UNDERGRADUATE MATH SEMINAR

The next seminar will be back in its usual location in Bailey Hall

DATE: **Thursday, October 24**

Time & **12:30 pm** – Pizza and drinks

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

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

Professor Jeff Hatley

Title: The Congruent Number Problem

Abstract: The Congruent Number Problem asks the following simple-sounding question: which rational numbers occur as the area of a right triangle with sides of rational length? For example, the familiar (3,4,5) right triangle has area 6, so 6 is a congruent number; but Fermat showed in the year 1640 that 1 is not a congruent number. Our investigation of this question will lead to a surprising and beautiful interaction between algebra and geometry, bringing us to the forefront of modern number theory and a math problem with a $1 Million prize.

REMINDER: Petitioning Continues Through Tuesday

The winter term math courses that are petition courses are

- *IMP 120*
- Math 110
- Math 117
- Math 199
- Math 221
- Math 340
- Math 487
- *Stats 104*

Math Contest this Weekend!

The 41st Virginia Tech Regional Math Contest will be held from 9:00 am to 11:30 am on Saturday, October 26. Last year 792 students participated, representing 94 colleges and universities in Virginia and nearby states!

This contest originated as a regional warm-up to the national Putnam competition. While it still serves that function, it is highly regarded in its own right. Union College students have been participating in this contest for the last several years.

If you would like to see the past 40 years of exams, go to the bottom of the website

http://intranet.math.vt.edu/people/plinnell/Vtregional/

To register and participate in this 2.5 hour contest, please show up at **8:45 am on Saturday, October 26 in Bailey 106**. And there is prize money awarded to the top finishers! Cha-ching!

Need help with Calculus? Go to the CALCULUS HELP CENTER!
Sunday – Thursday, 7:30 – 10:00pm
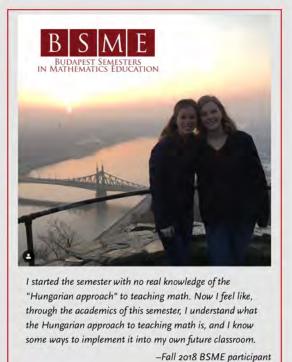Sorum House Seminar Room

A Term Abroad in Math Education: Budapest Semesters in Mathematics Education

The Math Department recently received an email about this (and next) year's Budapest Semesters in Mathematics Education (BSME). Its content is repeated here:

"Are you passionate about the learning and teaching of mathematics? Would you like to spend semester or summer in a beautiful historical city, with one of the most vibrant cultures in Europe? How about learning in small classes where instructors challenge each student to deeply engage with the material?

"Please consider Budapest Semesters in Mathematics Education (BSME), a study abroad program in Budapest, Hungary, 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

I started the semester with no real knowledge of the "Hungarian approach" to teaching math. Now I feel like, through the academics of this semester, I understand what the Hungarian approach to teaching math is, and I know some ways to implement it into my own future classroom.

–Fall 2018 BSME participant

bsmeducation.com

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.

"We are currently accepting applications for Spring 2020 (due Nov. 1) and Summer 2020 (due April 1), as well as Fall 2020 and Spring 2021 semesters. The applications are reviewed on a rolling basis, so apply early! More information, including the online application, can be found at bsmeducation.com.

"If you have any questions, please contact our BSME office, either by email (bsme@bsmeducation.com) or by phone (507- 786-3821)."

Problem of the Newsletter – October 21, 2019

Last week's problem: A solution to last week's problem has been posted at the newsletter sites around Bailey Hall. Take a peek!

This week's problem: Count 'em up! How many sequences of 0's and 1's of length 19 are there that begin with a 0, end with a 0, contain no two consecutive 0's, and contain no three consecutive 1's? Have fun!

Professor Friedman (friedmap@union.edu) will accept solutions until noon on Friday, October 25.