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Amir A Maleki Khan* (amaleki@fac.howard.edu). *An Application of Ultrafilters to the Haar Measure.*

Let G be a locally compact and Hausdorff topological group with the identity e . Let I be the collection of all compact subsets A of G such that e is in the interior of each A . Let B be the Banach algebra of all complex valued and bounded functions on I . By constructing an ultrafilter in I and its related nonzero multiplicative linear functional on B , we pass the theory of generalized limit of Von Neumann to establish the existence of Haar measure on G . (Received August 26, 2000)