

UNDERGRADUATE MATH SEMINAR

The next math seminar on the term will be

DATE: **THURSDAY, October 28**

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

Location: **12:55 – 1:45** Seminar in **Bailey 207**



Professor
Phaniel Mariano

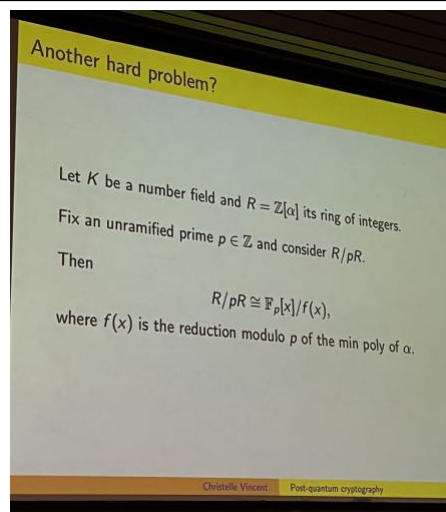
In this seminar, **Phaniel Mariano** from the Union College Department of Mathematics will deliver the following talk:

Title: Solving Differential Equations with Probability

Abstract: In this talk I will discuss how one can solve second order differential equations using the notion of 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. Since then, Brownian motion has been used in many applications to physics, finance and other branches of math. In 1944, Shizuo Kakutani was the first to use a probabilistic approach to solve a differential equation with a boundary condition. We will use this approach to solve a simple boundary value problem that one could encounter in an elementary differential equations class.

Big Numbers at Number Theory Conference

This past weekend, Union hosted the Tenth Annual Upstate Number Theory Conference. Organized by **Professor Jeff Hatley** and supported by a grant from the National Science Foundation, over 75 number theorists and graduate students (including **Zack Porat '20**) converged uniformly in Schenectady to discuss the latest advances in the field. With five plenary talks and dozens of contributed talks, there was something for everyone.



Left: Professor Jeff Hatley introducing plenary speaker, University of Vermont Professor Christelle Vincent's talk to the audience. Above: part of the talk on Post-quantum cryptography



Where Are They Now? Maggie Weinreb, Class of 2013, Checks-in

In the fall of 2009, I remember sitting in Math 115H, Calculus 3 honors course. It was my first week of college, I was incredibly homesick, and the anxiety was real. I left that class, went to the registrar, and switched to regular Calculus 3. At that moment, one week into college, I figured my dreams of being a math major were done. Turns out, the saddest part of that story is that I never had the chance to take another course with Professor Zwicker. Luckily, my math story didn't quite end there. I had a wonderful math advisor (Hi Paul Friedman!) who helped me map out my entire path. We

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planned out my cluster (I think that is a thing of the past), when I would take each course, and made sure that I balanced out my classes. One course I had to take for my cluster was an introduction to computer science. I mention this for a reason, though I will come back to it in a moment. With the goal of being a math educator, I decided to be an interdepartmental math and psychology major. I wrote a thesis on the psychology of math education.

I graduated college on Sunday, June 16, 2013. On Monday, June 17, 2013, I started graduate school. I don't really recommend that...but I was part of an amazing fellowship called Math for America. I got my Master of Arts in Math Education less than one year after I graduated Union, and in the fall of 2014, I had my very own classroom! I taught high school for my first 2 years of teaching and transitioned to middle school for the next 5 years. Remember that computer science course I had mentioned earlier? Well, I took it senior winter and loved it. It was too late for me to take more computer science courses, which was a bummer. I continued to study it on my own after college, and in my fourth year of teaching, I was asked to teach it!

After 7 years in the math classroom, I knew I was ready for a change. I had taught through a pandemic and my love for educational technology grew. I started a "side hustle" business helping other teachers use technology, and in June 2021, I left the classroom. In August of 2021, I started my new career as a program associate for a small company called DeltaMath. DeltaMath is a math educational technology company that allows teachers to assign different problems to their students, as well as offering students videos and examples. As a program associate, I wear a lot of hats. I work on sales, I answer teachers' questions on the program, and I test out the new math modules. And remember that computer science class I randomly took senior year that started my love of CS? Well, that really set me up for success in this position and it allowed me to take on additional roles! I am learning how to utilize our backend database and edit the existing code for errors. I am three months into this new career and am thrilled.

So...my advice for you? Take all the classes that you are interested in and don't save them for winter senior year. Follow your path but don't be afraid if it is different than you expect. And if you end up starting grad school the day after you graduate, I highly recommend bringing a lot of snacks, because it is hard to fall asleep while actively eating! Want to chat? You can find me on Instagram @technicallymaggie and I would love to connect!

Winter Term Prescheduling: Waitlist Sign-Up Is Underway

Just a reminder that "Waitlisting" is happening this week on Self Service. The math courses that are designated as waitlist courses are Math 105, 110, 112, 113, and 117. In addition, Statistics 104 is a waitlist course.

Timeline:

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| • <i>Faculty Academic Advising:</i> | Monday, October 18 – Friday, November 5 |
| • <i>Waitlist Course Sign Up on Student Planning:</i> | Monday, October 25 – Friday October 29 |
| • <i>Waitlist Course Review & Approval by Depts:</i> | Monday, November 1 – Friday, November 5 |
| • <i>Prescheduling on Student Planning by Appt:</i> | Monday, November 8 – Thurs. November 11 |
| • <i>Last Day to Preschedule on Student Planning:</i> | Sunday, December 12 |

And don't forget, if you have not already done so, to meet with your academic advisor in good time before your prescheduling appointment so you will not have an advisor hold.