JULIAN BUCK, Francis Marion University
Strict Comparison for Crossed Products of Certain Non-Simple, Non-Commutative C*-Algebras

Crossed product C^*-algebras of the form $C^*(\mathbb{Z}, X, h)$, where X is a compact metric space and h is a minimal homeomorphism, have been studied extensively over the past 20 years and their structure is quite well-understood for many good cases. A recent result of particular interest is a theorem of Toms and Winter that states such crossed products are stable under tensoring with the Jiang-Su algebra $\mathcal{Z}$, and consequently have strict comparison of positive elements. In this talk we will discuss related results for crossed products of algebras of the form $C(X, A)$, where X is a compact metric space and A is a C^*-algebra with appropriate properties. In particular, we will show that the approximating subalgebra for the crossed product (corresponding to the subalgebras A_Y introduced by Putnam for the Cantor set case and generalized by Q. Lin and N.C. Phillips to compact metric spaces) are $\mathcal{Z}$-stable under sufficient assumptions on X and A, and that $A_{\{y\}}$ is a large subalgebra of the crossed product in an appropriate sense. It will follow that the crossed product has strict comparison of positive elements. This is joint work with Aaron Tikuisis.