Training Graduate Students in the Mathematical Sciences

Tara Holm, Cornell
Chair, AMS CoE
TPSE Math
TPSE Math - Chicago
19 September 2015
Founded in 1865

A public / private land-grant institution in the Ivy League, APLU and AAU

3 campuses in Ithaca; New York City; and Qatar

Ithaca: 14,500 undergrad, 7,500 grad students

1,600 academic staff (faculty and other)

Seven undergraduate colleges and schools

The Graduate School plus Professional Schools

65% of students are undergraduates
39 Tenured / T-track faculty, 5 HC Wang (post docs),
5 Lecturers / Senior Lecturers
70 math majors / 15 minors per year
65 graduate students, roughly 12-15 per year
35 additional graduate students in applied math
6500 students served:
5100 UG12 + 1000 UG34 + 400 G
Department of Mathematics

- Diversity: 38% of PhDs to women (past 5 years)

- TA Training
  - 2-day workshop, including micro-teaching seminar
  - Assignments include grading; recitations; or lectures
  - Ongoing mentoring and personalized training
  - Grad-student-organized Teaching Seminar

- Outreach efforts: Math Explorations in High School
  Students volunteer in local schools, prison
Federal Support: VIGRE, RTG

Co-curricular training
- Grad students organize seminars, clubs
- Small number do internships
- Professional Development through The Grad School

University resources
- NIH-funded program: BEST for STEM students
- Science communication workshops
- Career services
Center for Applied Mathematics

- 70 affiliated faculty members
- 35 Graduate Students (typically 40-50% women)
  - Access to better URM fellowships (Engineering)
  - Some are TAs in Mathematics
  - Larger number participate in internships (7 last year)
- Federal support: two IGERT grants
- Cornell Summer Mathematics Institute (SMI)
- About half of students end up outside of academia
Over 30,000 members
Roughly 12,000 graduate student members
     (the vast majority are nominated by institutions)

Current Programs
  • Graduate Student Travel Grants
  • Math Research Communities
  • Graduate Student Chapters
  • Graduate Student Blog

October 30-31, 2015: AMS Committee on Education

Coming Soon: Office of Education and Diversity