1106-37-2885 **Yaroslav Vorobets*** (yvorobet@math.tamu.edu), Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843-3368. *The Grigorchuk groups and Toeplitz subshifts.*

The Grigorchuk groups are a family of 4-generated 2-groups of automorphisms of the binary rooted tree. The groups are not finitely presented but all relators of any particular group can be obtained from a finite set by successively applying certain substitutions depending on the group. The sequence of substitution rules gives rise to an infinite sequence over an alphabet of four letters which, in a sense, encodes the structure of the group.

We show that the sequence associated to any Grigorchuk group is a Toeplitz sequence. The corresponding subshift is an extension of the binary odometer which is one-to-one up to a countable set. Further, we establish a relation between the Grigorchuk group and the Toeplitz subshift as dynamical systems. (Received September 17, 2014)