

On cross gramians and asymptotic incoherence: from Fourier to shearlets

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December 14, 2013

Abstract

In this talk we will discuss some novel results within the context of generalized sampling. In fact, we focus on the Fourier-shearlet cross gramian and the decay of its entries. These investigations lead to the linearity of the stable sampling rate for acquisition of measurements in a Fourier system and the reconstruction in a shearlet system. Moreover, we shall link this work to the asymptotic incoherence of the Fourier shearlet matrix and show that it is as (asymptotically) incoherent as the Fourier wavelet matrix.