Augarithms

Colloquium Series Dates for 2002-2003

Colloquia are usually held on Wednesdays from 3:40 to 4:40 p.m. in Science 108. Note that the November 4th talk is on a Monday! Here is the tentative schedule for 2002-2003:

Wed.	Oct.	9	Steve McKelvey, St. Olaf College
Wed.	Oct.	23	Jay Goldman, University of Minnesota
Mon.	Nov.	4	Ken Kaminsky, Augsburg College
Wed.	Nov.	20	Michael Kac, University of Minnesota
Wed.	Dec.	4	Loren Larson, Carleton College
Wed.	Jan.	29	Milo Schield, Augsburg College
Wed.	Feb.	12	David Molnar, St. Olaf College
Wed.	Feb.	26	Tracy Bibelnieks, Augsburg College
Wed.	Mar.	12	Laura Chihara, Carleton College
Wed.	Mar.	26	Nick Coult, Matt Haines, & Ken Kaminsky, Augsburg College
Wed.	Apr.	9	Augsburg Students
Wed.	Apr.	16	Augsburg Students

This week's speaker: Steve McKelvey, St. Olaf College

Steve McKelvey

Transportation Network Design: Who Says Common Sense is a Good Thing?

Synopsis: "In this season of high powered political cal rhetoric, we are often bombarded by statements like, "Support me, my position makes common sense." The implication being that anything running counter to common sense must be incorrect.

Well, governance is a complex undertaking and common sense may be misleading in many areas of public policy. Transportation network design is one example.

In this talk I will describe a very simple (yet surprisingly realistic) mathematical model of flow through a congested transportation network with the goal of showing how "common sense" fixes can actually lead to worse congestion. The culprit isn't poorly designed interchanges, mistimed traffic lights or other easily fixed infrastructure maintenance issues. The culprit is the overall network design. The take home message is that many public policy issues are more complicated than they may appear and that careful analysis, often utilizing mathematical models, can avoid unexpected and potentially expensive mistakes.

The mathematical background needed for this talk is first term calculus; specifically using derivatives to solve univariate max-min problems."

Puzzle & Problem of the week...

THE PUZZLE: A positive integer n is equal to the sum of its digits. Find n. Is n unique? Prove it.

THE PROBLEM: An oldie: A farmer died and left a herd of cows to his son and daughter. They sold the cows, receiving as many dollars for each cow as there were cows in the herd. Then they spent all that money to buy sheep for $10 apiece and a lamb with the extra. Finally, they each took half of the animals and went their separate ways. How much did the lamb cost?

Send your solutions to the editor. You can drop them in the Puzzles & Problems box just inside the math suite (Sci. 137), or you can e-mail them to him at kaminsky@ augsburg.edu.

At press time there had been an avalanche of solutions to the Puzzle and Problem in the last issue. Among the correct solvers of the Problem include **Donald Gettinger**, of Stillwater Area H. S., Augsburg students **Hung Nguyen**, **David Wallace** and **Patrick Martell**, **John David Lystig** ('62), mystery person **Stew Famosh**, **Brent Lofgren** ('88), currently at the Great Lakes Environmental Research Laboratory, and **Mike Fleischhacker** of St. Thomas Academy. Solvers of the Puzzle include **David Wallace** and **Brent Lofgren.**

Statistics Seminar (at Mac)

J. L. Gastwirth

Having trouble making it to our colloquia because of time conflicts? Here is an opportunity to get credit for a colloquium at a different time. Just check in with me (Ken Kaminsky) to arrange the credit. Here are the details:

Professor **Joseph L. Gastwirth** from George Washington University will give a seminar for the Mathematics Department at Macalester College on October 11, 3:30PM. He is going to talk about the role of statistical science in the courtroom. He will talk about the reopening of the Brown v. Board of Education case, concerning racial segregation in public schools. Some time will be devoted to issues arising in equal employment cases. Professor Gastwirth is a well-known statistician, especially in the area of legal statistics. He has published over 100 articles in statistical and other journals and two books: *Statistical Reasoning in Law and Public Policy* and *Statistical Science in the Court Room*. His article with Dr. Freidlin on the use of change-point methods in equal employment case was one of two papers that received the "Outstanding Applications Award" at the 2002 Joint Statistical Meetings.

Want to be on our regular mailing list, but aren't now?

If you do not receive this newsletter regularly, but would like to, just send Ken an *e*-mail to that effect at kaminsky@augsburg.edu.

Seventeenth Annual Pi Mu Epsilon Regional Undergraduate Math Conference

This year's conference at St. Norbert College, De Pere, Wisconsin, takes place on November 1-2, 2002. The featured speaker is Frank Morgan of Williams College.

For details, see Ken Kaminsky, Science 137E (x1066).

Have you always wanted to be a biostatistician?

Or, would you like to find out about graduate study in biostatistics? The Division of Biostatistics at the University of Minnesota invites you to their annual Open House. This year, the festivities will take place on Friday, October 11, at the Radisson Hotel Metrodome--Nolte Room, 615 Washington Avenue SE, Minneapolis.

If you are interested in attending, RSVP by e-mail Sally Olander at sally@biostat.umn.edu, or call her at (612) 625-9185. For further details, see Ken Kaminsky.

Mathematician Biography

William Wallace

William Wallace (1768-1843) was self-taught in mathematics earning his living working for a bookbinder and tutoring mathematics. He became a mathematics teacher at Perth Academy in 1794. John Playfair advised him to apply for the post of professor at the Royal Military College at Great Marlow where he was a colleague of Sir James Ivory. Then, in 1819, he was appointed professor of mathematics at Edinburgh University.

Wallace's work was on geometry and Simson's line (which is definitely not due to Robert Simson!) appears first in a paper of Wallace in 1799. One of Wallace's theorems,

if 4 lines intersect each other to form 4 triangles (omit one line in turn) then the circumcircles of the triangles have a point in common,

was generalised to $2n$ lines by W. K. Clifford.

He published two books, *A New Book of Interest containing Aliquot Tables* (aliquot = fractional) and *Geometrical Theorems and Analytical Formulae*.

Wallace also invented the pantograph, an instrument for duplicating a geometric shape at a reduced or enlarged scale. In addition to mathematical articles, he wrote articles on astronomy which he published in the *Transactions of the Royal Astronomical Society*.
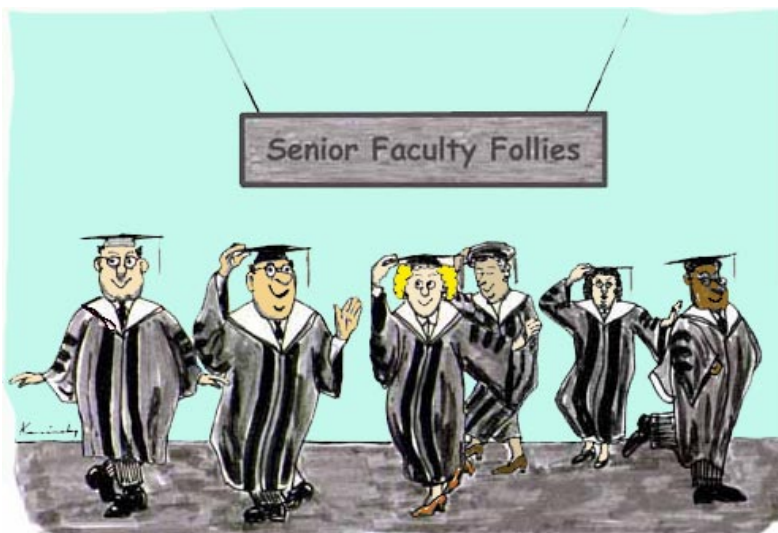
From D. T. Rice's *The University Portraits*:-

He [Wallace] took an active interest in the erection of the Observatory on the Carlton Hill and the monument to John Napier. As a Professor, Wallace was regarded as an able teacher, he was popular alike with pupils and colleagues. In recognition of his services to learning and to the University, he was made an honorary Doctor of Laws.

Wallace retired from his chair at Edinburgh in 1838 due to ill health.
Article by: J J O'Connor and E F Robertson

Cartoon Corner

Misunderstanding a voice mail from the Dean, Professor Fogelfroe organizes his college's first Post-Tenure Revue.

Cartoon by K. Kaminsky, published in the July-August 2000 issue of *Academe*

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

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