UNDERGRADUATE MATH SEMINAR

Given that there have been two seminars in some of the last few weeks, there will not be a seminar this week. But, check next week's newsletter, as well as Student Seminar page (under Activities) on the math department's website, https://www.union.edu/mathematics/upcoming-student-seminar-talks, for current information.

If you are burning for more math talks, consider going to the next HRUMC … as discussed below!

HRUMC–Saturday, April 4, 2020 at Mount Holyoke College: Sign-up Now!

The 27th Hudson River Undergraduate Mathematics Conference (HRUMC) will be **Saturday, April 4th** at **Mount Holyoke College.**

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.

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

- 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. You will then need to submit an abstract by **Friday, March 6** via the conference website, HRUMC, linkable from the Union Math Department website -> Activities -> HRUMC -> Abstract Submission.

- **Francesca Dominici,** the Clarence James Gable Professor of Biostatistics, Population, and Data Science, and the Co-Director of the Data Science Initiative at **Harvard University** is this year's keynote speaker.

Students who have attended HRUMC generally rave (positively) about the experience, commenting on how great it is to support the Union student 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 junior math majors to start thinking about their own math theses.

Interested in attending HRUMC? If you would like to go to this year's HRUMC, please email **Professor Paul Friedman** (friedmap@union.edu). Transportation to/from the conference might be limited, but we will do our best to accommodate all interested students. (There is **no charge** for attending the conference, and breakfast and lunch will be provided at the conference.)

Spring '20 Petitioning – Deadline is Tuesday, February 18.

Don't forget that petitioning for spring term classes ends this Tuesday, February 18.

The following spring math courses require a petition: Math 112, 224, 332, and 430.

Four Union Students Participate in the Rochester Math Olympiad

On Saturday, February 8, four Union students, **Srihari Balaji, Vu Le, Muhammad Talha Mushtaq, and Son Nguyen,** participated in this year's Rochester Math Olympiad. This contest is administered to about ten participating schools, mostly in New York state, and prize money is awarded to the top three performers. Individually, they battled four challenging problems over a three-hour period. **Professor Ehssan Khanmohammadi** coached the Union participants, holding preparation sessions to help get them ready. (He also gets credit for the photo to the right!) Results will be released later this year; no matter how things pan out, our students reported they had a great experience. Congratulations!

A Term (Summer?) Abroad in Math Education

The Budapest Semesters in Mathematics Education (BSME) offers Summer, Fall, and Spring terms abroad (in Budapest, Hungary). The website for this is: https://bsmeducation.com/

Quoting from a recent email from BSME to the math department, this highly regarded program is "designed for undergraduates and recent graduates interested in the learning and teaching of secondary mathematics. BSME participants explore the *Hungarian pedagogy*, in which a strong and explicit emphasis is placed on problem solving, mathematical creativity, and communication.

"Why BSME? Today's American teachers are expected to provide students with opportunities to struggle productively towards understanding. Preparing teachers who can cultivate such a learning environment is an important goal, and the Hungarian pedagogy has the potential to play a critical role in this endeavor. At BSME, we are excited for our participants to bring back this new perspective on mathematics education.

"BSME participants engage in mathematical exploration to experience first-hand learning in the Hungarian pedagogy. They connect these experiences to their own understanding of learning and teaching. They observe Hungarian classrooms and teach their own lessons to Hungarian students (in English). And BSME courses are designed so that credits are transferable to American colleges and universities."

BSME application deadlines are: April 1 for Summer 2020; May 1 for Fall 2020, and Nov. 1 for Spring 2021.

Problem of the Newsletter – February 17, 2020

Last week's problem: Congratulations to **Vu Le** for solving last week's problem. His solution has been posted at the newsletter sites in Bailey Hall.

This week's problem: Prove that there exist infinitely many integers n such that the three consecutive integers $n, n+1, n+2$, are each the sum of the squares of two integers. [For example, $0=0^2+0^2$, $1=0^2+1^2$, and $2=1^2+1^2$.]

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