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Applications of M. G. Krein's Theory of Entire Operators to Sampling Theory

The Whittaker–Shannon–Kotel'nikov Sampling Theorem gives a formula for reconstructing Paley–Wiener functions from their values at a discrete set of points (samples). This theorem has been extended and generalized in various ways.

In this talk we consider a generalization of the Whittaker–Shannon–Kotel'nikov Sampling Theorem on the basis of a particular class of simple symmetric operators with deficiency indices $(1, 1)$. The theory of this class of operators is due to M. G. Krein.

This is a joint work with Julio H. Toloza.