



FRONTIERS OF RESEARCH IN MATHEMATICS

The department of Mathematics boasts a large number of highly rated research groups, covering an especially broad variety of topics. Ranked 8th in the country by the most recent National Research Council rankings, our program’s focus on excellence will provide you with the opportunity for exciting research in one of many thriving fields in Mathematics that have recently been transformed by several breakthroughs.

Our curriculum promotes innovative ideas in Mathematics while offering a large and flexible selection of courses that can be tailored to your interests. Our training emphasizes a rigorous foundation in mathematics but also strongly encourages interdisciplinary collaborations.

In addition to traditional master’s and Ph.D. programs, we participate in Penn State’s Integrated Undergraduate Graduate program. With mathematical tools having recently taken a critical role in several sciences, our students are welcomed to pursue a concurrent and/or minor degree program.

Our department’s vibrant activities are an ideal setting for students, with a thriving visitors’ program and frequent international conferences and workshops. We also provide our student with strong mentorship and excellent preparation: All of our new teaching assistants attend a semester-long training program before they begin teaching undergraduates and classes are carefully selected for the teaching assistant.

RESEARCH FOCUS AREAS

Penn State mathematics faculty have wide-ranging research expertise, including these areas:

- Algebra and group theory and algebraic geometry
- Deformation of solids, material science, and fluid mechanics
- Dynamical systems and ergodic theory
- Geometry and topology
- Mathematical biology
- Mathematical logic and foundations
- Number theory and combinatorics
- Numerical analysis
- Operator algebras, noncommutative geometry, and mathematical physics
- Partial differential equations
- Probability theory and stochastic processes
- Social science, economics, and optimization



FELLOWSHIP AND ASSISTANTSHIP OPPORTUNITIES

Our department makes extremely competitive and individually tailored offers to accepted graduate students. While no financial assistance is offered to master's degree students, graduate students in the doctoral program are eligible for University, college, and governmental fellowships, departmental teaching and research assistantships, and other forms of financial aid. The Eberly College of Science's assistantships and fellowships include a stipend, tuition waiver, and subsidized health, dental, and vision insurance.

Doctoral students are guaranteed financial support during the first summer for teaching, grading, or research. Teaching assistantships are offered for up to six years. A reduced teaching load is available to doctoral students who pass qualifying exams ahead of schedule. In addition, our department awards several Pritchard Dissertation Fellowships to students nominated by their adviser in their final year of study. This fellowship exempts the recipients from teaching during the fall semester.

This publication is available in alternative media on request.

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