



The Math Colloquium  
Department of Mathematics  
San José State University



**Tim Hsu**  
SJSU

*Square-gluing puzzles and  
the Gauss-Bonnet Theorem*

MARCH 7, 2012, MH320

**Abstract:** The Gauss-Bonnet Theorem is a deep and surprising connection between a surface's *curvature* (what it looks like at the micro level) and its global geometry (i.e., its *topology*). In this talk, we use square-gluing puzzles to illustrate some consequences of the Gauss-Bonnet Theorem. We also interpret these results in terms of *group theory* (the algebraic study of symmetry) and describe some related recent results (joint with Dani Wise, McGill Univ.).

*Background:* No particular background is necessary, as all of the above terms, including surface, curvature, topology, and group theory, will be defined during the talk.

**About the speaker:** Tim Hsu is an associate professor of mathematics at San José State. He received his Ph.D. from Princeton University and taught at the University of Michigan and Pomona College before coming to SJSU. He has done research in several fields, including geometric group theory and combinatorics.

SNACKS IN MH331B AT 2:30 PM  
TALK STARTS AT 3 PM

For more information, see our full schedule at:

<http://www.math.sjsu.edu/~hsu/colloq/>