

CALIFORNIA STATE UNIVERSITY, LONG BEACH
THE MATHEMATICS COLLOQUIUM

presents

Erica Flapan

Pomona College

speaking on

A topological look at molecular symmetries

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12:00PM-1:00PM

FO3-200A

Abstract: Symmetry plays an important role in predicting the behavior of molecules. A particular type of symmetry that is chemically important is mirror image symmetry. If a structure is rigid, it is not hard to check whether the structure and its mirror image are interchangeable. However, molecular knots, links, and other large structures have been synthesized which do not have the rigidity that is characteristic of small molecules. If a molecule is flexible or even partially flexible, it may be able to change into its mirror image even though it cannot be rigidly superimposed on its mirror image. In this talk we will give examples of such structures and present topological techniques that can be used to prove that certain flexible structures cannot change into their mirror image.