Braids and Centralizer Algebras

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(Tea 3:30 pm Math Lounge)

Abstract

Abstract: Using R-matrices, one obtains a representation of the braid group B_n on $V^{\otimes n}$ for each module V of a quasitriangular Hopf algebra. We study the question when the braid group does generate the whole centralizer algebra, for Drinfeld-Jimbo quantum groups. It turns out that one can find a generating module V of the representation category for all Lie types except E_8 and (possibly) F_4 such that the braid group and at most one more element generate the centralizer algebra.

This talk should be accessible to graduate students.