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Van Cyr* (van.cyr@bucknell.edu), 361 Olin Science Building, Department of Mathematics, Bucknell University, Lewisburg, PA 17837, and **Bryna Kra** (kra@math.northwestern.edu), Lunt 224, Department of Mathematics, Northwestern University, Evanston, IL 60208. *Automorphisms of subshifts with low factor complexity.*

The automorphism group of a symbolic dynamical system (X, σ) is the group of homeomorphisms of X that commute with σ . For many natural systems, this group is extremely complicated (e.g. a theorem of Boyle, Lind, and Rudolph shows that if X is a topologically mixing SFT, then $\text{Aut}(X)$ contains isomorphic copies of all finite groups, the free group on two generators, and the direct sum of countably many copies of \mathbb{Z}). This can be interpreted as a manifestation of the “high complexity” of these shifts.

Many interesting shifts arising in combinatorics on words have “low complexity.” In this talk I will discuss recent joint work with B. Kra which places restrictions on the automorphism group of any topologically transitive subshift (not necessarily an SFT) whose factor complexity function grows sub-quadratically. This class contains the Sturmian shifts, the Rauzy-Arnoux shifts, many of the morphic shifts, and others. One of our main results is that, for these shifts, if H is the subgroup of $\text{Aut}(X)$ generated by σ then $\text{Aut}(X)/H$ is a periodic group. (Received August 18, 2014)