

1116-16-1654

**Zhaobing Fan, Yiqiang Li and Zongzhu Lin\*** (zlin@math.ksu.edu), Department of Mathematics, Kansas State University, Manhattan, KS 66506. *Equivalence of representation categories of various quantum and super quantum groups*. Preliminary report.

Corresponding to a Cartan datum, which defines a Kac-Moody Lie algebra  $\mathfrak{g}$ , there are several versions of quantum enveloping algebras, including original quantum in the form of Lusztig, and quantum groups with many parameters, as well as their supervision. The main result of the talk is that, in the generic cases, the category  $\mathcal{O}$ 's for all these algebras including the super-algebras, have exactly the same decomposition matrices and character formulas, Similarly for modular representations, including the cases of at roots of unit cases, also have the same decomposition matrices and character formulas. Using the known results in original quantum groups at roots of 1, these decomposition numbers are determined by Kazhdan Lusztig polynomials. (Received September 21, 2015)