



## COLLOQUIUM

**Julie Bergner**

**“Thirteen Ways of Looking at  
a Topological Group”**

**Wednesday October 29, 2008**

**4:10-5:00pm**

**Surge 284**

**Tea Time is at 3:40pm**

**Abstract:** Topological groups are spaces with a group structure that is compatible with the topology, and they have a wide range of applications in many areas of mathematics. In this talk, we consider many examples of structures that are, from the perspective of homotopy theory, equivalent to topological groups. Some of these are given by spaces with some kind of weak multiplication, others are described by sequences of spaces and maps between them inducing a group structure on one of the spaces, and still others are best understood by replacing topological spaces with a combinatorial model. We'll look at the development of these new perspectives on topological groups and why we might want so many of them.