Geometry and Groupoids

The purpose of this series of talks will be understanding several geometric objects naturally related to groupoids, such as orbifolds, actions, foliations, algebroids, pseudogroups and differentiable stacks. These objects are linked to each other in various ways. If time permits, I will explain all their mutual relations, shown in the following chart:

Part 1: Orbifolds

I will introduce orbifolds as a generalization of manifolds and show how they arise in the context of proper group actions. I will also explain why orbifolds can be thought of equivalence classes of proper Lie groupoids.