

NEW BOREL SUBALGEBRAS OF QUANTUM GROUPS

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ABSTRACT. We are interested to understand right coideal subalgebras of quantum groups, which have the property that every finite-dimensional representation is one-dimensional. In Lie-theoretic terms this property characterizes the solvable Lie subalgebras, and the maximal solvable subalgebras are the Borel subalgebras. For quantum groups however, we find additional subalgebras with this Borel property. In my talk I report on our recent progress in this question. As an interesting application, these Borel subalgebras give rise to interesting and unfamiliar classes of induced modules, with nondiagonal action of the Cartan part.