LaTeX Abstract for Mathematics Open House 2023

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Abstract

Reproducing kernel Hilbert spaces (RKHS) are Hilbert spaces consisting of complex valued functions on some underlying set X such that for each element in X, the corresponding linear evaluation functional is bounded. In this talk, we primarily address the question: when are two RKHSs considered to be the "same"? We present various notions of isomorphisms between reproducing kernel Hilbert spaces and between their multiplier algebras. We finally present a specific class of reproducing kernel Hilbert spaces with the property that any pair of spaces from the class is isomorphic as RKHSs if and only if their multiplier algebras are isomorphic as multiplier algebras.