

Abstract

R-matrices are the solutions of the Yang-Baxter equation. The R-matrix realization is an important realization of quantum algebra, which originated from the study of quantum inverse scattering theory. In this talk, we will introduce our recent work on R-matrix realization of quantum algebra: (1) The isomorphism between R-matrix presentation and Drinfeld's new realization of BCD type Yangians and quantum affine algebras. This is a joint work with Naihuan Jing and Alexander Molev. (2) The parabolic presentation of BCD type Yangian which is a joint work with Zhihua Chang, Naihuan Jing and Haitao Ma.