

## INFORMATION ABOUT YALE MATH DEPARTMENT

### 1. DEPARTMENT BY THE NUMBERS

- 18 ladder faculty, plus several affiliated faculty. A description of their research interests can be found [here](#). In addition, this year we have three job searches<sup>1</sup>.
- 14 Gibbs Assistant Professors (postdocs).
- 43 graduate students. This year our admission target is 6.

### 2. SEMINARS AND OTHER ACTIVITIES

The department has the following regularly run research seminars:

- *Analysis*,
- *Friday mornings*: subjects include, but are not limited to, geometry, probability, combinatorics and dynamics.
- *Geometry, Symmetry, and Physics*: see [here](#). The seminar concentrates on Algebraic geometry and Representation theory.
- *Geometry and Topology*.
- *Group actions and Dynamics*.
- *Quantum topology and Field theory*, see [here](#).

There are also the department colloquium, several distinguished lectures/ lecture series, and the graduate student seminar.

In addition to these activities there are several working groups and learning seminars. Here are some that were/are running this academic year:

- Brown-Yale Analysis working group.
- Geometric representation theory learning seminar.
- Learning seminar on derived categories of GIT quotients.
- Informal Algebra and Geometry seminar, see [here](#).
- Working group on vertex algebras incl. affine W-algebras.

Working groups in Geometry and Dynamics ran last academic year.

### 3. LOCATION

New Haven is located in the center of the mathematical US Northeast:

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<sup>1</sup>As this is a confidential matter we cannot disclose the names of candidates

- The closest major city is New York, it takes about two hours to get there via Metro North local trains. Two major Math departments in NYC are Columbia and NYU.
- Providence, where Brown is located, is 1.5-2 hours by Amtrak.
- Boston is about 2 to 2.5 hours by Amtrak. There are many universities there including Harvard and MIT.
- One can get to Princeton: about 3 hours by car and somewhat longer by train.
- One can get to Stony Brook on Long Island via a ferry in Bridgeport, this takes about 90-120 minutes. There one has, for example, Simons Center for Geometry and Physics that hosts a bunch of programs and conferences.

#### 4. CLASSES

The list of currently offered classes is available on Yale Course Search, see [here](#). The displayed list is for Spring 2025 but you can choose a different semester. The graduate courses are level 500 and higher. Classes of level 500 are typically cross-listed as undergraduate courses.

#### 5. TIMELINE AND REQUIREMENTS

Students typically spend 5 or 6 years in the program. Note that the financial support for year 6 is not guaranteed but currently the department is able to support all of the 6th year students. Students typically find an advisor by the end of the 2nd year and often earlier than that. Right now six out of our seven 2nd year students already have an advisor.

Here are requirements (see [this link](#) for a more comprehensive list) by year in the end of which they need to be completed:

Year 1: In the Fall semester take the government mandated MATH 991, Ethical conduct of research. The course meets once a week for 50 min, there are 10 meetings total.

Year 2: By the end of year 2 a student should

- Get the grade of H, the highest graduate grade, in at least two courses.
- Pass the three written qualifying exams, see [here](#).

In the Spring of the 2nd year a student should pass MATH 827, Lang teaching seminar, that prepares students to teach their own Calculus sections.

Year 3: By the end of the 3rd year a student should:

- Complete 8 graduate courses (MATH 827, 991 do not count) with the average graded of at least HP (where H is 3, HP

is 2, P is 1 and F is 0, F's do not count for the number of courses to be passed). There are no required courses, except the two mentioned above.

- Submit a dissertation prospectus, a short document describing the thesis topic.

Please see your offer letter for teaching requirements.

## 6. FINANCIAL STUFF AND HOUSING

New Haven is an affordable city to live. Yale also provides furnished apartments for graduate students, with many being designated for first year students and are not renewable. The majority of our 1st year students currently live in dormitories.

In addition to stipends the department currently offers the following forms of financial support to its students:

- 2,500\$ of travel/ research funding for the duration of study.
- 12 dining hall lunch swipes every semester.

Students also have an opportunity of working as TA's during the summers for additional compensation.

## 7. OTHER

It is possible to take a semester-long leave for academic purposes while still being paid by Yale, e.g., as a part of Ivy Plus exchange, see [here](#).