Zhaobing Fan* (fanz@math.ksu.edu), Nantong St 145, Harbin Engineering Univ., School of Science, Harbin, 150001, Peoples Rep of China, and Yiqiang Li and Zongzhu Lin. Equivalence of Representation Categories of Various Quantum and Super Quantum Groups.

We establish equivalences of several representation theories of quantum groups. 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 Lustig, and quantum groups with many parameters, as well as supervision. The main results of the papers that in the generic cases, the category $\mathcal{O}$’s for all these algebras including super-algebras have exactly the same decomposition matrixes and character formulas, Similarly for modular representations, including the cases of at roots of unit cases, also the same decomposition matrixes and character formulas. Using the known results (Kazhdan-Lusztig theory) in the one parameters. These decomposition numbers are determined by Kazhdan Lusztig polynomials. This is a joint work with Yiqiang Li and Zongzhu Lin. (Received July 20, 2017)