Title
Analogies Between Fields and Spaces: Galois Groups and Fundamental Groups

Abstract
Galois theory describes the rich connection between field theory and group theory. Given a field k, we get a group, its absolute Galois group, whose subgroups we can use to understand extensions of k. Analogously, given a topological space X, we get a group, its fundamental group, whose subgroups we can use to understand coverings of X. In this talk, we formalize this analogy and explore how to use our intuition about paths in space applies to number theory.