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*Automorphisms of triangular AF-algebras (preliminary report)*

Donsig, Pitts and Power showed that any isomorphism  $\Theta : \mathcal{A}_1 \rightarrow \mathcal{A}_2$  between triangular AF algebras  $\mathcal{A}_1$  and  $\mathcal{A}_2$  factors as  $\Theta = \alpha \circ \beta$ , where  $\beta$  is a (not- necessarily \*-extendible) automorphism of  $\mathcal{A}_1$  which fixes the spectrum of  $\mathcal{A}_1$  and  $\alpha : \mathcal{A}_1 \rightarrow \mathcal{A}_2$  is an isometric \*-extendible isomorphism.

Let  $G$  be the group of automorphisms of  $\mathcal{A}_1$  which fix the spectrum. In this talk, I will show that for each  $\theta \in G$ , there is a complex valued cocycle on the spectrum of  $\mathcal{A}_1$ . When  $\mathcal{A}_1$  belongs to the class of TAF algebras generated by order-preserving normalizers, the cocycle is continuous and the map from the automorphism group to cocycles is a group homomorphism.

This is “work in progress” and is joint with Allan Donsig.