

Carleson's theorem for pairs of Hilbert function spaces

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A sequence $\{z_n\}$ in the unit disc is called an interpolating sequence if, given any bounded sequence $\{w_n\}$, one can always find a bounded analytic function f such that $f(z_n) = w_n$ for every n . Carleson (1958) proved that $\{z_n\}$ is interpolating if and only if it is separated in the pseudohyperbolic metric and generates a Carleson measure. Following the solution of the Kadison-Singer problem in 2013, Aleman, Hartz, McCarthy, and Richter extended this characterization to multiplier algebras of spaces that host an analogue of the classical Nevanlinna-Pick interpolation theorem. In this talk, we will focus on interpolating sequences for multipliers between certain pairs of spaces. In particular, we will see that, after appropriately modifying the separation condition, Carleson's theorem holds true in this more general setting. We will also show that our modified condition is, in a sense, sharp, thereby answering a question of Aleman, Hartz, McCarthy, and Richter.

In Special Session 1 on Applied Harmonic Analysis and Operator Theory at the Mathematical Congress of the Americas 2025.