Department of Mathematics, BGU

Operator Algebras and Operator Theory

On *Monday, December ,11 2017*

At *16:00 − 17:00*

In *101-*

Kyle Austin (BGU)

will talk about

Inverse Approximation of Groupoids

Abstract: I will briefly discuss the general things that Magdalena Georgescu, Joav Orovitz, and I determined one needs to take into consideration for constructing inverse sequences of groupoids with Haar systems such that the pullback morphism induce a directed sequence of groupoid C*-algebras (to be clear, the groupoid C*-algebra of the inverse limit groupoid is the direct limit of the induced directed system of groupoid C*-algebras). Then I will proceed to discuss a variety of examples of how to create, in a simple way, groupoids whose groupoid C*-algebras are matrix algebras, UHF-algebras, infinite tensor powers of direct sums of such things, and dimension drop algebras $Z_{m,n}$ where m and n are natural or even supernatural numbers. I will briefly discuss my work with Atish Mitra on our current project for making the Jiang-Su algebra as a groupoid C*-algebra of an inverse limit groupoid (which, I believe is much more understandable and geometric than other groupoids which have Jiang-Su algebra as

groupoid C*-algebra that show up in the literature). I will also discuss my project with Magdalena Georgescu on taking inverse limits of sigma-compact groupoids by second countable groupoids as a way to bootstrap known results about second countable groupoids to sigma-compact groupoids.