UNIFORMIZATION OF WEIGHTED GROMOV HYPERBOLIC SPACES AND UNIFORMLY LOCALLY BOUNDED GEOMETRY

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The seminal work of Bourdon and Pajot gave a way of constructing a Gromov hyperbolic space whose boundary is a compact doubling metric space of interest. The work of Bonk, Heinonen, and Koskela gave us a way of turning a Gromov hyperbolic space into a uniform domain whose boundary is quasisymmetric to the original compact doubling space. In this talk we will describe a way of uniformizing measures on a Gromov hyperbolic space that is uniformly locally doubling and supports a uniformly local Poincare inequality to obtain a uniform space that is equipped with a globally doubling measure supporting a global Poincare inequality. This is then used to compare Besov spaces on the original compact doubling space with traces of Newton-Sobolev spaces on the uniform domain. This talk is based on joint work with Anders Bjorn and Jana Bjorn.