

Building a strong (physics) graduate school application

The components (~chronologically?):

- GREs (General and Physics)
- Letters of Recommendation
- Transcripts
- Fellowships (covered 3 weeks ago)
- The Application
- (Personal Contacts)

GREs (General and Physics)

- For those of you applying this year, you have already taken care of this!
- Most US graduate schools require the General GRE, and of course the Physics GRE
- Subject tests offered in the fall (Oct, Nov) and in the spring (Apr)
- General test has three parts:
 - Verbal reasoning
 - Quantitative reasoning
 - Analytical writing (essays)
- Physics test consists of 100 multiple-choice questions covering most of undergraduate physics

GREs (General and Physics)

- Graduate schools accept students with a broad range of GRE scores
- The Columbia example: in recent years, accepted students have had Physics GRE scores ranging from 630-990 (the average in recent years has been about 880)
- Admissions committees recognize that GRE (physics) performance may depend strongly on undergraduate background (university, liberal arts school, international,...)

Letters of Recommendation

- You will typically need 3-4 letters
- Develop relationships with faculty (either those that have taught you, or those that you may have worked with in a research environment)
- Need not all be in physics
- Discuss your applications with faculty – they will be able to write better letters the better they know you!
- Very important component
- The more specific/personal the better...
- (Choose referees who know you well over “prestigious” faculty)

Transcripts

- Undergraduate grades, of course especially in physics courses, are an important component
- If there are any anomalous or unusual grades, you may want to address those in a cover letter (or possibly in a Personal Statement)
- You may be able to include your fall semester grades for senior year, so long as you do not miss the application deadlines (usually early Jan)!

The Application

- Most schools have deadlines at the beginning of Jan
- What subfield/where to apply?
 - If you know what field(s) you are interested in, talk to local faculty in those areas for advice and information about the best schools in those fields; most schools are flexible if you decide that you want to change
 - Faculty may also be able to suggest reach/match/safety schools if they know you well
 - It is fine *not* to know what field you are interested in (but show that you have given this serious consideration, and narrowed options...)
- In some cases, you may want to look at other departments (e.g. Applied Physics)
- AIP publishes an annual summary of grad programs (the Dept. has copies for reference)

The Application

- Theory vs Experiment?
 - Easy if you know what your interests are!
 - Your undergraduate record/experiences may provide some “clues”
 - In general, there is more competition for positions in theory than in experiment...
 - ...and there is usually less funding for theory
- Personal Statement:
 - Mention any awards/honors received
 - Significant research experience? Describe it
 - Publications/presentations?
 - Show passion/enthusiasm!

(Personal Contacts)

- If you know of specific faculty/groups at a school that you want to work with, it is quite appropriate to contact them in advance and let them know of your interest
- Local faculty may be a useful resource here