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Generating functions for fusion rules

A fusion rule is a well defined rule for decomposing the product of two integrable highest-weight representation of a given affine Lie algebra at a fixed level k into a direct sum of integrable representations. It can be regarded as a restricted tensor product for the corresponding Lie algebras finite weights, with the degree of truncation determined by the level k. Fusion coefficients are thus specified in terms of tensor-product coefficients and threshold levels. Expressions for the threhold level can be obtained, for instance, in terms of Berenstein-Zelevinsky triangles for $su(N)$. Generating functions describing the fusion rules of low rank affine Lie algebras and presented.