1154-20-1719   **Volodymyr Nekrashevych*** (`nekrash@math.tamu.edu`), TX. *Constructing simple groups using dynamical systems.* Preliminary report.

We will show how minimal dynamical systems and etale groupoids can be used to construct finitely generated simple groups with prescribed properties. For example, one can show that there are uncountably many different growth types (in particular quasi-isometry classes) among finitely generated simple groups, or embed the Grigorchuk group into a simple torsion group of intermediate growth. Other properties like torsion and amenability will be also discussed. (Received September 16, 2019)