Meeting: 999, Nashville, Tennessee, SS 7A, Special Session on Operator Theory on Function Spaces

999-47-151 **Thomas Kriete*** (tlk8q@virginia.edu), Department of Mathematics, University of Virginia, Charlottesville, VA 22904, **Barbara MacCluer**, Department of Mathematics, University of Virginia, Charlottesville, VA 22904, and **Jennifer Moorhouse**, Department of Mathematics, Colgate University, Hamilton, NY 13346. *The C^*-algebra of a linear-fractional composition operator.*

Let φ be a linear-fractional self-map of the unit disk which is not an automorphism. We assume there are points ζ and η on the unit circle with $\varphi(\zeta) = \eta$ and consider the composition operator C_φ acting on the Hardy space of the unit disk. We show that C_φ^* is a compact perturbation of sC_σ, where $s = |\varphi'(\zeta)|^{-1}$ and σ is the "Krein adjoint" of φ appearing in Cowen's formula for C_φ^*. If, in addition, $\varphi(0) \neq 0$ and $\eta \neq \zeta$, the unital C^*-algebra $C^*(C_\varphi)$ generated by C_φ contains the ideal $\mathcal{K}$ of compact operators, and $C^*(C_\varphi)/\mathcal{K}$ is naturally isomorphic to the C^*-algebra of continuous 2×2 matrix-valued functions on $[0, s]$ which are diagonal at the origin. (Received August 20, 2004)