1025-20-212 **Collin Bleak**, **Martin Kassabov** and **Francesco Matucci*** (`matucci@math.cornell.edu`), 310 Malott Hall, Cornell University, Ithaca, NY 14853. *Structure Theorems for Subgroups of Homeomorphisms Groups.* Preliminary report.

We give a classification of the solvable subgroups G of the group $Homeo_+(S^1)$ of all orientation-preserving homeomorphisms of the circle. The key tool is proving that the rotation number map is a group homomorphism and it is done by relating the dynamics of G and its group structure. Applications include new proofs of known results as the Margulis' theorem on the existence of a G-invariant probability measure on S^1. (Received January 23, 2007)