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Composition operators on weighted Hilbert Spaces.

Let φ be an analytic self-map of open unit disk \mathbb{D} . A composition operator is defined as $(C_\varphi f)(z) = f(\varphi(z))$, for $z \in \mathbb{D}$ and f analytic on \mathbb{D} . Given an admissible weight ω , the weighted Hilbert space \mathcal{H}_ω consists of all analytic functions f such that $\|f\|_{\mathcal{H}_\omega}^2 = |f(0)|^2 + \int_{\mathbb{D}} |f'(z)|^2 \omega(z) dA(z)$ is finite. In this talk, we study composition operators in weighted Bergman space A_α^2 and weighted Hilbert space \mathcal{H}_ω . Using generalized Nevalinna counting functions associated with ω , we characterize the boundedness and compactness of these composition operators. (Received February 08, 2016)