
TCU Math News Letter

Volume 5, Number 5 February 97

Mathematicians do not study objects, but relations among objects; they are indifferent to the replacement of objects by others as long as relations do not change. Matter is not important, only form interests them.

- Henri Poincaré

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

TCU to Host the 1997 Texas Geometry and Topology Conference

Texas Christian University will be the site of the semiannual Texas Geometry and Topology Conference on February 7-9, 1997. The conference is being organized by Professor Efton Park and Professor Ken Richardson of the TCU Mathematics Department.

The featured speakers will be Robin Forman of Harvard University and Rice University, Claude LeBrun of SUNY Stony Brook, Paulo Lima-Filho of Texas A&M University, Darryl McCullough and Gerard Walschap of the University of Oklahoma, Kate Okikiolu of MIT and Princeton University, Jonathan Rosenberg of the University of Maryland, and Xingru Zhang of Oklahoma State University.

If you are interested in learning more about the conference or attending some of the talks, you can find information at the web site <http://www.tcu.edu/math/faculty/park/tgtc97.html> or by contacting Dr. Park or Dr. Richardson.

TCU Lectureship Series Talk on February

Professor Darryl McCullough of the University of Oklahoma will be the next speaker in the TCU Mathematics Department Research Lectureship Series. He will present the talk "Automorphisms of Three-Manifolds" on Tuesday, February 11 at 4:00 p.m. in Winton Scott Hall 145. Refreshments will be served in Winton Scott Hall 171 during the half-hour preceding the talk.

First Parabola Meeting of Spring 1997 on February 6

Parabola, the TCU undergraduate mathematics club, will have its first meeting of the Spring semester on Thursday, February 6. The featured speaker for the meeting will be Professor Laura Anderson. She received her Ph.D. from the Massachusetts Institute of Technology and is currently at the Mathematical Sciences Research Institute in Berkeley, California. She will present her talk "Combinatorics and Applications" at 4:45 p.m. in Winton Scott Hall 145. The Parabola meeting will begin with refreshments from 4:15 to 4:45 p.m. in Winton Scott Hall 171.

We plan to have a second guest speaker in February, but the time and date have not yet been determined.

Please watch the Parabola bulletin board for details.

Summer Mathematical Research Opportunities for Students

Undergraduate mathematics majors who are interested in participating in one of the National Science Foundation Research Experiences in Mathematics for Undergraduates Sites in the summer of 1997 will need to apply soon. Some application deadlines are as early as mid-February, while others are in late March. In these projects, which are held at about twenty universities across the United States, undergraduate students conduct research under faculty guidance. The student participants receive a stipend, housing support, and sometimes travel support.

Undergraduates who are interested in learning more about or applying to one of the REU projects should contact Dr. Hatcher in WSH 142 or by phone at 921-7335.

Solution to the December 1996 - January 1997 Problem of the Month Problem:

A slight change in last month's problem results in an entirely different result. Show that there does not exist a polyhedron that has an odd number of faces each with an odd number of sides (e.g., triangles, pentagons, ...)? Any number of faces each with an even number of sides is allowable. Solution: If we count the number of edges for each face and add all of these numbers up, we will have counted each edge exactly twice. In particular, this total is an even number. However, for a polyhedron with an odd number of faces with an odd number of sides, this sum would have to be odd, a contradiction.

Problem of the Month

Two mathematicians each think of a number and whisper it to a mutual friend. The friend reports that each is thinking of a positive integer and that the product of the two is either 4 or 8. The first mathematician says to the second, "I don't know your number." The second mathematician replies, "I don't know your number either." The first one then asks for a hint. What was the first mathematician's number?

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).