

1107-43-454

David E Weirich* (dweirich@unm.edu), 87110. *Haar Basis in Spaces of Homogeneous Type.*

We first look at geometric properties of so-called spaces of homogeneous type – sets equipped with a quasi-metric and a doubling measure. We then use these properties to explicitly describe a collection of “Haar-like” functions defined over such spaces and show that they form an orthonormal basis for L^2 functions. We finally look at some applications of these Haar functions. (Received January 20, 2015)