

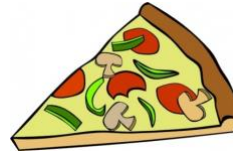
UNDERGRADUATE MATH SEMINAR

Welcome back as we kick off the seminar series for the spring term. This term, the seminar will generally be at its "usual" time and location, as displayed below, with the next math seminar being

DATE: THURSDAY, April 7

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

Location: 12:55 – 1:45 Seminar in **Bailey 207**



Professor Jeff Hatley

In this seminar, **Professor Jeff Hatley** from the Department of Mathematics at Union College will deliver the following talk:

Title: Geometric Constructions in Number Theory

Abstract: One of the most satisfying aspects of mathematics is finding bridges between seemingly disparate fields. These sorts of connections abound between number theory and geometry -- in fact, there is an entire field, called "arithmetic geometry," which studies this sort of thing.

In this talk, we will explore one big (geometric) idea and the insight it provides for two very classical number theory problems. We will begin with a problem of interest to the ancient Greeks, and we will end on a modern, wide-open conjecture whose solution is worth \$1 million.

The prerequisites for this talk are high school algebra and an affinity for pictures.

HRUMC – Saturday, April 30 Registration Deadline: Friday, April 8

The 28th Hudson River Undergraduate Mathematics Conference (HRUMC) will be **Saturday, April 30th**, at **Siena College**. It is a *free* conference, and the math department will arrange transportation for those interested in attending.

The HRUMC is a one-day mathematics conference held annually each spring, attended by students and faculty from colleges and universities throughout New York and New England. It was founded by four colleges, Siena, Skidmore, **Union**, and Williams, with the goal of providing undergraduates with the experience of attending and/or presenting at a professional mathematics meeting and was designed primarily with the student in mind. It is the premier regional undergraduate mathematics conference after which several others have been subsequently modeled nationwide.

Students who have attended HRUMC generally rave about the experience, saying how great it was to support the Union speakers, to meet students from other colleges, and to hear about some exciting math that students and faculty at other schools are doing. It is also a great way for underclass math majors to start thinking about their own math theses.

The conference features short, 15-minute talks *primarily by students* and faculty, as well as a longer invited address by a noted mathematician.

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This year's HRUMC keynote address, entitled ***Optimal Tiles***, will be delivered by **Frank Morgan**, the **Atwell Professor of Mathematics, Emeritus**, at **Williams College**, and is described below.

Abstract: *In 2001 Hales proved that regular hexagons provide the least-perimeter way to tile the Euclidean plane with unit areas. What are the best pentagons? What about the hyperbolic plane? What about higher dimensions? The talk will include open questions and recent results, some by undergraduates.*

If you are interested in **attending the conference**,

- Email **Professor Paul Friedman** (friedmap@union.edu), and
- **Register** for the conference through the HRUMC website, [HRUMC](#) (also findable from Union Math Department website -> Activities -> HRUMC). The deadline is **Friday, April 8**.

If, in addition to attending the HRUMC, 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,
- Prepare and submit an abstract through the [HRUMC](#) registration website, also by the **Friday, April 8** deadline.

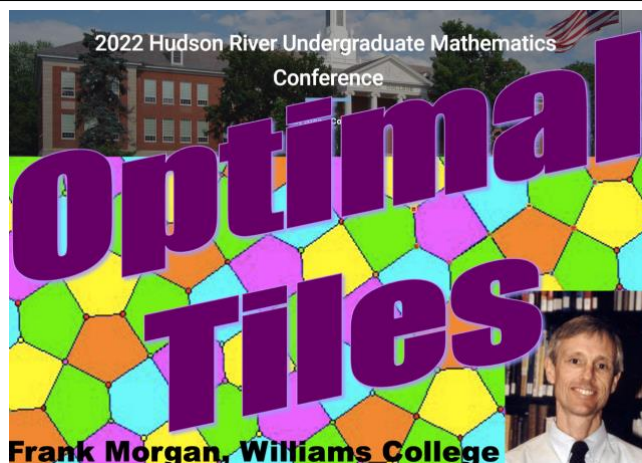
Note: Attendees at this year's HRUMC will need to present proof of COVID vaccination and to mask indoors at Siena College.

Join the Fun: Math Club!

This term, the Math Club will usually be meeting on Thursdays at 5:00pm in the Math Common Room, Bailey 204. Come help plan math activities and to discuss fun math problems!

The picture to the right is from the Math Club's March 31 meeting attended by (from left to right), **Mayah Teplitskiy**, **Livi Gwinnett**, **Will Grimwood**, **Uri Tomer**, **Prestine St. Louis**, and **Jacob Hernandez**.

To be added to the Math Club's mailing list, contact Uri Tomer (tomeru@union.edu).



Calculus Help Center – open for business!

The math department runs a Calculus Help Center (CHC) that offers **free, drop-in, tutoring** in calculus courses through Math 117. In the spring term, it is open three nights per week, Sunday, Tuesday, and Thursday nights, 7:30-10:00pm. The CHC is held in the SORUM HOUSE seminar room.