1 Choosing a PhD Program

1.1 Finding Possible Universities

- Defining your research area:
  - Your current thesis research as defined as a broad area such as Bergman spaces, combinatorial aspects of toric geometry, or algebraic phylogenetics (as opposed to complex analysis, toric geometry, or computational biology respectively – these are too broad)
  - Consulting your thesis advisor can help you choose the appropriate topic
- Identify people doing research in this area
  - Authors of the papers you read
  - References of research papers
  - Thesis bibliography
- Identify universities
  - Using the topic found above you and your advisor should be able to identify 8-10 schools in your research area.
  - At this stage, this is the only thing to think about. Worry about location and other stuff later.
- Additional sources
  - In published papers, MSC (Math Subject Classification) numbers identify specific areas within mathematics. MSC numbers for specific topics can be obtained on www.ams.org
  - Math Genealogy Project
- It may still be difficult to find 8-10 suitable places!

1.2 Research the universities and faculty found above

- Look at department websites and personal webpages of faculty in your area
- Researching faculty:
  - Recent work (last 3-4 years)
  - Number of PhD students
  - Recent courses
  - Connections to ”interdisciplinary centers” like UC Davis Genome Center
  - VISIT THESE PEOPLE (if possible)
- Researching University:
  - Course Requirements
  - Qualifying exams/Prelims (written, oral) usually at the end of the first year
  - Post-quals requirements =example: oral exam in front of your committee
– Defense = sometimes informal, sometimes a big deal
– Average length of program (5 years is about average for math. 6 years is not uncommon.)
– When are these tests offered? Be clear that you will have earned an MA, this could affect many of these timelines.

• VISIT the place. Talk to official graduate advisor, your potential research advisor, and graduate students.

• Other considerations
  – location
  – weather
  – family

REMEMBER! PhD is a time (5 years) to study (learn, be creative, etc.) You'll have most amount of time for these things during your program.

1.3 Financing PhD Studies
• The financing environment says a lot about the department. (competitive vs. cooperative)
  – What are their TAship/RAship practices?
  – Do they offer funding for the first year or for summers?
  – Do they expect you to teach? If so, how much?