OPTIMAL SAMPLING OF MULTIDIMENSIONAL PERIODIC BAND-LIMITED SIGNALS (MonPmOR7)

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Abstract: In this paper, we present an algebraic description of the aliasing phenomena evident in the linear sampling process of multidimensional periodic band limited signals. Opposed to the classical Shannon sampling, periodic band limited signals underlie a different aliasing structure providing further freedom in the sampling strategy due to the discreteness of the spectrum. An algebraic formulation of the optimal sampling problem is also presented.