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Discretization of Weyl group orbit functions

Weyl group orbit functions arise in connection with each simple compact Lie group G. They have several pertinent properties. We will focus on their pairwise discrete orthogonality within each family when summed up over points of a finite fragment of a lattice lying in the fundamental region of the affine Weyl group of G. This allows us to implement discrete Fourier-like transforms which are useful in the processing of multidimensional digital data sampled on lattices of any symmetry.