

UNDERGRADUATE MATHEMATICS SEMINAR

Next week, there will be **two** seminars:

(1) **Tuesday, April 17 at 2:30pm** in Bailey 207

(2) **Thursday, April 19 at 1:00pm** in Bailey 207

Be sure to check your email and the bulletin boards around Bailey Hall for posters announcing the speakers, and the titles and the abstracts of the talks.

HRUMC XIV - April 21, 2007: Sign-up Now!

The 14th annual Hudson River Undergraduate Mathematics Conference (HRUMC) will be held next Saturday, April 21, 2007 at Siena College in Loudonville, NY.

The HRUMC is a one-day mathematics conference held each spring, attended by students and faculty from colleges, universities throughout New York and New England. It was founded by four colleges, Siena, Skidmore, Union, and Williams, with the goal, as currently stated on the HRUMC's webpage (<http://www.skidmore.edu/academics/mcs/page/s/hrumc.htm>), of "provid[ing] undergraduates with the experience of attending and/or presenting at a professional mathematics meeting designed primarily with the student in mind."

The conference features short, 15-minute talks **primarily by students** and faculty, and a keynote address by noted mathematician. This year's keynote address will be delivered by **Georgia Benkart** from the University of Wisconsin. Her talk is entitled "*Ladies of the Rings: A Tale of Science Non-fiction About Two Women and Their Magical Mathematics.*"

From its origin in 1994 in which there were 69 talks, participation has swelled: last year's HRUMC had more than 200 talks, and over 500 participants from more than 40 institutions. HRUMC is **the** premier regional undergraduate mathematics conference after which several others have been subsequently modeled nationwide.

This year, **nine** Union students and **one** math

professor will be giving talks. See the next page for more information.

The Math Department **strongly encourages** you to attend this **free** conference. It provides you with (breakfast and lunch and) a great opportunity to meet math majors from other institutions, to discuss and share the math that you have been doing, to hear about work other students have been doing, to get ideas for new projects (in fact, one of this year's senior thesis projects was inspired by last year's HRUMC keynote address!), and simply to learn some math that you might not have the opportunity to learn elsewhere.

In the past, Union College has hosted two HRUMCs (V and X), and we are looking to do so again in the near future. When we do, we will be looking for math undergraduates to help plan and coordinate the effort. Underclassmen: if this interests you, then you should consider attending an HRUMC or two to understand what this might involve.

Want to attend HRUMC? **Sign-up by Wed. April 18th** by submitting the form on the back of this newsletter to Linda Jorgensen in the Math Department office, or by sending an email to Professor Friedman at friedmap@union.edu that contains the information requested on the form. The Math Department will arrange rides for students who want to attend the HRUMC.

With its historical ties to Union College and its focus on undergraduates, is it really a coincidence that "U" is right smack in the middle of HRUMC?

Problem of the Newsletter: April 13, 2007

Congratulations to **Schuyler Smith** for submitting a correct solution to last week's problem of the newsletter. You can view his solution, along with a short paper showing how to implement the solution, on the bulletin boards.

Here is this week's problem: Find, with explanation, the maximum value of $f(x) = x^3 - 3x$ on the set of all real numbers x satisfying $x^4 + 36 \leq 13x^2$.

Professor Friedman will accept solutions to this problem until 12:00 noon Thursday, April 19.

HRUMC Talks by Union Folk

The talks at HRUMC are divided into three sessions, the first from 9:50 – 10:45, the second from 1:45 – 2:40, and the third from 3:30 – 4:45. Each session consists of 18 or 19 parallel sessions, organized by subject matter. Below is a list of the talks that will be given by people from Union College. They are all scheduled for either the first or second session. To view the abstracts of their talks, or to see a list of all talks and activities at the conference, see <http://www.skidmore.edu/academics/mcs/pages/hrumc14in.htm>

- Session 1: 9:50 – 10:45
 - **Laura Hutchinson:** *Escapable Human Knots*, in Knot Theory 1.
 - **Jacqueline Palermo:** *Public Key Encryption with Chebyshev Polynomials*, in Number Theory 1.
 - **Sydney Wells:** *Set Partitions and the Chain Rule for Higher Derivatives*, in Analysis 1.
 - **Jaclyn Siedlecki:** *Incommensurable Magnitudes, Irrational Numbers, and the Pythagoreans*, in History of Mathematics 1.
 - **Leah Ziamandanis:** *Ancient Greek Mathematics: A Look at the First Notions of Calculus*, in History of Mathematics 1.
- Session 2: 1:45 – 2:40
 - **Susan Beckhardt:** *Graphs with Knotted Hamiltonian Cycles*, in Knot Theory II.
 - **Prof. Brenda Johnson:** *Homology and Detector Networks*, in Topology.
 - **Tom Mazur:** *Homology and Detector Networks II*, in Topology.
 - **Daniel Stevenson:** *Two Properties of Even Perfect Numbers*, in Number Theory IIA.
 - **Peter Wright:** *Relating Functions to Relations*, in Sets and Categories.

Name: _____

Phone: _____ e-mail: _____

_____ I will attend the HRUMC on Saturday April 21st.

Check one:

_____ I need transportation.

_____ I have made arrangements for transportation.

_____ I will be driving and have room for _____ additional passengers.

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| <p>Submit this form to Linda Jorgensen in the Math Office by Wednesday, April 18th.</p> |
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