Weighted composition operators on unitarily invariant spaces on $\mathbb{B}_d$

Abstract: Given a reproducing kernel Hilbert space of holomorphic functions on the open unit ball $\mathbb{B}_d$ of $\mathbb{C}^d$, it is quite natural to ask what the unitaries of this space look like. Of particular interest to is the question of when a weighted composition operator (WCO) on this given space defines a unitary.

In 2020 Martín, Mas and Vukotić considered WCOs on a large class of reproducing kernel Hilbert spaces of holomorphic functions on the unit disc $\mathbb{D}$. The authors then showed that in this setting, a WCO is unitary if and only if it is co-isometric, while additionally characterizing when this is the case. In this talk, we will generalize this result to the unit ball $\mathbb{B}_d$. This is joint work with Michael Hartz.