

Classification of type D minimal affinizations

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The notion of minimal affinizations of representations of quantum groups was introduced by V. Chari over 2 decades ago. It is now an area of intensive study motivated not only by its applications in mathematical-physics, but also because of the rich inner structure of these representations with interesting connections to combinatorics. In particular, there has been efforts by many authors focused on the subclass of Kirillov-Reshetikhin modules and, in the last 2 years, K. Naoi has shown that part of the structure of most of the known minimal affinizations can be explained through the theory of Demazure modules, expanding results of G. Fourier and P. Littelmann for the Kirillov-Reshetikhin modules. However, the problem of completing the classification of minimal affinizations has been left aside since V. Chari and A. Pressley described the classification for modules whose highest weights have support either not bounding a subdiagram of type D or containing the trivalent node of the Dynkin diagram, almost 20 years ago.

This talk is based on a joint work with D. Hernandez and F. Pereira where we complete the classification for algebras of type D.

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