

Augarithms



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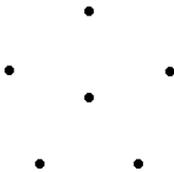
Colloquium Series Dates for Fall 2003

Colloquia are held on Wednesdays from 3:40 to 4:40 p.m. in Science 108. Except for the names of some of the speakers, here is the schedule of dates for the 2003-2004 academic year:

- Oct. 22 Ioanna Mavrea, Augsburg College Mathematics Department
- Nov. 5 Andrew Pole, Guest Research and Analytics for Target.Direct, Target Corporation
- Nov. 19 Randy Erdahl, Decision Intelligence, Inc.
- Dec. 3 Glen Meeden, University of Minnesota

Puzzle & Problem...

Last issue's puzzle, which asked for a day of the week that has an anagram (Monday = Dynamo), was solved by **Crystal Creighton, Chrissy Piram, and Ellen Waldow**. And here is this week's puzzle:



Connect nine pairs of the points above with line segments so that no three of the points form the vertices of a triangle.

Last week's problem about the probability that runner A wins ($4/7$) was correctly solved by **Kasi Clauson, Ron Fedie, Andrew Held, and Chrissy Piram**. Here is this week's problem:

Insert numbers into the blanks below to make a true statement. There is a unique solution.

- The number of 0's in this box is _____
- The number of 1's in this box is _____
- The number of 2's in this box is _____
- The number of 3's in this box is _____
- The number of 4's in this box is _____
- The number of 5's in this box is _____
- The number of 6's in this box is _____
- The number of 7's in this box is _____
- The number of 8's in this box is _____
- The number of 9's in this box is _____

Late solutions from earlier volumes were received from **Chrissy Piram**, and **Bob Prust**, of St. Anthony Middle School. Send your solutions to the editor or drop them in the P & P box just inside the math suite.

NCS/MAA Team Competition

The North Central Section of the Mathematical Association of America is holding its 7th annual team competition on Saturday, November 15, 2003, from 9:00 a.m. to noon.

Teams can consist of up to three people. The competition exam consists of 10 problems of varied difficulty. The Rules:

- No calculators
- No computers
- No books or notes
- Team members work jointly on the problems

Three people in one room with nothing but their own ingenuity and determination – attempting through their combined efforts to reveal the mathematical secrets of the ten problems.

Last year Augsburg had two teams that successfully survived the exam and placed very well among 70 schools from North Dakota, South Dakota, Minnesota, Manitoba, Saskatchewan, and Ontario. This year we hope to again field two or three Augsburg teams for the competition.

For sample problems, visit <http://condor.stcloudstate.edu/~maancs/index.html>.

If you would like to compete on a team, or if you have formed a team to compete, send the names, phone numbers, and email addresses by Friday, October 17, 2003 to Matthew Haines haines@augsborg.edu. All team members must commit to participating in the contest on Saturday, November 15, 2003, 9:00 a.m. to 12:00noon.

This week's colloquium...



Ioanna Mavrea

The Augsburg math faculty's newest member, **Ioanna Mavrea**, will present this week's colloquium. Here are the title and

a brief description.

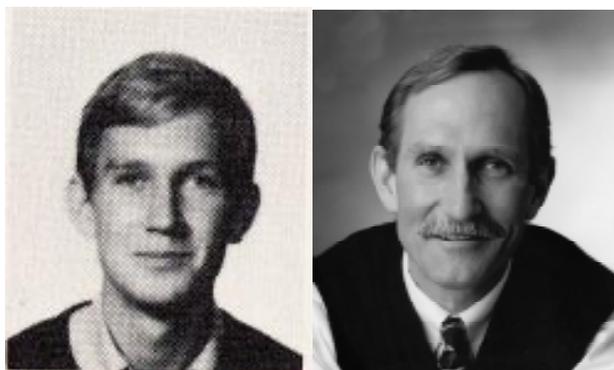
"The Forty Thieves and a Very Big Loot"

Interested in pursuing a lucrative career in piracy after graduation but worried about keeping your head? If so, come learn about a young thief's dilemma and the problem solving method that George Polya called heuristic. The purpose of this talk is to illustrate elements of this method through a selection of problems from Recreational Mathematics and Logic Puzzles.

Augarithm is available on-line at augsborg.edu/math/augarithms/. Click on the date you want to see.

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Peter Agre, Augsburg graduate, wins Nobel Prize in Chemistry



Peter Agre, circa 1969, future Nobel Prize winner in chemistry

Peter Agre '70 won the 2003 Nobel Prize in chemistry

Peter Agre, a 1970 graduate of Augsburg College, has won the 2003 Nobel Prize in chemistry. He shares the honor with American Roderick MacKinnon.

Agre, of the Johns Hopkins University School of Medicine in Baltimore discovered the "channels" that let water pass in and out of cells. The discovery represents a major breakthrough and has led to a greater understanding of many inherited and acquired water balance disorders, such as kidney disease.

Agre received a B.A. in chemistry from Augsburg College in 1970. He went on to receive his medical

degree from John Hopkins University and became a faculty member in the department of medicine in 1984. He was awarded the Distinguished Alumni Award from Augsburg College in 1995.

"The Chemistry Department is elated at this news," said Arlin Gyberg, Augsburg chemistry professor. Gyberg had Agre in class and also taught along with his father, the late Courtland Agre, who taught chemistry at Augsburg from 1959 to the mid-'70's and served as department chair from 1959-68.

"Those of us who had Peter as a student are not surprised he has reached this level. It's no shock that he won the Nobel Prize in Chemistry."

NASA Scholarship Opportunity

There is an undergraduate scholarship opportunity for sophomores, through seniors majoring in physics, chemistry, biology, pre-engineering, space science, mathematics, mathematics education, or science education. This competitive program awards four scholarships (for spring 2004) in the following areas:

Emerging Scholarship--(sophomore-junior) One scholarship of \$500 to encourage students whose course of study shows progress in meeting the criteria of this scholarship program.

Enhanced Scholarship--(sophomore-senior) Three scholarships of \$1500 to support students who have shown considerable progress in meeting the criteria established for this scholarship program.

NASA Space Grant Undergraduate Scholarship Application and information can be obtained on Facstaff/Education/gregoire/public/NASA programs/Scholarship forms or by calling 330-1551 or gregoire@augzburg.edu and leaving your name and campus box number. Scholarship material must be in the NASA Space Grant Office (Campus Box 224) by November 1 to be considered by the Scholarship Committee. Scholarships will be awarded by November 17, 2003. Students from traditionally under-represented groups in science and mathematics fields are encouraged to apply. No applicant shall be denied consideration based on race, creed, color, national origin, age, sex or disability.

Passerby gives "surprisingly good" math colloquium at VPU

When scheduled speaker Rolf Rasmussen didn't show up for a colloquium last Tuesday at ValuPak™ University's math department in Margo's Forehead, passerby Ted Torktumlare was tapped to be his replacement, and, according to the colloquium coordinator, did a "surprisingly good" job, considering that, as we found out later, he left school after eighth grade.

"I just came in the building to use the john," said a surprised but proud Torktumlare. "Next thing I know this guy comes up to me, tells me it's kind of a last minute thing, and would I like to give a talk. Well, to be honest, I think he mistook me for someone else. But, I had a few beers in me at the time, so it didn't really seem like such a bad idea" added Torktumlare.

A forklift operator at nearby Snusby, Inc., Torktumlare talked about some stacking problems he has faced at work. On-lookers were impressed to hear about Torktumlare's solu-



Ted Torktumlare on his forklift at Snusby, Inc.

tions to some of the space-filling problems plaguing mathematicians for centuries.

"I just hope they'll invite me back sometime," observed Torktumlare, as he went on his way back to work.