1077-17-2633 **Sachin Gautam*** (sachin@math.columbia.edu), Department of Mathematics, Columbia University, 2990 Broadway, New York, NY 10027. *Yangians and quantum loop algebras.*

For a simple Lie algebra $\mathfrak{g}$, the Yangian $Y_\hbar\mathfrak{g}$ and the quantum loop algebra $U_\hbar L\mathfrak{g}$ are deformations of the current algebra $\mathfrak{g}[u]$ and the loop algebra $\mathfrak{g}[z, z^{-1}]$ respectively. These deformations arise as a tool to construct rational and trigonometric solutions of the quantum Yang-Baxter equation.

In this talk I will present an explicit relation between the representation theories of the Yangian and quantum loop algebra associated to a simple Lie algebra $\mathfrak{g}$. The motivation for constructing such a relation lies in an attempt to understand the monodromy of a certain trigonometric connection (constructed by V. Toledano Laredo) which appears naturally in the theory of quantum cohomology for quiver varieties.

This talk is based on a joint work with V. Toledano Laredo (arxiv:1012.3687). (Received September 22, 2011)