

# Augarithms



vol 19.8

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February 8, 2006

*The new fall line of colloquia is revealed...*

## Mathematics Colloquium Series

Unless otherwise indicated, colloquia are held Wednesdays from 3:40 - 4:40 in Science Hall 108. Refreshments are provided.

Jan.	25	Fermat's Last Theorem, The NOVA special
<b>Feb. →</b>	<b>8</b>	<b>Terrance Hurley, University of Minnesota<sup>†</sup></b>
Mar.	15	Cindy Kaus, Metro State University
	29	TBA
Apr.	5	TBA
	26	Missy Larson & Dan Wolf, Augsburg College

## This week's colloquium...<sup>†</sup> *Economists Are Scientists Too*



Economic analysis is often characterized as normative or positive. Normative analysis is prescriptive in nature and seeks to answer the question: What should happen? Positive analysis is descriptive in nature and seeks to answer the question: What will happen?

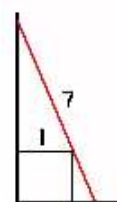
While the role for normative

analysis is well accepted in science based public policy debates, the role for positive economics is not as well accepted. The purpose of this talk is to motivate the importance of positive economic analysis for science based risk assessment as well as normative economic analysis for science based risk management. As an example, Dr. Hurley will draw on his experience working with the U.S. Environmental Protection Agency to develop regulatory guidelines for plant-incorporated-protectants. During this discussion Dr. Hurley will emphasize the important role mathematical simulation modeling played in helping the EPA formulate policy. The seminar will end with a discussion of the opportunities for graduate study in the new Applied Economics program at the University of Minnesota.

## Problem of the week...

We've not received any solutions to the POTW of volume 19.7. Here is a new problem which *came from the University College Problem Solving Competition*.

A 7 foot ladder (See the Figure at right) is leaning against a wall and just resting on a box which is 1 foot on a side. See figure. Precisely how high up the wall is the ladder sitting, assuming it is touching higher up the wall than it is out from the wall? The answer must be exact, no approximations!



Send solutions to the editor at [kaminsky@augsborg.edu](mailto:kaminsky@augsborg.edu), or slip them under his door at Science Hall 137E.

\*reproduced with permission from Bradley University's 'potw' page [bradley.bradlye.edu/~delgado/](http://bradley.bradlye.edu/~delgado/)

## Puzzle of the week...

We've received no solutions to the puzzle of volume 19.7. I guess no one has seen *Sea of Love*. Here is a new puzzle:

By adding just one line (but not = to ≠) to the equation below, form a correct equation.

$$5+5+5=550$$

Send solutions to the editor at [kaminsky@augsborg.edu](mailto:kaminsky@augsborg.edu), put them in the Puzzles & Problems box near the department printer, or slip them under his door at Science Hall 137E.

## Augarithms

The bi-weekly newsletter of the  
Department of Mathematics at  
Augsburg College.

Editor.....Ken Kaminsky  
<[kaminsky@augsborg.edu](mailto:kaminsky@augsborg.edu)>

# News from the Great Southwest

Four faculty and two students traveled to San Antonio last month to attend the annual joint meetings of the American Mathematical Society (AMS) and the Mathematical Association of America (MAA).

**Su Dorée** led a paper session titled “Countering “I Can’t Do Math”: Strategies for Teaching Under-Prepared, Math-Anxious Students” that was written up in the local paper (*San Antonio Express*). She also served as a judge for the undergraduate research poster session.

**Rebekah Dupont** co-organized a panel discussion titled “Firefighting, paper trailing, and cat herding: Everything you wanted to know to be an administrator but were afraid to ask.”

**Matt Haines** represented Augsburg as our departmental liaison to the MAA.

**Jody Sorensen** co-organized a session called “Research and Other Mathematical Experiences for Students Outside the Classroom,” which included talks on undergraduate research and mathematical service projects.

Mathematics major **Melissa Larson** presented a poster “Stability Results for Bifurcations of Periodic Points” based on work she has done along with student **Dan Wolf** under the supervision of Professor **Jody Sorensen**.

Mathematics and Actuarial Science major Jennifer Geis presented a poster “Optimization Least Squares Approach for Valuation of American Put Options” based on her work done in the research experience for undergraduates (REU) during the summer of 2005 at North Carolina State University.



Rebekah Dupont



Jennifer Geis



Dan Wolf



l. to r. Jody Sorensen, Melissa Larson, and Matt Haines



Su Dorée

## Math and Science Students Needed in Student Leadership Positions

**Greg Hildebrandt**, mathematics major and Orientation Leader (OL) and Amber **Dolejs**, Augsburg Student Ambassador (SA) coordinator, recently met with some mathematics and science majors to share their experiences. Greg described being an OL as great way to help new students get to know Augsburg. OL’s work with incoming students during summer registration and help out with AugSem, the weekly meeting linked to a course for first-year students. Contact Professor Tracy Bibelnicks of the mathematics department or Mark Skjervem, Director of Activities and Orientation, if you are interested in learning more.

SA’s work for Augsburg Admissions and are responsible for giving campus tours to prospective students, along with candidates for faculty and staff positions. Amber described being an SA as fun and rewarding. As a graduating senior doing job interviews, she valued this work experience as an indication of her communications skills and ability to work as part of a team. She also noted the need for students with a variety of academic interests to be involved, and encouraged students from mathematics and science to find out more about the opportunity. Applications for SA’s are being accepted for next fall, with the possibility of openings earlier. Desirable qualities include good communications skills, enthusiasm for and knowledge about Augsburg, ability to interact with a wider variety of people, and an outgoing personality. If you would like to learn more, feel free to contact Professor Rebekah Dupont in the mathematics department, or to contact Admissions (in Christensen Center) directly.

## Undergraduate Research Opportunities

“Want to have a fantastic summer? What could be more exciting than conducting research in mathematics for eight weeks and getting paid to do it?! If this sounds like fun read on—it just keeps getting better!” This is an excerpt from the online flier for the Research Experience for Undergraduates (REU) at California State University San Bernardino (<http://www.math.csusb.edu/reu/reu03.html>). The National Science Foundation, the major funder of REU’s has a website with links to many programs ([http://www.nsf.gov/crssprgm/reu/list\\_result.cfm?unitid=5044](http://www.nsf.gov/crssprgm/reu/list_result.cfm?unitid=5044)).

Augsburg students typically have attended REU’s during the summer between their junior or senior years, though some programs are designed for sophomores. Typically, summer programs run 8-10 weeks, and students receive a stipend between \$2000 and \$3000, along with paid housing. Applications often include a personal statement and letters of recommendation from faculty that know you as a student. If you would like to learn more, contact your mathematics professor, advisor, or Dixie Shafer, director of Undergraduate and Research Opportunities (URGO), as [shafer@augsb.org](mailto:shafer@augsb.org). Deadlines range from now to dates in March – so get started today!