

UNDERGRADUATE MATH SEMINAR

The next math seminar will be

DATE: **THURSDAY, October 16**

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

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



Professor Robin Belton

In this seminar, **Professor Robin Belton**, a mathematician at **Vassar College** whose research interests are in topological data analysis, computational topology and geometry, and mathematical biology, will present the following talk.

Title: Searching for the Unknown:

Parameter Selection in Topological Data Visualization

Abstract: Topological data analysis (TDA) uses methods from topology (think squishy geometry) to study the underlying structure and “shape” of a dataset. The Mapper algorithm is a popular tool for visualization and data exploration in TDA with applications ranging from discovering new types of breast cancer to classifying plants. However, it is difficult to use the Mapper algorithm because the user needs to input values for several parameters, and the “best” values are unknown. In this talk, I’ll introduce Mapper and how my collaborators, students, and I have approached parameter selection in this setting.

Pre-Approval Time! MTH 105, 110, 113. And, Meet with your Advisor!

Don’t forget: the deadline for submitting pre-approval forms for winter term course offerings is **Monday, October 13 at 5:00pm**. This winter term, three math courses require pre-approval: **MTH 105, 110, and 113**. Registration for the winter term then begins on October 27. As you are planning your winter courses, don’t forget to meet with your advisor who must clear you to register.

Students – Join the MAA. It Is Now FREE for you!

Through the Union College Math Department’s institutional membership, students are now able to become members of the Mathematical Association of America (MAA) **for free!** Student members receive online subscriptions to **all** MAA Journals, including The American Mathematical Monthly. Additionally, they have access to exclusive professional development resources, community networking opportunities, and more. As their website says, “MAA membership is your portal to the community of mathematicians and mathematical educators all focused on advancing mathematics at the collegiate level and providing you with opportunities to build your network of professionals and peers.”



Follow this QR code for instructions on how to join the MAA

For instructions on how to join, follow the link below or the QR code above. Have we mentioned that **it’s free!** <https://www.union.edu/document/maa-student-membership>

A Fun Problem Seen on Instagram

Math Instagram often posts fun math memes and interesting teasers/problems. The following was found there recently. Find functions $f(x)$ such that

$$f(f'(x)) + f'(f(x)) = 126x^2$$

Calculus Help Center: free peer tutoring in calculus

Sunday through Thursday nights, 7:30-10:00pm, Sorum House Seminar Room