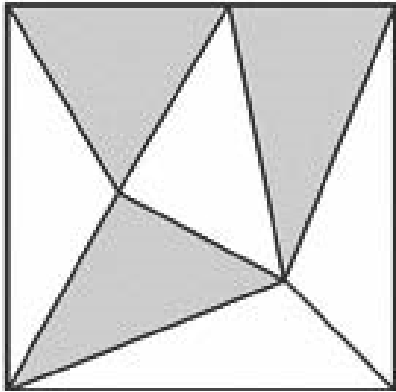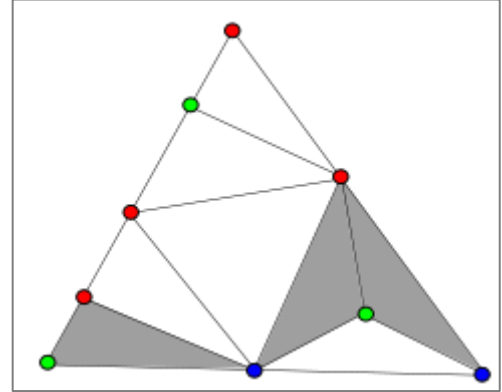# Department of Mathematics
Spring 2017 Colloquium Series

Paul Monsky

Dividing a Square into Triangles: Combinatorial Topology meets the 2-adic Absolute Value

Peter Goetz,
Humboldt State University

Thursday, April 20, 2017

BSS Room 204, 4 pm

Can a square be divided into an odd number of non-overlapping triangles, all of the same area? This question was asked by Fred Richman and John Thomas as Problem 5479 in the American Mathematical Monthly (1967). Building on initial work of John Thomas, three years later, Paul Monsky settled this question. His proof is both beautiful and surprising! He uses a result of combinatorial topology, Sperner's Lemma, and the 2-adic absolute value. In this talk I will outline Monsky's proof. Along the way, I will introduce the field of p-adic numbers, which in some aspects is completely analogous to the field of real numbers, but in other ways is profoundly different. All math enthusiasts are welcome to attend!

Peter Goetz got his PhD degree in Mathematics from the University of Oregon in 2003. He held a postdoctoral assistant professor position at Bucknell University from 2003 to 2006, and has been a faculty member at HSU since then. In addition to doing research in algebra, in his spare time, he enjoys studying number theory, as well as running and lifting weights.

To view this poster online, go to http://www.humboldt.edu/math/news-and-events/math-colloquium

We cordially invite you to the Pre-Colloquium Tea on the third floor of the BSS building at 3:30 pm on Thursday