

## UNDERGRADUATE MATH SEMINAR

The first seminar of the spring term will be

**DATE:** **THURSDAY, April 10**

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

**Location:** **12:50 – 1:45 Seminar in Bailey 207**



Professor Phanuel  
Mariano

This seminar, Union College **Professor Phanuel Mariano** will present the following talk:

**Title: The Isoperimetric Inequality and its Connection to Probability**

**Abstract:** The isoperimetric inequality is a geometric result relating the square of the circumference of a closed plane curve to the area it encloses, along with various generalizations of this relationship. There is a connection between inequalities that come up in probability and the classical isoperimetric inequality. The connection is through Brownian motion, which is a mathematical model for the random movement of a particle. It was first observed by Robert Brown in 1827 while looking at pollen grains through a microscope. I will discuss some classical isoperimetric problems related to the expected lifetime of Brownian motion from a domain.

## HRUMC – A Huge Success!

This past Saturday, April 5, the Union College Math Department hosted the 31<sup>st</sup> annual Hudson River Undergraduate Mathematics Conference (HRUMC). Bringing together almost 300 students and faculty from about 50 colleges and universities, the conference featured 90 talks, including a keynote address by **Professor Álvaro Lozano-Robledo** on “Math and Social Media” as well as several talks by Union folk: students **Baibhav Barwal** and **Atharv Tekurkar**, **Audrey Benson**, **Hunter Gould**, **Grace Newcombe** and **Josh Vaidman**, **Sydney Berger**, **Grace Newcombe**, **Ziayan Omer**, and Professor **Grant Moles**. Additionally, there were two panel discussions: “Making the most of one’s undergraduate mathematics experience,” with Union panelist **Audrey Benson** and moderators **Frankie Morone** and **Tremaine Richardson**; and “Careers/Life after a math major” featuring three Union alums, **Dan Anderson**, **Mark Mortensen**, and **Katie Schuff**, and moderated by **Professor Fanhui Xu**.



Top: Professor Paul Friedman welcoming the HRUMC attendees at the keynote address.

Above: Sydney Berger presenting, her talk “Treatment Disparities in Substance Use Disorders”.

Left: Izzy Petersen, Audrey Benson, and Ricky Farina.

Left-left: Lunch panel.

### Careers/Life after a math major

Chair: Fanhui Xu, Union College

#### Panelists:

- Dan Anderson (Math/CS Teacher, Shenendehowa High School)
- Mark Mortensen (Retired actuary)
- Radu Neagu (Director, Enterprise Risk Management, Santander)
- Katie Schuff (Associate attorney, Nagy Wolfe and Appleton LLP)



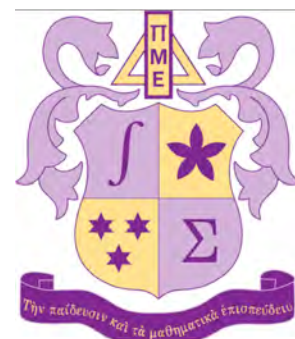
## Pi Mu Epsilon – Math Honors Society Accepting Applications

Pi Mu Epsilon (PME) is a national undergraduate math honors society. In Spring 2013, a chapter of PME was established at Union College. Now we are looking to induct new members who have demonstrated an ability and interest in mathematics consistent with PME's purpose and goals.

To be considered for membership into Union's chapter of PME, a student must have

- taken at least two math courses at the 200-level or above;
- a minimum campus-wide GPA of 3.0 and a minimum GPA of 3.0 in all math courses that can be used to fulfill a math major;
- a demonstrated engagement and involvement, while at Union College, in the promotion of mathematics at Union College and/or broader community, (examples include, active involvement in the Union College Math Club, in the Association of Women in Mathematics, in the Hudson River Undergraduate Mathematics Conference, in the Calculus Help Center, in math tutoring through the Kenney Center, in math problem solving training sessions and/or competitions, regular attendance at the Union College Math Department Seminar);
- an interest in joining PME, demonstrated by writing a few paragraphs/mini-essay in an email to **Professor Paul Friedman** ([friedmap@union.edu](mailto:friedmap@union.edu)) explaining your interest, your qualifications, and how you have supported and will continue to support the purpose and goals of PME. This email must be received by **noon on Thursday, April 24**.

The national initiation fee for PME is \$30. This covers the cost of membership and also a one-year (two issue) subscription to the MPE Journal. Members of MPE can also purchase other PME items such as tassels for graduation, t-shirts, etc. For more information, go to the website [pme-math.org](http://pme-math.org).



## Math Clubbing!

- **Association for Women in Mathematics (AWM)**. This spring term, the Union chapter of AWM will be holding its meetings on **Mondays at Common Lunch** in the **Math Common Room, Bailey 204**. All are welcome!
- **Society of Physics Students (SPS)**. Have you ever wondered how your professors typeset mathematics (and, ok, physics) so beautifully? Almost without exception, they use the typesetting program, LaTeX. Would you like to learn how to do so? Let members of the SPS get you started this **Friday, April 11** at **12:50pm** in **ISEC 120**.

Free Peer Tutoring in Calculus Courses  
**CALCULUS HELP CENTER**  
 Sunday, Tuesday, and Thursday nights  
 7:30 – 10:00pm  
 Sorum House Seminar Room

Society of Physics Students  
**BEGINNING LaTeX**  
**FRIDAY APRIL 11** **12:50 PM ISEC 120**  
 JOIN US TO START LEARNING ABOUT LATEX AND HOW TO APPLY IT TO YOUR CLASSES AND PROJECTS