UNDERGRADUATE MATH SEMINAR

The next, and last, math seminar of the winter term will be

DATE: <mark>THURSDAY, March 5, 2026</mark>

Time & **12:30 – Refreshments in Bailey 204**

Location: **12:50 – 1:45** Seminar in **Bailey 207**

In this seminar, **Professor Rylan Gajek-Leonard**, a number theorist in the Union College math department will present the following talk.

Professor Rylan Gajek-Leonard

Title: Is Your Piano out of Tune? *The Mathematics of Sound and Tuning*

Abstract: Why are there exactly 12 notes in the Western musical scale? Why do some combinations of notes sound consonant while others dissonant? What does it really mean to say that a musical instrument is "in tune"?

In this talk, we'll explore these questions through a mathematical lens. With the aid of computer-generated sounds and live demonstrations on the cello by yours truly, we will learn about the Pythagorean scale, the idea of just intonation, and the great compromise of equal temperament, the modern tuning system that makes music we listen to today possible.

HRUMC 2026, April 25 at Vassar College: Registration Is Open

The 32nd annual Hudson River Undergraduate Mathematics Conference ([HRUMC](#)) will be **Saturday, April 25** at **Vassar College** in Poughkeepsie, NY. This is a *free* daylong conference, and the math department will provide transportation for those interested in attending.

The conference features short, 15-minute talks *primarily by students* along with some by faculty, as well as a keynote address by a prominent mathematician. This year's keynote will be *"Topological Time Series Analysis,"* by **Jose Perea** of **Northeastern University.**

- If you are interested in **presenting a talk** (based on summer research, a thesis, a project, or problem you enjoyed, etc.) contact a math faculty member to sponsor it.
- If you are interested in **attending the conference or knowing more about it**, email **Professor Paul Friedman** (friedmap@union.edu).

Some timing notes: conference registration is now open on the HRUMC website, [HRUMC](#) (also findable from Union Math Department website -> Activities -> HRUMC).

- Online registration and title/abstract submission deadline for speakers: April 7.
- Online registration deadline for participants not presenting a talk: April 17.
- To help the math department as we coordinate Union's participation and travel needs, if you are planning on attending this year's HRUMC (whether you will be giving a talk or not), please contact **Professor Paul Friedman** by April 17 (though earlier is appreciated!).

HRUMC website for more information, registration, and abstract submission:

https://sites.google.com/view/hrumc