Braids and Centralizer Algebras

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102 Bradley Hall, 4:00 pm
(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.