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Volodymyr Nekrashevych* (nekrash@math.tamu.edu), Department of Mathematics, Texas A&M University, College Station, TX 77843. *Hyperbolic duality and analysis on fractals*. Preliminary report.

We will talk about hyperbolic pseudogroups of local self-similarities of a topological space and their duals (which are also hyperbolic pseudogroups). Duality can be used to construct natural metric and measure classes on the space. We will discuss possible approaches to analysis on fractals in this setting. (Received June 29, 2011)