



Getting Into Grad School (Without Going Insane)

SPS/PAW Meeting
November 12, 2014

Things to do BEFORE senior year



- Do well in your classes (obviously)
- Get involved in research!
 - No “right” time to get involved.
 - Some professors will even take freshman (esp. in experiment)
 - Theory research a bit harder, they may prefer you’ve taken certain math/physics classes first
 - Coming next semester: “Getting into research night”

Undergraduate research: faculty mentors

The faculty listed below have expressed interest in mentoring undergraduates in their research programs.

Research Area	Faculty
AMO	Nate Gemelke, Ken O'Hara, David Weiss
Biological Physics	Lu Bai
Condensed Matter	Moses Chan, Vin Crespi, Renee Diehl, Eric Hudson, Qi Li, Ying Liu, Nitin Samarth, Jorge Sofo, Jun Zhu
Gravity/Cosmology	Martin Bojowald, Sam Finn, Ben Owen
Particles & Fields	Steve Heppelmann
Particle Astrophysics	Doug Cowen, Tyce DeYoung , Miguel Mostafá

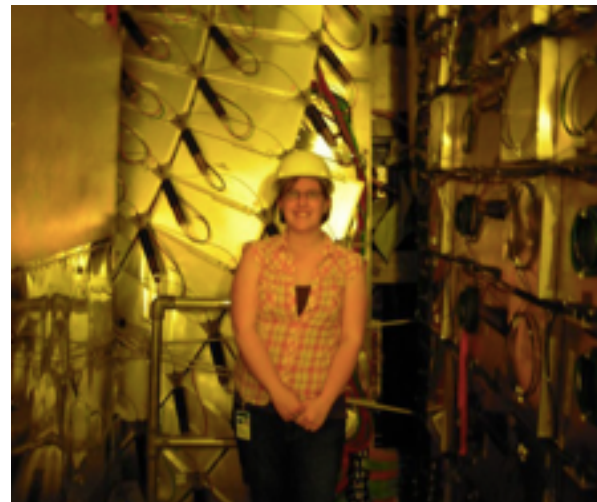
Don't be afraid to email professors whose research you find interesting!

- Research Experience for Undergraduates
- Can do research in areas not offered at Penn State
- Some have weekly physics seminars targeted to undergrads and/or presentations about applying to grad school
- Get a stipend/paid housing/travel to and from the university paid for; some places will also pay for your food.
- Deadlines are usually in Jan./Feb.
 - Kind of like applying to grad school, except applications are free
 - This website is your bible: http://www.nsf.gov/crssprgm/reu/reu_search.jsp

My Undergrad Research Experience



- Did research in both physics and astronomy departments
- Honors thesis on EXO experiment
- REU summer before senior year with University of Rochester → Fermilab



So you're ready to apply... now what? PENNSTATE.



- Cannot pick a graduate program based on rankings alone
- Does the school offer your specific interest?
- Professor(s) whose research sounds interesting?
- Backup interests?
- Location?
- How do they treat their graduate students?

Applying to a bunch of schools can be expensive → try to be selective



- Every school has different requirements and deadlines
- Not to mention Letters of Recommendation, Test Scores, Transcripts, and Application Costs.
- Ultimately, it is YOUR responsibility to make sure everything is turned in, on time.



- You are surrounded by people who have already gotten in to grad school, or are currently applying to grad school!
- At least some of these people will be willing to help you
- Don't be afraid to ask questions if you get confused.

- Don't be cliché, phony, or dishonest
- Tell a story/write an essay that will be REMEMBERED
- Tailor each essay to the specific school
 - Do your research
 - Specific research/professors? Don't be afraid to contact them!
 - Why are you good for the school? Why is the school good for you?
- Don't just say you are _____, SHOW IT. Highlight your good qualities
- Don't apologize
- Write, rewrite, and rewrite again



- This is one of the most important pieces of your application!
- Choose your letter writers carefully - most schools need 3; research advisors are very good choices
- Make it as easy for them as possible to write you a good letter
- Be appreciative afterward!

- GRE scores are NOT the end all/be all. Doesn't correlate to future success in Ph.D. programs
 - Still prepare for them!
 - “Schaum’s 3000 Solved Problems in Physics”
 - <http://grephysics.net/ans/> (old released GRE tests)
- If you don't do well on GRE's, find another way to boost your application → **UNDERGRADUATE RESEARCH!**
- Use your networking skills! You never know who will get you a job!

- The school is trying to impress YOU now
- Talk to the grad students! Make sure they don't look miserable
 - Things to ask about: funding (do most people have to TA for a long time? Is there \$ to go to conferences?), what they do for fun, quals, etc.
- Talk to the professors!
 - Are the ones you're interested in taking on students in the next few years?



Q&A Session with panel of grad students

Kelly Malone
Beatrice Bonga
Cody Messick
Amber McCreary