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Yale Math department by the numbers:

18 graduate faculty, with a few more affiliated faculty members and several visiting faculty.

At this link

Graduate Faculty and Their Research | Department of Mathematics (yale.edu)

you can find a description of faculty's research interests.

Note: 9 out of 18 faculty arrived in the last three years. And we are currently in the process of hiring two more faculty members: the department is growing as a part of the effort from Yale to strengthen its Science departments.

18 Gibbs Assistant professors (postdocs) in Pure and Applied Mathematics.

39 graduate students, with 30 in the general Math program and 9 in the Applied Math program.

Research areas

Algebraic geometry

Applied Mathematics

Combinatorics and Discrete math

Complex and real analysis

Differential geometry

Geometric analysis

Groups actions and Dynamical systems

Harmonic analysis

Lie groups and discrete subgroups

Low-dimensional topology

Math Physics

Number theory

Numerical analysis

PDE

Probability and Stochastic analysis

Representation theory

Teichmuller theory

Classes.

The department teaches a wide range of graduate classes that fall into three groups:

- Introductory classes, cross-listed also as undergraduate classes.
- Intermediate classes accessible to students who took intro classes (at Yale or elsewhere). These classes either have a mostly fixed syllabus or are more of topics classes. Just this year, four of such classes have debuted, and we plan to add more in the coming years.
- Advanced topics classes that often focus on faculty's current research.

The class schedule (for MATH and a given semester, e.g. Spring 2022) can be accessed at:

Search Yale Courses

Students are required to take 8 classes in the first three year in the program, but there are no required individual classes, which gives a lot of flexibility.

Guidance

The department takes active effort in guiding students through the program. We have prepared the advising guidelines to help our students with navigating the program, the document is available at:

advising-guideline_2021.pdf (yale.edu)

The department has introduced the temporary advisor program. Each incoming student is assigned a faculty member (based on students' preferences) who guides them through the program before they choose a thesis advisor. This allows students to better connect with faculty. A thesis advisor is usually chosen during the second or the beginning of the third year.

Research seminars and other activities running this semester:

Analysis

Applied Mathematics

Algebra and Number theory

Geometry, Symmetry, and Physics (featuring talks on Algebraic geometry, Math Physics, Representation theory, occasionally Number theory), seminar webpage: Home (google.com)

Geometry and Topology

Geometric Analysis and Applications

Group actions and dynamics

Seminar calendar can be found here: Department of Mathematics (yale.edu)

We also have Colloquium as well as the number of other activities. The current activities include:

- Graduate student seminar run by graduate students. From time to time, it features talks by faculty explaining their work in accessible terms.
- Algebra and Geometry lecture series (yale.edu) featuring lecture series in Algebraic geometry and Representation theory by Yale faculty and postdocs.
- Student learning seminar on homological algebra and sheaf theory.
- Reading group on Schrodinger operators.
- "Math for Humans" reading group discussing issues of belonging, diversity and inclusion.

Other important things

Financial support

For the previous admissions cycle, the stipend was 36,750. Funding is guaranteed for the first five years subject to satisfactory progress and participation in teaching.

Teaching

Students teach in one of the two semesters. They work as TA's for the first two years, and teach their own section of Calculus in years 3-5. In the Spring semester of the second year there is a teaching seminar providing training for that.

Working with undergraduates

There are several opportunities for that including:

1) Directed reading program, where graduate students are paired with undergraduates to supervise their readings: yale drp (google.com)

2) SUMRY, an NSF funded REU program:

Welcome | Summer Undergraduate Math Research at Yale

Program requirements:

Requirements for the Ph.D. Degree | Department of Mathematics (yale.edu)