Department of Mathematics

September 21, 2020

Join the Club(s)! AWM and Math Club Event this Week: *Meet the Math Department*

Come join the Association for Women in Math (AWM) and the Math Club for their first event of the year! We are hosting a "Meet the Math Department" event, where students can come talk to math professors and other math students! The clubs will be joined by **Professors Louisa Catalano, Paul Friedman, Ellen Gasparovic, Jeff Hatley, Kathryn Lesh, Kim Plofker, and Christina Tønnesen-Friedman**. This is a great opportunity to learn more about the math department!

Join this Zoom link on **Tuesday, September 22nd at 5:00pm** to participate:

https://union.zoom.us/j/99426496712?pwd=MmRPWEJVa1ZDeU5Qdjd1cHZidVlhUT09

(The meeting id is 994 2649 6712 and the password is math.) See you there!

Math Graduate School Advice: Q&A Panel via Zoom

Are you considering whether or not you should apply to a graduate program in mathematics, mathematics education, statistics, or applied mathematics? Then you should definitely attend the Seaway Section of the Mathematical Association of America's Graduate School Advice Q&A panel discussion on Zoom on **Thursday, September 24th, 6:00-7:00pm**. Current graduate students will be on hand to share their graduate experience and answer your questions.

The panelists are:

- Mr. Chris Eppolito from Binghamton University (Mathematics Doctoral Program)
- Mr. Tom Peebles from University of Albany (Mathematics Doctoral Program)
- Mr. Mike Abili from Texas State University (Mathematics Education Doctoral Program)

To attend this event, please sign-up using the event registration link here, or via the URL

https://www.cognitoforms.com/MAASeawaySection/Seaway2020FallConference

(Also, it is FREE!)

Resources for Students

- **Calculus Help Center**. The math department runs a Calculus Help Center (CHC) that offers ***free, drop-in, tutoring***, staffed by helpful, friendly, and calculus-skilled Union undergraduates, for its calculus courses through Math 117. The CHC will be open **Sunday, Tuesday, and Thursday nights, 7:30-10:00pm** (NY time). Due to the college-wide restriction on face-to-face peer tutoring, the CHC will be operating online through Zoom! The Zoom link can be found on the CHC's webpage on math department's website, https://www.union.edu/mathematics under the For Students tab. A direct link to the CHC page, with the Zoom link, is

  https://www.union.edu/mathematics/calculus-help-center

Mathematics Continued Conference: A Research Conference for Undergraduates

Mathematics Continued is a one-day conference for undergraduate students in mathematics. The main goal of the conference is to give undergraduate students interested in math an idea of what graduate school may be like and to showcase some current research done by graduate students, postdocs, and faculty members. The conference is scheduled for **Saturday, October 24th**, and registration (and more!) information can be found on the website: https://mcc.math.uconn.edu/.

The conference, *which will be held online this year*, will feature two hour-long plenary talks as well as several 20 minute talks by graduate students, post docs, and early career faculty where research is presented at a level which is accessible to junior and senior level math majors. This year there will also be a virtual poster session where undergraduates can display their work (the abstract submission deadline for posters is October 1st).

One of the plenary speakers is **Professor Lan-Hsuan Huang**, a professor at the University of Connecticut. Her talk is entitled, "*The Shape of Black Holes"*. In this lecture, Professor Huang will discuss the mathematical models of black holes and their intriguing interconnections to topology, geometry, and analysis.

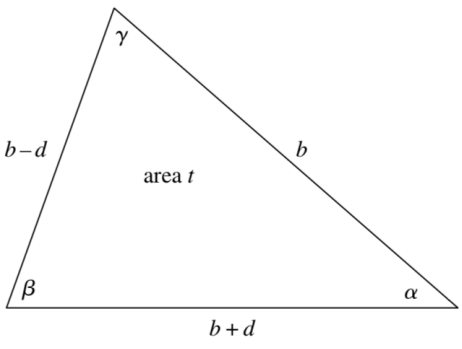
The other plenary speaker is **Professor Misha Kilmer**, the William Walker Professor of Mathematics and Adjunct Professor of Computer Science at Tufts University. Her talk is entitled, *"The Case for Tensor Factorization: Compression, Analysis, and Reconstruction of Image Data".* Professor Kilmer will introduce new methods for factoring tensors which resemble matrix factorizations and illustrate how these can be used to successfully compress, analyze and reconstruct multiway image data. This talk is intended to accessible to students who have had a course in Linear Algebra.

Class of 2020: Stay in Touch

Recent graduates – we would love to keep in touch! To continue receiving the Math Newsletter, please update your email address with **Joanne Higgins** (higginsj@union.edu) or **Professor Paul Friedman** (friedmap@union.edu).

Problem of the Newsletter – September 21, 2020

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: Here's one that will help us dust off our algebra skills! A triangle with area *t* has side lengths in an arithmetic progression with difference *d*, say *b-d, b, b+d*. Find the side lengths of the triangle.

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