

Meeting: 1003, Atlanta, Georgia, SS 23A, AMS Special Session on Representations of Lie Algebras, I

1003-81-817

Georgia Benkart* (benkart@math.wisc.edu), Department of Mathematics, University of Wisconsin - Madison, 480 Lincoln Drive, Madison, WI 53706. *Representations of $1/3$ and $2/3$ of a Quantum Group.*

The quantum group $U_q(\mathfrak{g})$ of a finite-dimensional simple Lie algebra \mathfrak{g} admits a triangular decomposition, $U_q(\mathfrak{g}) = U_q(\mathfrak{g})^- \oplus U_q(\mathfrak{g})^0 \oplus U_q(\mathfrak{g})^+$. This talk will first feature some results and conjectures on the representation theory of $U_q(\mathfrak{g})^+$ and then will focus on the analogous representation theory of $\mathfrak{b} = U_q(\mathfrak{g})^0 \oplus U_q(\mathfrak{g})^+$ for the affine Lie algebra $\mathfrak{g} = \widehat{\mathfrak{sl}}_2$. (Received September 29, 2004)