

## Symbolic Dynamical Systems and Their Full Groups

**Constantine Medynets**

United States Naval Academy

`medynets@usna.edu`

In this talk we discuss how one can associate a finitely generated group, dubbed a *full group*, with every symbolic dynamical system. In general, full groups “remember” subshifts up to flip-conjugacy. The main focus of the talk is the interplay between algebraic properties of full groups and dynamical properties of the associated subshifts. We will discuss examples of (1) periodic shifts in which case the associated full group is the symmetric group  $S_n$ , (2) some shifts of finite type where full groups look like free products of  $\mathbb{Z}/2\mathbb{Z}$ , and (3) minimal subshifts in which case the full groups are amenable yet have a very complex structure. We will clarify the connection between invariant measures of the subshift and characters of full groups as well as present several open questions.