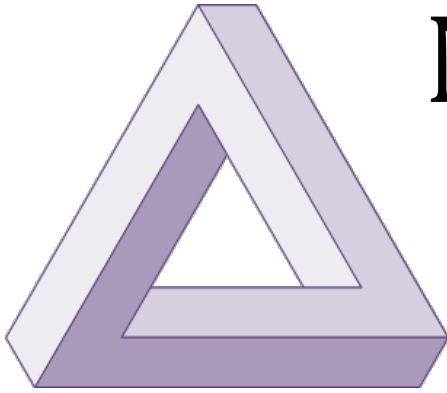


# TCU Math Newsletter



*The advancement and perfection of mathematics are infinitely connected with the prosperity of the state.*

- Napoleon

## **Résumé Writing Presentation on Thursday September 4**

Shannon Merchant, the College of Science and Engineering's Career Consultant from TCU's Career Center, will give a presentation on résumé preparation on Thursday, September 4, 3:30 – 4:30 pm in Tucker 245. Refreshments will be served in Tucker 300 at 3:00 pm. While part of the talk will focus on special tips for actuarial students, all mathematics majors could benefit from the talk.

An online résumé book is being set up for actuarial and mathematics students. Submission to this book is open to all math majors. In order to be included in the book, the résumé must be submitted by September 18. Résumés must meet the standards set by Career Services, so students are strongly advised to attend the talk.

Résumés should be prepared as soon as possible because the TCU Career and Intern Expo will be held on September 10.

## **General Motors Recruiting Presentation**

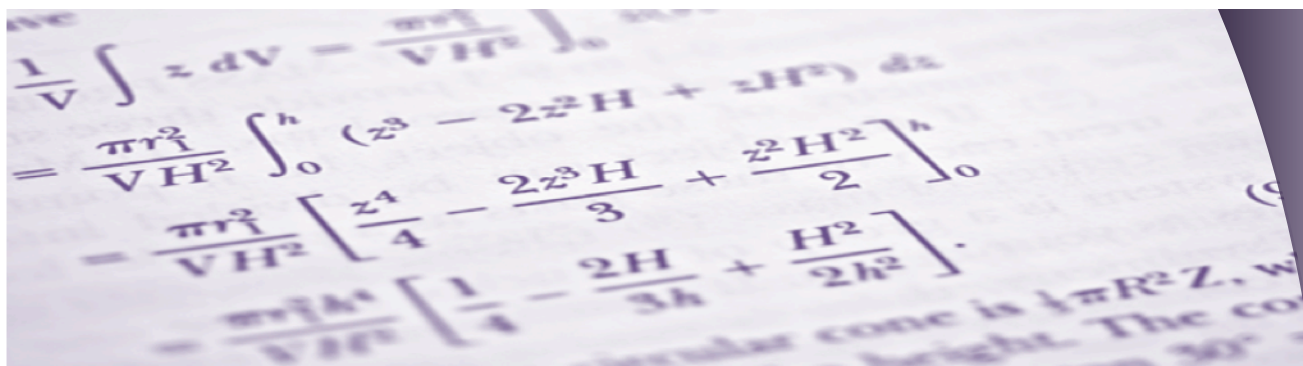
TCU graduate Drew Card, now working at General Motors, will present the talk "Mathematicians in the IT Field: A Presentation by General Motors." Students interested in possibly working for General Motors should attend the talk. It will be on Thursday, September 11 at 12:30 pm with pizza served before the talk in TUC 300.

## **Actuary Talk on September 25**

Jennifer Nicklay and Brent McGill from Wellington Insurance Company will present the talk "Property and Casualty Actuarial Careers" at 3:30 pm on Thursday, September 25 in TUC 245. Refreshments will be available before the talk in TUC 300. Approximately once or twice a month, the TCU Mathematics Department will host talks such as these of interest to students in the actuarial program. Many of the talks will be useful in general for careers in industry or finance.

## **Frank Stones Colloquium**

The first speaker in the Frank Stones Colloquium series is Gregory Pearlstein from Texas A&M University. He will present the talk "Normal Functions and the Hodge Conjecture" on Thursday, September 11 at 3:30 pm in TUC 245. The second colloquium speaker will be Mark Walsh of Wichita State University. His talk, "The Space of Positive Scalar Curvature Metrics on a Smooth Manifold," will be in TUC 245 at 3:30 pm on Tuesday, September 30. Refreshments will be served at 3:00 pm in TUC 300 before each talk.



## Solution to the April 2014 Problem of the Month

**Problem:** (*The Inquisitive Problem Solver*) Can you build a  $3 \times 3 \times 3$  cube with thirteen  $1 \times 1 \times 2$  blocks if the  $1 \times 1 \times 1$  space in the center is empty?

**Solution:** No. If possible, each block would cover exactly one  $1 \times 1 \times 1$  edge space and one  $1 \times 1 \times 1$  corner or center space. However, there are only 12 edge spaces, whereas there are 8 corner spaces and 6 center spaces, a total of 14.

The April Problem of the Month was solved by Brad Beadle ('96) and Siggie Kurz.

## September 2014 Problem of the Month

This month's problem is a variant of a Problem of the Week from Purdue University's archives. The polynomial  $p(x)$  has integral coefficients and equals 2014 for at least five distinct integral values of  $x$ . Show that  $p(x)$  cannot equal 2025 for any integer  $x$ . (In fact, the claim is true if "five" is replaced by "four.")

Students and others are invited to submit solutions to Dr. George Gilbert by e-mail ([g.gilbert@tcu.edu](mailto:g.gilbert@tcu.edu)) or hard copy (Math Dept. Office or TCU Box 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.

Editor: Rhonda Hatcher  
Problem Editor: George Gilbert  
Thought of the Month Editor: Robert Doran