Title: Symmetries in symbolic dynamics

Abstract: The automorphism group of a symbolic system captures its symmetries, reflecting the dynamical behavior and the complexity of the system. It can be quite complicated: for example, for a topologically mixing shift of finite type, the automorphism group contains isomorphic copies of all finite groups and the free group on two generators and such behavior is common for shifts of high complexity. In the opposite setting of low complexity, there are numerous restrictions on the automorphism group, and for many classes of symbolic systems, it is known to be virtually abelian. I will give an overview of relations among dynamical properties of the system, algebraic properties of the automorphism group, and measurable properties of associated systems, all of which quickly lead to open questions.