

UNDERGRADUATE MATHEMATICS SEMINAR

The next meeting of the seminar will be this coming Monday, September 25, in Bailey 312 beginning at 7:00. Professor Alan Taylor will continue to discuss Fair Division, but this time he will focus on real-world applications. Cider and donuts will be provided.

TITLE: Fair Division in the Real World

ABSTRACT: Can mathematics play any role in issues of fairness arising from divorces, inheritances, or

international dispute? In suggesting that it can, we will focus on a particular fair-division scheme -- Adjusted Winner -- and give two applications of its use, one in a (hypothetical) divorce and one in a (hypothetical) resolution of the Egyptian-Israeli dispute leading to the Camp David accords of 1978. The patent issued for the Adjusted Winner scheme was the first in the field of conflict resolution. **The material in this talk is independent of what we did in last week's seminar.**

The 2006 William Lowell Putnam Exam – Sign up Now!

The Putnam Exam is a national mathematics contest for college and university students. This year's exam will be administered in two three-hour sessions on Saturday December 2. In each session students are given six problems to attempt to solve. These problems, while difficult, offer an exciting challenge to your problem solving abilities.

Registration for the exam goes through the math

department. We register individuals as well as teams of three. (Even though students might be on a team, they still work independently.) The **registration deadline, Tuesday October 10**, is fast approaching! If you are considering participating in this year's Putnam Exam, please indicate so in an email to the department chairperson, Professor Johnson, at johnsonb@union.edu. Give it a shot!

Sample problem: Given any five points on a sphere, show that some four of them must lie on a closed hemisphere.

Where are they now? Fatima Mahmood '06

Fatima Mahmood '06, a double major in math and physics at Union College, entered the Mathematics PhD program at Cornell University this fall. She finds the program very challenging but realizes that it is meant to be so in order to bring the students to the next level in mathematics.

This semester she is taking two of the core graduate classes in mathematics: Real Analysis and Algebra I. She is also a Teaching Assistant, with duties including grading and holding office hours for an undergraduate linear algebra class. The graduate classes move at a fast pace and are very homework intensive, and Fatima finds that they consume almost all of her time every week! So far, she has learned about abstract integration and measures in Real Analysis, and the Sylow Theorems and various results on the properties of groups and subgroups in Algebra.

Fatima reports that her office is one of many cubicles in a large, windowless room in the Malott Hall (the Math building) basement! The relegation to the basement of the grads is a long-standing joke, but the room actually becomes very lively with the graduates congregating around "The Table" to eat lunch and play board games. Most of these are older students, humorously lamenting on the "poor first years who are actually trying to do work!"

As autumn marches on, Fatima hopes to get enough of a break from homework sometime to explore the beautiful natural landscape in and around the Cornell campus. Her everyday walk to the Math building involves crossing over one of the many gorges in Ithaca. She hopes to eventually be able to find some time to make artwork of the spectacular surroundings she will be in for the next five years.



Do you have any ideas
for future newsletters?

E-Mail:
friedmap@union.edu

Resources for Students

- Free tutoring! The Math Department offers a free tutoring service for students enrolled in its calculus courses through Math 115. The Calculus Help Center is open five nights a week, Sunday through Thursday, from 7:30pm to 10:00pm in the seminar room of Sorum House.
- Learn how to typeset mathematics like the pros! For those who missed the first one, Professor Black will be holding another "Introduction to TeX/LaTeX" on Tuesday, September 26 from 4:30-5:30 in Olin 106
- Get a job! On Wednesday, September 27, the Becker Career Center (BCC) will be hosting "U Connect: Bringing Students and Employers Together – Finance and Consulting Careers." In the past, several Union math majors have been hired by some of the companies that will be there. The BCC asks students to sign-up in advance on eRecruiting to receive a list of participating employers.

Problem of the Newsletter: September 22, 2006

Congratulations to David Brown, winner of last week's Problem of the Newsletter contest. You can view the winning solution on the first floor bulletin board in Bailey Hall.

Here is this week's problem: Each letter in the sum below represents a unique digit. Find the solution that maximizes the amount of money!

We're on the Web!

See us at:
<http://www.math.union.edu/~friedmap/Newsletters/>

WE
ALL
NEED
<u>MORE</u>
MONEY

Solutions to this problem will be accepted by Professor Friedman until 12:00 noon Thursday, September 28. Please put your solution in his mailbox in the Math Department's office on the second floor of Bailey Hall. The student who solves (correctly!) the most PONs will receive a one-year student membership into the Mathematical Association of America, courtesy of the Math Department!