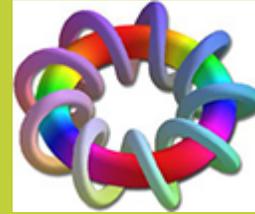


<Baylor Mathematics> News Brief



2018 – ISSUE 2

September 2018

What's Happening?

Update from the Chair of the Department

First of all, a huge thanks to you, our mathematics alumni, for your generosity during Baylor's first-ever Giving Day in August. The donations received will aid the Department in many ways – from scholarships, to helping our students travel to professional meetings and bringing in visitors to work with our faculty. We simply cannot make it to Tier 1, Research 1 university status – all part of President Livingstone's Pro Futuris vision – without your help.

The semester is now in full swing. Already, we have hosted several visiting mathematicians in the first month of this semester. Indeed, six excellent talks have been given by visitors so far this semester. One of these speakers, Professor Rafael del Rio (IIMAS, Mexico), also a professional magician, put on a mystifying magic show for us which has several of us wondering...*how did he DO that?!!*

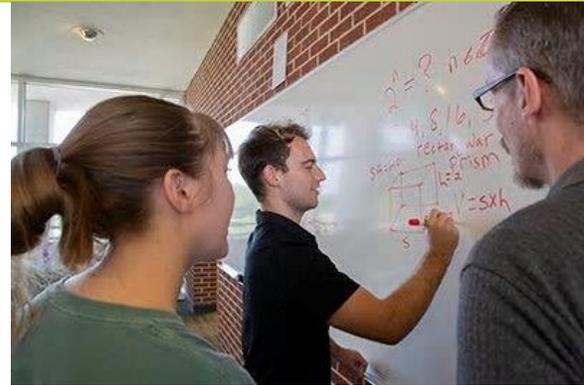
Our two biggest lecture series in the department will again have 'big name' speakers. In November, Dr. William Cook (Johns Hopkins University, National Academy of Engineering) will speak in the eleventh annual [Baylor Undergraduate Lecture Series in Mathematics](#). Next April, Dr. Peter Sarnak (Princeton, National Academy of Sciences) will deliver the twelfth annual lectures in the [Baylor Lecture Series in Mathematics](#).

I would love to hear from you! Please feel free to email me at lance_littlejohn@baylor.edu. And visit our webpage <https://www.baylor.edu/math> for more information on our department. Or see what we are doing on Facebook at [Baylor Mathematics](#).

Lance L. Littlejohn

Homecoming 2018

The October newsletter will contain information on a Homecoming math alumni get-together during Homecoming 2018 weekend (November 1-3). Try to plan on joining us!



Math Curiosities

$$166^3 + 500^3 + 333^3 = 166,500,333$$

$$296^3 + 584^3 + 415^3 = 296,584,415$$

$$710^3 + 656^3 + 413^3 = 710,656,413$$

$$828^3 + 538^3 + 472^3 = 828,538,472$$

Statement: $991n^2 + 1$ is NEVER a perfect square.

This statement is actually FALSE. However, the *smallest* natural number n for which $991n^2 + 1$ is a perfect square is

$$n = 12,055,735,790,331,359,447,442,538,767$$

which is on the order of 1.2×10^{28} .

The equation $x^2 = ky^2 + 1$ is called Pell's equation and is studied in Algebra and Number Theory.

"If I were again beginning my studies, I would follow the advice of Plato and start with mathematics."

-----Galileo Galilei (1564-1642)