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Ahmed I Zayed*, Department of Mathematical Sciences, DePaul University, Chicago, IL 60614.

Sampling with the Prolate Spheroidal Wave Functions: A New Perspective.

A sampling theorem for bandlimited functions using the prolate spheroidal wave functions as a basis has recently been obtained and shown to have some advantages over the classical Whittaker-Shannon-Kotel'nikov sampling theorem. In this talk we show that this new sampling theorem is a special case of a more general result in reproducing-kernel Hilbert spaces. (Received September 24, 2012)