



# 2006 Kemeny Lecture



**PROF. ALAN WEINSTEIN**

U.C. – Berkeley

will speak on

## *Symmetry groupoids of crystals and networks*

Thursday, April 27, 2006

7:00 – 8:00 pm

Filene Auditorium

**Abstract.** Symmetry in nature is traditionally described mathematically in terms of the action of *groups*, such as the symmetry group of a crystal. But some materials, built of highly symmetric layers which may be stacked in an asymmetric way, admit only partial symmetry, for which the appropriate mathematical description is a more general object known as a *groupoid*. Groupoid symmetry has also been used to analyze coupled networks, such as those which control animal locomotion. In this talk, we will introduce the basic definition and elementary theory of groupoids, motivated by these examples from crystals and networks. No knowledge of standard group theory is assumed.

**All Undergraduate Students are  
Welcome!**

For more information contact:  
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