

# ON MULTIDIMENSIONAL SAMPLING

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There is a fundamental difference between one- and multidimensional sampling and interpolation based on the fact that in dimension  $n = 1$  the zeros of entire functions are discrete while in several dimensions the zero sets are analytic manifolds. That is why in several dimensions no sufficient conditions for sampling and interpolation can be given in terms of densities of the sampling set. We describe a method which allows to give some sharp characteristics for optimal sampling in several dimensions.

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