The Math/Stats Colloquium
Department of Mathematics and Statistics
San José State University

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Topological and Geometric Symmetries of Molecular Structures

May 6, 2015, MH320

Abstract: How does a chemist know that a synthetic molecule has a particular form? Most non-biological molecules are too small to see by any means, so chemists need to collect experimental data as evidence of a molecule's form. One approach is to match experimental data about symmetries of the molecule to symmetries of a physical model of the desired form. But molecules that are not completely rigid may have symmetries not found in the model. In that case, *topology* (the study of deformations of objects in space) can help interpret the data. In this talk we will explore topological and geometric approaches to studying the symmetries of complex molecular structures.

Background: No background in math or chemistry is necessary.

About the speaker: Erica Flapan received her Ph.D. from U. Wisconsin, Madison, and taught at Rice Univ. and UC Santa Barbara before coming to Pomona College. Her research interests include topology and its applications. She is a recipient of the MAA Haimo Award for Distinguished College or University Teaching and a Fellow of the AMS.

Snacks in MH331B at 2:30 pm
Talks start at 3 pm

For more information, see our full schedule at:

`http://www.math.sjsu.edu/~hsu/colloq/`