
TCU Math News Letter

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This principle is so perfectly general that no particular application of it is possible.

--- George Polya

[Editor: Dr. Rhonda Hatcher](#) and [Archive of Newsletters](#)

First Parabola Meeting On Tuesday, September 29

Parabola, the TCU undergraduate mathematics club, will hold its first meeting on Tuesday, September 29. The featured speaker will be Professor Ken Richardson of the TCU Mathematics Department. The title of his talk is, "Would Aliens from Outer Space Want to Listen to Mozart?: Mathematics and Musical Harmony." We will have refreshments beginning at 3:00 p.m. in Winton Scott Hall 171, and then move to room 145 for the talk at 3:30 p.m..

Membership in Parabola is open to all TCU undergraduates, faculty, and other interested members of the community. Dues are just four dollars per year, which we use to help cover the cost of refreshments. If you are interested in joining, please try to attend our first meeting or contact Professor Rhonda Hatcher, the faculty sponsor of Parabola, at 257-6062.

The Putnam Exam

The 59th Annual William Lowell Putnam Mathematical Competition will be held on Saturday, December 5, 1998. This annual competition consists of a twelve-question written exam. The questions require different amounts of mathematical background, and all require a bit of ingenuity to solve. The scores on the exam are typically quite low, and even answering a few questions is considered an excellent performance. The competition is open to undergraduates enrolled in colleges and universities of the United States and Canada who have not yet received a college degree. Any college or university with at least three entrants also enters the team competition. Prizes are awarded to the top twenty-five finishers and to the departments of mathematics of the institutions with the five top ranking teams.

Copies of the exam from last year are posted on the Problem Solving bulletin board down the hall from the Mathematics Department. Those interested in signing up to take the Putnam Exam this year should contact Professor George Gilbert by October 5 (in Winton Scott Hall 141 or 257-6061 or g.gilbert@tcu.edu).

Frank W. Stones Lectureship Series Begins September 8

The TCU Mathematics Department would like to thank our friend, Frank W. Stones, for his generous gift. This gift will support a research lectureship series which we have named The Frank W. Stones Research Lectureship in his honor. The series will feature talks by nine research mathematicians from other universities this academic year. The first speaker will be Professor Stephen Semmes of Rice University. He will present the talk "Geometry and Problems of Existence of Good Parametrizations" at 4:00 p.m., on

Tuesday September 8, 1998. A second Lectureship talk will be given by Professor Rick Kreminski of Texas A&M University, Commerce at 4 p.m. on Wednesday, September 23, 1998. Dr. Kreminski's talk is entitled "Computing Anything You Want Really Fast: From Computing the Gamma Function to the Zeta Function."

Both talks will be given in Winton Scott Hall 145, and refreshments will be served in Winton Scott Hall 171 during the half-hour preceding each talk. All TCU students, faculty, and other interested members of the community are invited to attend the lectures.

Calculus Bee Winners

The winner of the 1998 TCU Calculus Bee, held last April, was Mitsutaka Shirasaki, a senior engineering and mathematics major. The second and third place contestants were mathematics major Aaron Heap, who graduated last May, and Jeff Moles, now a junior mathematics major. Congratulations!

Solution to the April 1998 Problem of the Month

Problem: Find an expression for 24 in which the numbers (not digits!) 1, 3, 4 and 6 each appear exactly once, while nothing beyond the four operations +, -, * and /, along with any brackets required, is used.

Solution: $6/(1-3/4)$

The problem was solved by a record number of undergraduates: Daniel Breedlove, Brian Hall, Michelle Haynes, Aaron Heap, Timothy Marthand, Matt Pacione, Sara Ricci, and Todd Williams.

Problem of the Month

A football player is returning a kickoff. He is 50 yards from the goal line, running in a straight line along the sideline at 10 yards per second. The only player with a chance to catch him is 40 yards from the goal line and 20 yards from the sideline, running at 9 yards per second. If this player takes the best angle of pursuit, where will he catch the player returning the kickoff?



Students and others are invited to submit solutions to Dr. George Gilbert (Math Dept. Office or P.O. 298900). Correct solutions submitted by persons who are not members of the TCU math faculty will be acknowledged in the next issue of the newsletter. Note that a correct solution is an answer and a justification of its correctness. The solution to the problem will be published in the next edition of the newsletter.

The TCU Math Newsletter will be published each month during the academic year. Dr. Hatcher: Editor; Dr. Gilbert: Problem Editor; Dr. Doran: Thought of the Month Editor. Items which you would like to have included should be sent to Dr. Hatcher (Math Dept. Office or P.O. 298900).