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*Finite-dimensional loop-highest weight representation theory*

Let  $\mathfrak{g}$  be a simple complex finite-dimensional Lie algebra,  $\sigma$  a diagram automorphism of  $\mathfrak{g}$  and  $L(\mathfrak{g})^\sigma$  the corresponding twisted loop algebra. Some aspects of the finite-dimensional representation theory of these twisted loop algebras are now well understood. In particular, the universal 'loop-highest weight' Weyl modules and simple modules have been described, as have the blocks of the corresponding (non-semisimple) category. The loop-highest weight representation theory of  $L(\mathfrak{g})^\sigma$  is used extensively for these results. We will discuss possible extensions of this theory to the multiloop generalizations of  $L(\mathfrak{g})^\sigma$ .