

Sampling theory of frequency band limited functions, complete interpolating sequences, and splines.

Wolodymyr (Wally) Madych

University of Connecticut

Thursday, October 11, 2001

102 Bradley Hall, 4:00 pm
(Tea 3:30 pm Math Lounge)

Abstract

We begin with a brief review of classical sampling theory and Schoenberg's spline summability method for the Whittaker cardinal series. We then consider related natural questions and extensions of these theories including some recent work of the speaker.

The notion of complete interpolating sequence plays a role similar to that played by the integer lattice in the classical theory. The investigation of such sequences dates back to the work of Paley and Wiener and is still ongoing. Among other things, we will describe some of the significant results and indicate that, in certain instances, appropriate variants of Schoenberg's summability method are valid.