L'Augarithms

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Mathematics Colloquium Fall Lineup

Colloquia are typically held Wednesdays 3:40—4:40 in Oren 113. Refreshments will be served.

Sep.	8	Annual Meet and Greet of the Mathematics Dept.
	15	Misha Shvartsman, University of St. Thomas
	29	Yoichiro Mori, University of Minnesota
Oct.	20	Christopher Poletto, Medtronic, Inc.
Nov.	3	Matt Richey, St. Olaf College
	→ 17	Travis Schauer, Boston Scientific[1]
Dec.	1	TBA

[1]This Week's Colloquium:

Mathematics and Computational Analysis in the Biomedical Industry—Travis Schauer, Boston Scientific

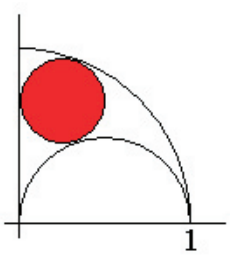
In today's competitive marketplace, the need to develop better products faster and cheaper than ever is imperative. However, in the medical device industry the quality and safety of the product is of utmost importance as well. So, how can devices be designed better than ever without sacrificing time and quality? One could argue that a fundamental understanding of the product is necessary. Then what better place to start than the basic laws of physics, right? Well, while these laws are well known for a variety of systems, applying them to real life problems and solving the resulting equations can be a daunting task. Fortunately, the mathematical techniques and computer horsepower required to solve problems of ever increasing complexity is becoming more of a reality. In this talk, I will discuss how computational modeling can be used in the medical device industry to assist with product and process development and give examples of its use at Boston Scientific.

Travis Schauer received his B.S. and M.S. in Aerospace Engineering & Mechanics along with a minor in Mathematics from the University of Minnesota – Twin Cities, where his area of focus was fluid dynamics. He has worked five years at Goodrich Sensor Systems in Burnsville and Eagan, MN, where he carried out wind tunnel testing and computational analysis of air data probes. Currently, he works at Boston Scientific in Maple Grove, MN, where he has spent the past 6+ years developing computational models for a wide range of transport related phenomenon (fluid, heat, mass, etc.).

Problem of the week...

The POTW from vol. 24.04 concerning the 56-game hitting streak of Joe DiMaggio had but one solver: **Toni Ek**. And now the new POTW.

The quarter-circle has radius 1. The semicircle has radius 1/2. What are the radius and center of the smaller, full circle, which is tangent to the other two and to the vertical axis? (See the figure on the right.)



❖Reprinted with permission from Bradley U's 'potw' page <bradley.bradley.edu/~delgado/>

Puzzle of the week...

Omitted from the list of solvers to the PZOTW from v24.03 was **Nate Fitzgerald**, who also got 200 as the answer. But, we have had no solvers to the PZOTW of v24.04. Let's try a new one:

a) Once in the history of the USA, there was a decade in which four of the years were prime numbers. Find the decade.

b) In which decade will this happen next?

❖Submit puzzle & problem solutions to kaminsky@augsburg.edu, or under Ken Kaminsky's door at SCI 137E, or in the puzzles and problems box just outside of Su's office.

L'Augarithms
The approximately bi-weekly newsletter of the
Department of Mathematics
at Augsburg College
Editor.....Kenneth Kaminsky

Best School Humor ...

How to fail a test with dignity.

What was Sir Walter Raleigh famous for?
He is a noted figure in history because he invented cigarettes and started a craze for Bicycles.

Best Church Bulletin Humor...

The following announcement appeared in a church bulletin, or was announced at a church service.

Ladies, don't forget the rummage sale. It's a chance to get rid of those things not worth keeping around the house. Don't forget your husbands.

Cartoon Corner

Professor Fogelfroe has his own unique way of finding out if his students are paying attention

Constance Reid, Biographer of Mathematicians, Dies at 92

By Daniel E. Slotnik, Published October 25, 2010 in the New York Times

Constance Reid, an English teacher who found a second career as a biographer of major 19th- and 20th-century mathematicians, died Oct. 14 at her home in San Francisco. She was 92. The cause was cancer, said Neil Reid, her husband of 60 years.

George Csicsery

Constance Reid in 2001.

Mrs. Reid never received formal training in mathematics, but mathematicians admire her books for making their work accessible to laypeople. "It's very hard to write about mathematics for the public," said Peter Lax, a professor emeritus at the Courant Institute of Mathematical Sciences at New York University. "She could boil it down into something that made sense for the general public," he said, making her books "popular beyond mathematicians."

After leaving her job at San Diego High School, Mrs. Reid wrote an article about the work her brother-in-law, Raphael Robinson, was doing on perfect numbers. After the article appeared in *Scientific American* in 1953, a publisher asked if she could write a book about numbers. She published "*From Zero to Infinity: What Makes Numbers Interesting*" in 1955 and followed it with two more books about mathematics and number theory.

Mrs. Reid was inspired to write her first biography by her familiarity with E. T. Bell's "*Men of Mathematics*," a book of short profiles of important mathematicians. She originally intended to write a similar work on modern mathematicians but became fascinated by David Hilbert, a German mathematician, and wrote his biography, "*Hilbert*" (1970).

She popularized important mathematicians like Bell, Richard Courant and Jerzy Neyman by drawing attention to their often dramatic lives. Her last biography was "*Julia: A Life in Mathematics*," written in the first person about her sister, who became the first woman to be president of the American Mathematical Society.

Mrs. Reid's first published work was the 1944 memoir "*Slacks and Calluses: Our Summer in a Bomber Factory*" (she was Constance Bowman at the time). It detailed a summer she spent building B-24 bombers in a Consolidated Aircraft factory and was illustrated by another worker at the factory, Clara Marie Allen.

Constance Bowman was born on Jan. 3, 1918, in St. Louis. She received a bachelor's degree from San Diego State University and met her husband, a lawyer, while studying for a master's degree in education at the University of California, Berkeley.

Besides her husband, Mrs. Reid is survived by a daughter, Julia Reid of Salt Lake City; a son, Stewart Reid of Ashland, Ore.; and four grandchildren.