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Groups and algebras of dynamical origin

We will discuss algebraic objects (groups and algebras) naturally associated with topological dynamical systems. Properties of the dynamical systems can be effectively used to study algebraic properties of the associated groups and algebras such as growth, amenability, simplicity, torsion, etc. In particular, one can construct examples with exotic properties, such as groups of intermediate growth, non-elementarily amenable groups, or simple groups and algebras with additional special properties. We will also discuss how algebraic objects can be used to study properties of the associated dynamical systems.