart of schools, deadlines, how to submit letter

When?

At least 2-3 weeks before first deadline

Taking Entrance Exams

- **GRE general and Advanced in CS**
 - Are they required?
 - What scores are acceptable?
 - Take spring junior/fall senior years
 - Retake if needed
- **If non native English speaker:**
 - TOEFL, TOEIC

Statement of Purpose

- Your motivation for grad school
- Your CS interests
- Your professional goals
- Evidence of potential success:
 - Research experience
 - Relevant accomplishments

*** originality, creativity, problem-solving ability, inquisitiveness, independence, the ability to collaborate, and good writing skills

Biggest Mistakes on Statement?

- **Not referencing any other research**
 - Shows you haven't done your homework, not familiar with area
- **Not asking professor/advisor to comment on statement**
 - They can't write it for you, but can give you feedback on what you have written

Finalizing the Application

- Follow up with letter writers
- Request official transcripts be sent
- Report test scores
- Complete/copy application

PAY ATTENTION TO DETAILS!!!

MEET THE DEADLINE!!!

Financing Your Graduate Study

- Admission application - 1st Step
- THEN, Apply for financing opportunities:
 - Teaching Assistantships
 - Research Assistantships
 - Fellowships
- Apply for Outside \$\$
 - Grants
 - Loans(at banks not through financial aid)
 - Fellowships – e.g., NSF Graduate Research Fellowship Program

NSF Graduate Fellowship

- **How much?**
 - \$34,000/yr plus tuition– 3 years
- **When can you apply?**
 - Senior, 1st and 2nd year grad student
- **Should you apply as a senior?**
 - Yes, compared to other seniors, not grad students
- **Four parts: personal statement, previous research, proposed research, reference letters**
 - Must address intellectual merit, broader impacts
 - Why address broader impacts?
 - Is government spending money wisely?

Evaluating Your Offers

March/April

- Spend time researching programs
- Visit the schools
- Meet faculty in your CISE interest area
- Admission decisions by committee
 - meet more faculty
- Meet current grad students/alumni and ask about their experiences
- Don't attend a school that is great in Cyber Security with no HPC if you want to do HPC (what's HPC?)

Making Your Decision

- You will probably do well at any of your top choices.
- Make decision and inform ALL schools in timely manner.
- Write thank-you notes to letter writers.
- Look forward and celebrate!!!

Resources

- Talk to your professors!
 - Ask them why they went to grad school
 - Ask them why they became a professor
 - Tell them you are considering grad school
- “Applying to Ph.D. Program in Computer Science” PDF –
<http://www-2.cs.cmu.edu/%7Eharchol/gradschooltalk.pdf>

Do you have questions?

- Where to apply
- Preparing application
- Getting letters of reference
- Taking GRE's
- Finalizing the application
- Funding Graduate School
- Evaluating Offers
- Making final decision