Department of Mathematics

University of Houston

Analysis Seminar

FRIDAY, September 07, 2018

13:00-14:00 − Room 646 PGH

Speaker: Tattwamasi Amrutam (University of Houston)

Title: Simplicity of Intermediate C^*-algebras

Abstract: Suppose that G is a discrete group, which acts on a unital C^*-algebra A by $*$-automorphisms. A unital G-C^*-algebra A is called G-simple if it doesn't admit any G-invariant two sided closed ideal. For a G-simple, unital G-C^*-algebra A, it is known that $A \rtimes_{\alpha,r} G$ is simple, when G is C^*-simple group. During this talk, we restrict ourselves to unital commutative G-C^*-algebras A, which are G-simple. Using the new notion of stationary C^*-dynamical systems, introduced by Yair Hartman and Mehrdad Kalantar, we show that, for a minimal action of a C^*-simple group G on a compact Hausdorff space X, every unital G-C^*-subalgebra of the reduced crossed product $C(X) \rtimes_{\alpha,r} G$ is G-simple. This allows us to conclude that, every intermediate C^*-algebra A of the form $C^*_\lambda(\Gamma) \subseteq A \subseteq C(X) \rtimes_{\alpha,r} G$ is simple. This is a joint work with Mehrdad Kalantar.