

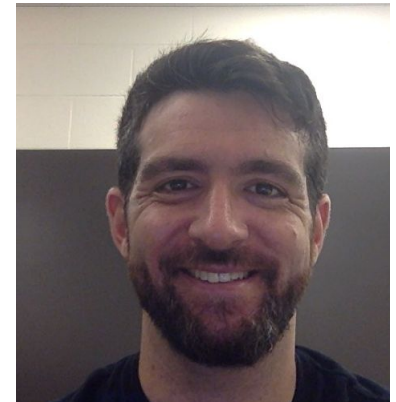
UNDERGRADUATE MATH SEMINAR

The next seminar of the term will be

DATE: **FRIDAY, September 21**

Time & **12:30pm** – Pizza in **Bailey 204**

Location: **1:00pm** – Seminar in **Bailey 207**



Jonathan Campbell
Vanderbilt University

In this seminar, **Jonathan Campbell**, a visiting assistant professor at **Vanderbilt** University will deliver the following talk:

**Title: Cutting Up Space:
Hilbert's Third Problem and the Dehn Invariant**

Abstract: Give two polyhedra of equal volume, can you cut up one into a finite number of pieces, and reassemble it into the other? This was a problem posed by Hilbert in a famous address. I'll go through the two-dimensional analogue of this problem, and present Dehn's beautiful solution to Hilbert's question. Time permitting, I'll give some hint of how this easily stated problem shows up in my own research.

What We Did this Summer

When the academic year ends in June and students leave campus for the summer, the faculty take the opportunity to continue their research activity, visiting collaborators and colleagues, attending and speaking at conferences, as well as preparing themselves and, for some the next incoming class, for the upcoming academic year. Here are some bullet point highlights of some of the activities of some of the math faculty this past summer. There will be more such reports in the next few newsletters.

- **Professor Ellen Gasparovic** kicked off the summer by organizing a workshop at a conference in Budapest, and later attended conferences or gettogethers with collaborators in Portland, Minneapolis, and Providence. She also had a great summer doing research in applied topology with seniors Danielle Gregg and Robert Righi.
- **Professor Jeff Hatley** wrote, "I spent a week at Laval University in Quebec City at the biannual summer conference of the Canadian Number Theory Association, where I presented a talk on my research, and I also started a new project with two international colleagues. This was the same week that France won the World Cup, so it was an especially exciting time to be in a francophone country! People watched the final game on a giant screen set up near the old city walls. Oh, and I ate a ton of poutine."



Professor Gasparovic, right,
with two colleagues

Putnam Exam Preparation: Organizational Meeting on Monday, 9/17/18

The William Lowell Putnam Mathematical Competition is an annual contest for undergraduate students across the United States and Canada. Participants in the contest spend 6 hours (in two sittings, a morning session and an afternoon session) trying to solve 12 problems. Problems on the “exam” are generally very challenging, but not specialized. In other words, they are accessible to students who may or may not have taken advanced courses.

This year, the exam will be on Saturday, December 1st. If you will be in the area, you can take the exam at Union. If not, we will try to arrange for you to take the exam at a college or university near your home.

For more information and to talk about some sample problems, **Professor George Todd** will be holding an organizational meeting on **Monday, September 17** during common lunch in **Bailey 106**.

Note: If you would just like to stop by and do some fun math problems, there is absolutely no commitment to take the exam itself! Moreover, if you are interested but cannot make the meeting, please contact **Professor George Todd**, toddg@union.edu.

Resources for Students

- The Math Club will be holding its first meeting on **Wednesday, September 19th** in **Bailey 204** (the Math Common Room) during common lunch. Come to help plan some fun math-related events. If you are interested in joining the math club but cannot attend this meeting, email Kallan Piconi (piconik@union.edu).
- **The Calculus Help Center (CHC)** is open and ready for business. The CHC offers **free tutoring** in calculus courses through Math 117. It is open Sunday through Thursday nights 7:30-10:00pm and is located in the SORUM HOUSE seminar room.



Math club co-president Kallan Piconi (L) with AWM club president Victoria Dafniotis (R) recruiting new members at the Club Expo.

Problem of the Newsletter – September 17, 2018

In most issues of the newsletter, we present a “Problem of the Newsletter.” While the problems will range in difficulty and in their prerequisites, we hope they will have at least one thing in common: they are fun to work on! And, if you submit a correct solution to a problem, you will receive public honor via recognition in the following week’s newsletter. Get ready. Get set. Have fun!

This week’s problem: Let $p(x)$ be a polynomial with integer coefficients. Suppose that $p(0)$ and $p(1)$ are both odd. Prove that p has no integer roots.

Professor Friedman (friedmap@union.edu) will accept solutions until midnight on Friday, September 21.

Class of 2018: Stay in Touch

Union College email accounts of recent graduates expire at the end of September. To continue receiving the Math Newsletter, please update your email address with **Joanne Higgins** (higginsj@union.edu) or **Professor Paul Friedman** (friedmap@union.edu).