Title: Incompressibility and structure of ideals in a L^p AF algebras.

Abstract: We introduce the class of spatial L^p AF algebra, and show that these algebras are completely classified by their K-theory, as in the case of AF C*-algebras. We then describe the structure of ideals of a spatial L^p AF algebra in terms of its K_0 -group. Lastly, we explore some of the properties that a L^p operator algebra should have to look like a C*-algebras. We focus on a property that involves the invertible isometries of an L^p operator algebra, and on strong incompressibility. We give a characterization of the invertible isometries in a spatial L^p AF algebra, and if time allows it, we discuss some surprising results about crossed products of spatial L^p AF algebras by finite group actions. This is joint work with N. C. Phillips.