1060-17-76 **Dijana Jakelic*** (jakelicd@uncw.edu), Department of Mathematics and Statistics, University of North Carolina Wilmington, 601 S. College Rd, Wilmington, NC 28401, and Adriano Adrega de Moura (aamoura@ime.unicamp.br). Tensor products and blocks of finite-dimensional representations of quantum affine algebras at roots of unity.

The category of finite-dimensional representations of quantum affine algebras is not semisimple. For generic values of the quantization parameter, results of V. Chari and M. Kashiwara provide a way of obtaining indecomposable objects by giving sufficient conditions for a tensor product of simple objects to be highest-weight. In particular, a tensor product of fundamental representations can always be reordered in such a way that these conditions are satisfied. Furthermore, this property turned out to be one of the essential ingredients used to describe the block decomposition of the category.

In this talk, we will focus on a joint work with A. Moura where we consider the root of unity setting. We prove an analogue of Chari's version of the aforementioned result on tensor products of simple modules. However, the result about tensor products of fundamental representations is no longer valid. We will discuss the techniques we used to overcome this issue for describing the blocks in the root of unity setting. (Received March 21, 2010)