## **Guaranteed Funding**

The Department pledges incoming PhD students financial support so that they have funding for at least 5 years of graduate study at UW Madison, subject to good academic progress and satisfactory performance of teaching duties. Most students will be supported as Teaching Assistants, but other sources of support, such as Research Assistantships, are also available. The department aims to provide funding for students even beyond the period of guaranteed support, if this is feasible and if the students are making good progress towards their degree.

Teaching Assistants play a major role in the teaching of undergraduate mathematics courses. New students participate in a comprehensive training organized by the Mathematics Instructional Excellence Program. This program provides instructional support to teaching assistants throughout their graduate career.





# **UW-Madison Department of Mathematics**

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# The Ph.D. Program in Mathematics





#### Graduate Student Life

Classes—Every semester there are on average 25 graduate classes being taught, with many being specialized topics courses. Students also have the opportunity to take one on one reading courses with professors.

Seminars—Currently there are 6 weekly seminars for graduate students and 13 research seminars which graduate students are welcome to attend as well as a departmental colloquium each Friday. On Wednesday afternoons all graduate students are welcome to attend a graduate students only "Donut Seminar" for informal math talks and donuts.

Advising-Students are initially assigned to an academic advisor who will assist in choosing courses, finding a dissertation advisor, and other matters.

Qualifying Exams—In their first couple years, students focus on passing two qualifying exams in any of the following subject areas: algebra, algebraic or differential topology, logic or computability, real or complex analysis, applied or computational math. Courses in these subjects are taught every year and special qual prep tutorials are often offered during the summers.

Outreach—We offer numerous outreach activities including Math Circles, Talent Search, Girls Math Night Out!, and the Directed Reading Program.

#### **Program Overview**

The Mathematics Department at UW-Madison is one of the leading institutions in the United States for research in mathematics, encompassing both pure and applied mathematics. Informally, the department is organized into seven overlapping research groups:

- Algebra, Algebraic Geometry, and **Number Theory**
- **Analysis**
- **Applied and Computational** Mathematics
- **Differential Equations and Dynamical** Systems
- **Geometry and Topology**
- Logic
- Probability

### After Graduating

Most of our recent students got postdoctoral research or teaching positions, many at highly ranked research universities such as Columbia, Duke, Institute of Advanced Studies, Kyoto University, Michigan, Purdue, Stanford, UC Berkeley, UCLA, UC San Diego, and UT Austin, or research institutes such as the Institute for Advanced Studies, the Max Planck Institutes, and the Korea Institute of Advanced Studies.

A substantial number of students got jobs in government and industry, including positions at Amazon, Epic Systems, Google, NSA, and J. P. Morgan.

#### Diversity in Math

Women and Non-binary People in Mathematics at Wisconsin — WIMAW fosters the growth and development of the members of the mathematics community at UW Madison through exposure to outstanding women mathematicians and provides a supportive community among the women in the department with a connection to the larger math community. To this end, we have many events throughout the semester, including potlucks for current and prospective graduate students, a lecture series in our departmental colloquium, and lunches with our invited speakers. We also participate in outreach programs to the community through UW Mentorship program for women in Math and Science (see Girls Math Night Out! below) and working with local Girl Scouts.

E.B. VAN VLECK HALL

Girls Math Night Out! - Girls Math Night Out! is a free program offered by the Department of Mathematics at UW Madison. It aims to create an inclusive and non-competitive environment to encourage high school students who are women or gender minorities to pursue mathematics and the sciences. Over 12 weeks students will work with graduate student mentors on a project which they will then present to each other and their families at the last meeting.