

## UNDERGRADUATE MATHEMATICS SEMINAR(S!)

The next TWO seminars will be

**DATE:** **WEDNESDAY, May 20<sup>th</sup>**

**Time &** **4:00 pm** – Refreshments in the Math Common Room, **Bailey 204**

**Location:** **4:15 pm** – Seminar in **Bailey 207**

In this seminar, Union College's **Professor Alan Taylor** will present the following talk:

**TITLE: BACK TO THE FUTURE! via Hat Problems**

**ABSTRACT:** We lead up to a mathematical result showing that if time is modeled by the real line (which it probably isn't), then the present, and a bit of the future, is almost always completely determined by the recent past. This result arises from a series of so-called hat problems, one of which is the following: Suppose that you and infinitely many of your friends are offered a deal in which you will all gather in (an enlarged version of) Bailey Hall 207 and red and green hats will be placed on your heads. Each of you will be able to see the other hats but not your own, and you will all be required to simultaneously submit a guess of your own hat color. No communication is allowed except a strategy session before the hats are placed. Nothing goofy is allowed (at least, nothing goofier than the axiom of choice, which we will explain). You each get a big prize if all but finitely many of you guess correctly, but all of you will be penalized if infinitely many of you guess incorrectly. Would you take the deal? This talk is based on joint work with Chris Hardin and will be accessible to anyone with two years of high school English.

The seminar after Professor Taylor's will be given by **John Robens, '09**.

**DATE:** **MONDAY, May 25<sup>th</sup>**

**Time &** **4:00 pm** – Refreshments in the Math Common Room, **Bailey 204**

**Location:** **4:15 pm** – Seminar in **Bailey 207**

In this seminar, Union College senior math major **John Robens, '09** will present the following talk:

**TITLE: Sikorsky Aircraft: Electrical Engineering Intern**

**ABSTRACT:** Come hear about my Internship Experience at Sikorsky Aircraft in Stratford CT working on BlackHawk Helicopters. I worked with the design and process engineers evaluating wire diagrams and dealing with hands-on problems on the assembly line and in the Hangers. I will provide details about what I did for my internship as well as describe what I gained from my experience. I will give a brief description how a very large company operates as a subsidiary of a larger one. I will also discuss the requirements for taking an internship for class credit and open up the floor for questions. Should be an interesting talk if you are not sure what you want to do after Union or if you are interested in going into the engineering or business/corporate world.

## Math Department Picnic!

- Wednesday, May 27<sup>th</sup>
- 4:00-6:30
- The Courtyard between Bailey and Butterfield



## Looking Ahead to the Future! By Sarah Britton '09

**Sarah Britton '09** is a math major, a member of the Union Scholars Program, a member of Big Brothers/Big Sisters and will be teaching math for Teach For America in Boston.

As I returned to campus this September, I realized that I was at a crossroads in my life. I knew that I always had a passion for teaching, but I wasn't sure if it was what I really wanted to do and at what level. I had read about Teach for America in Forbes Magazine, which had recently ranked it as one of the best jobs for recent graduates, and decided to attend an on-campus recruiting session that they were holding.

After talking to the recruiter, who herself had been a TFA Corps member at a middle school in the Bronx, I knew that I had to apply to this program. I realized that TFA was a great opportunity: an opportunity to make an immediate impact on young students, to experience a new city, to get my masters while I taught and to have access to a vast alumni network.

The TFA application process is quite extensive. In an effort to make sure they recruit graduates that are dedicated to teaching under privileged and struggling students, Teach for America narrows down applicants in a three-stage process. First, applicants are asked to send in their resumes, write a letter of intent and an essay about a challenge they have faced during their undergraduate education. TFA then narrows down the applicant pool and conducts lengthy and extensive phone interviews. In my phone interview, TFA asked me about challenges that I have overcome, leadership positions that I have held and why I was interested in joining the TFA corps.

After I passed the phone interview, TFA asked me to travel to Albany for the final step in the process, which they called "Interview Day." In reality, Interview Day is more than an interview, but an intensive evaluation consisting of a personal interview, a group exercise, a mini lesson that I had prepared and written assessments. This was, by far, the most grueling interview that I've had in my short professional career.

Come March, after enduring a two-month application process, I was elated to find out that I had been invited to be a member of the TFA Corps in Boston. Although it took a lot of work to join the TFA teaching corps, I realize that this is an amazing opportunity to figure out whether or not I want to be a teacher. And, if I realize that I don't want to pursue teaching as a career, I have no doubt that being a Corps member will be a great growth experience and will give me a little more perspective on my life.

## Calculus Help Center Tutoring Positions for Fall Are Available!

Professor Friedman is now accepting applications for Calculus Help Center tutoring positions. Tutors work in the CHC one night per week (Sun-Thurs) from 7:30-10:00. Tutors must have had calculus through Math 115, preferably through Math 117, with grades no lower than A-. To apply for a position, send an email to [friedmap@union.edu](mailto:friedmap@union.edu) expressing your interest, listing your mathematical background (including coursework and grades), tutoring experience (if any), and statement about why you think you would be a good tutor.

**Application deadline: Monday, June 1**

## Problem of the Newsletter: May 20, 2009

Congratulations and thank you to **Schuyler Smith** for providing both last week's problem and solution. You can see these posted on the bulletin boards around Bailey Hall.

**Here is this week's problem:** An integral  $\int \frac{5}{16 + 9\cos^2 x} dx$ . Show all work.

Professor Friedman will accept solutions to this problem until 12:00 noon **Monday, May 25<sup>th</sup>**. Email your solution to him ([friedmap@union.edu](mailto:friedmap@union.edu)) or put it in his mailbox in the Math Department's office.