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Michael T Jury* (mjury@math.ufl.edu), Department Of Mathematics, University of Florida, 358 Little Hall, Gainesville, FL 32611-8105. *Row contractions, composition operators, and generalized de Branges-Rovnyak kernels*. Preliminary report.

We prove that the norm of a weighted composition operator on the Hardy space H^2 of the disk is controlled by the norm of the weight function in the de Branges-Rovnyak space associated to the symbol of the composition operator. As a corollary we obtain a new proof of the boundedness of composition operators on H^2 , and recover the standard upper bound for the norm. We also show that the positivity of a generalized de Branges-Rovnyak kernel is sufficient for the boundedness of a given composition operator on the standard function spaces on the unit ball, and we obtain a norm estimate analogous to the one-variable case. In particular, if φ is a holomorphic self-map of the unit ball in \mathbb{C}^d , then the composition operator C_φ is bounded on H_d^2 whenever the d -tuple of coordinate functions $(\varphi_1, \dots, \varphi_d)$ induces a contractive row multiplier of H_d^2 , and

$$\|C_\varphi\| \leq \left(\frac{1 + |\varphi(0)|^2}{1 - |\varphi(0)|^2} \right)^{1/2}$$

Similar methods provide sufficient conditions for the boundedness of composition operators on spaces possessing a complete Nevanlinna-Pick kernel. (Received August 07, 2006)