LORENZO SADUN, University of Texas
A relative cohomology theory for tiling dynamical systems

Relative homology is based on inclusions of spaces, but factor maps between dynamical systems are typically surjective, not injective. I will present a variant of relative cohomology, called "quotient cohomology", that is adapted to this case, and show how it can be used to better understand dynamical systems with R^d actions, such as tiling spaces. Examples include variations on the chair tiling, and finite matching rules tilings that model substitution tilings. This is joint work with Marcy Barge