
Königs eigenfunction for composition operators on analytic function spaces

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Abstract

In 1884 G. Königs solved Schröder's functional equation $C_\varphi(f) = f \circ \varphi = \lambda f$, where φ is a given non-automorphic selfmap of the complex unit disc \mathbb{D} that fixes the origin and $0 < |\varphi'(0)| < 1$. The solution to Schröder's equation is called the Königs eigenfunction of the composition operator C_φ and its eigenvalue is the multiplier $\lambda = \varphi'(0)$. In this talk we discuss when the Königs eigenfunction belongs to Banach spaces of holomorphic functions on \mathbb{D} , like Bloch type and H^∞ type spaces.