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Brittney R. Miller* (mille753@purdue.edu). *Classifying Functions in the Kernel of the Adjoint of a Composition Operator on the Hardy Space*. Preliminary report.

Let φ be an analytic function mapping the complex unit disk \mathbb{D} to itself. The composition operator C_φ , with symbol φ , is defined by $C_\varphi f = f \circ \varphi$ for f in a Hilbert space of analytic functions on \mathbb{D} . Results in the Hardy space relate the kernel, spectrum, and adjoint of C_φ to its symbol φ . In this talk, I will give a classification of functions in the kernel of the adjoint of C_φ for certain classes of symbols φ using the adjoint formula in the Hardy space from Hammond, Moorhouse, and Robbins's 2008 paper. (Received September 21, 2015)