1107-47-461 **Katie Spurrier Quertermous\*** (`querteks@jmu.edu`), Department of Mathematics and Statistics, MSC 1911, James Madison University, Harrisonburg, VA 22807. *Unitary Equivalence of Composition C\*-algebras on the Hardy and Weighted Bergman Spaces.*

If $\varphi$ is an analytic self-map of the unit disk $\mathbb{D}$, then the composition operator $C_\varphi : f \mapsto f \circ \varphi$ is a bounded operator on the Hardy space $H^2(\mathbb{D})$ and on the weighted Bergman spaces $A_\alpha^2(\mathbb{D})$ for $\alpha > -1$. In the Hardy space setting, several authors have investigated the structures of the C\*-algebras $C^*(C_\varphi, \mathcal{K})$, where $\varphi$ is a linear-fractional self-map of $\mathbb{D}$ and $\mathcal{K}$ is the ideal of compact operators. In this talk, we extend some of these results to the weighted Bergman space setting. We show that if $\varphi$ is a linear-fractional, non-automorphism self-map of $\mathbb{D}$ that fixes a point on the unit circle, then the unital C\*-algebra generated by $C_\varphi$ and the ideal of compact operators on $A_\alpha^2$ is unitarily equivalent to the unital C\*-algebra generated by $C_\varphi$ and the ideal of compact operators on $H^2$. We also establish a unitary equivalence between constant multiples of related weighted composition operators induced by arbitrary linear-fractional self-maps of $\mathbb{D}$ that fix a point on the unit circle. (Received January 20, 2015)

1