

Weighted composition operators between weighted Bloch type spaces

Elke Wolf

Abstract

Let \mathbb{D} be the open unit disk in the complex plane and $\phi : \mathbb{D} \rightarrow \mathbb{D}$ as well as $\psi : \mathbb{D} \rightarrow \mathbb{C}$ be analytic maps. For a holomorphic function f on \mathbb{D} the weighted composition operator $C_{\phi, \psi}$ is defined by $(C_{\phi, \psi}f)(z) = \psi(z)f(\phi(z))$ for every $z \in \mathbb{D}$. We characterize when weighted composition operators acting between weighted Bloch type spaces are bounded resp. compact. Moreover, during these studies we also obtain a characterization of boundedness and compactness of weighted composition operators from weighted Bloch type spaces to weighted Banach spaces of holomorphic functions.

MSC 2000: 47B33, 47B38

Keywords: weighted composition operators, weighted Bloch type spaces, weighted Banach spaces of holomorphic functions