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EXTREMAL PROBLEMS AND HILBERT SPACES OF ENTIRE FUNCTIONS

In this talk we will present a class of extremal problems connected to the theory of de Branges spaces of entire functions, in which one wants to approximate a given function by entire functions of exponential type minimizing the error in the de Branges metric. A fundamental tool to solve such a problem is to construct entire interpolations at the zeros of Pólya-Laguerre functions. Ultimately, we shall specialize the construction to a certain family of homogeneous de Branges spaces, in order to establish a connection to extremal problems in Euclidean spaces and applications to inequalities in number theory.

7

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