Weighted Paley-Wiener Spaces

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Abstract

In an explorative paper published in 2002, Professors Kristian Seip and Yurii Lyubarskii (NTNU, Norway) investigated a family of de Branges spaces subject to a natural axiom: in these spaces, the norm of a function is comparable with its L^2-norm against $\|k_x\|^2\, dx$, where k_x is the reproducing kernel at x. Doing so, they invented the notion of *weighted Paley-Wiener space*. From a deep study of the Hermite-Biehler functions associated with weighted Paley-Wiener spaces, they deduced many structural results. In this talk I will discuss these lasts, with emphasis on an auxiliary class of de Branges spaces introduced in the same work, which appears to be more general.