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The (positive) shadowing property is a concept from dynamical systems that originated in the works [3] and [4]. In the context of bounded linear operators on Banach spaces, this property has received attention in recent years, culminating in a recent characterization of hyperbolicity in terms of shadowing and expansivity ([1], [2]). Motivated by these results, it is natural to investigate this property for more concrete operators.

In this presentation, we will consider a holomorphic self-map of the open unit disk $\mathbb{D}$, denoted by ϕ . We will describe the positive shadowing property for composition operators $C_\phi f = f \circ \phi$ on the Hardy space $H^2(\mathbb{D})$ using some general criteria and canonical forms. In particular, we obtain a description of all linear fractional self-maps, ϕ , of $\mathbb{D}$ such that C_ϕ has the positive shadowing property. If time permits, we will also discuss shadowing on $H^p(\mathbb{D})$ for $p \neq 2$.

Trabajo en conjunto con Artur Blois (Unicamp), Paulo Lupatini (Unicamp) y Osmar R. Severiano (Unicamp).

Referencias

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