Handout on Research Experiences for Undergraduates

Fall 2016

Jesse Kass

Opportunities at the University of South Carolina

Currently the university primarily supports undergraduate math research through two activities.

1) The Office of Undergraduate Research supports student research through several activities. Most significant is the Magellan Scholars program that provides grants of up to $3,000 per student. The grants are awarded on the basis of a competitive research proposal that is drafted with the help of a faculty mentor. The next grant application deadline is February 16, 2017.

The office also hosts a regular forum, Discovery Day, for student presentations and maintains and undergraduate research journal Caravel. The office can also help you find a faculty member to work with.

To find out more information about what the Office of Undergraduate Research can do for you, check out their website http://www.sc.edu/our/.

2) Both the Honors College and the Math Department support undergraduate senior theses. In order to graduate with honors from the Honors College or to receive a B.S. with Distinction in Mathematics from the Math Department, you need to write a senior thesis. The same document can be used to satisfy both graduation requirements. If you plan to write either senior thesis, you should talk to your undergraduate advisor and start looking for a faculty mentor towards the end of junior year, or the start of senior year at the latest.

The Honors College senior thesis is described at http://students.schc.sc.edu/student-resources/senior-thesis, and the Math Department thesis is described the current Undergraduate Program Booklet.

Potential Faculty Mentors:
Francisco Blanco-Silva (blanco@math.sc.edu),
Matt Boylan (boylan@math.sc.edu),
Josh Cooper (cooper@math.sc.edu),
Eva Czabarka (czabarka@mailbox.sc.edu),
Doug Meade (meade@mailbox.sc.edu),
Jesse Kass (kassj@math.sc.edu),
George McNulty (mcnulty@mailbox.sc.edu),
Yi Sun (yisun@math.sc.edu).

Opportunities at other universities

Many universities run Math REU programs during the summer. If you are thinking about applying for math graduate school, you should seriously think about applying for these programs. REUs are an important way to learn about research, meet other talented math students, and prepare for graduate school. For most students, the ideal time to attend an REU is summer after junior year (after you have taken some significant coursework but before you are applying for graduate school).

A typical REU brings together 8-10 students for roughly 2 months. REUs typically fund you by paying for housing, travel, and offering a modest stipend. Most REUs have a competitive application process that involves submitting a CV, a college transcript, and one or two letters of recommendation. Applications are typically due between February and March, but the Spring semester goes by quickly, so start your application well in advance of deadlines.

Some resources for finding REUs:

The MAA has an article about math REUs: http://www.maa.org/programs/students/undergraduate-research/research-experiences-for-undergraduates/is-an-reu-for-you

The NSF maintains a list of math REUs: https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=5044

The AMS maintains a list of math REUs: http://www.ams.org/programs/students/emp-reu

The lists maintained by the NSF and the AMS are incomplete, so make sure to ask friends and faculty for suggestions, and search around on your own.