

Sparse Interpolation in Terms of Multivariate Chebyshev Polynomials Associated to a Weyl group

Hubert, Evelyne - Inria, Méditerranée

Given a multivariate polynomial that can be evaluated at chosen point, sparse interpolation offers to first recover the support of this polynomial; Then the coefficients. The number of evaluations is a measure of complexity.

We examine the situation where the polynomial is assumed to consist of a small number of generalized multivariate Chebyshev polynomials associated to a Weyl group. We address the multivariate Chebyshev polynomials of the first and second kind in the same framework and with analogous numbers of evaluations.