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Valerio Toledano Laredo*, 360 Huntington Ave., Boston, MA 02115. *Yangians, quantum loop algebras and elliptic quantum groups.*

The Yangian $Y\mathfrak{g}$ and quantum loop algebra $U_q(\mathfrak{Lg})$ of a complex semisimple Lie algebra \mathfrak{g} are infinite-dimensional quantum groups which were introduced by Drinfeld in the mid 80s, and deform the current algebra $\mathfrak{g}[s]$ and loop algebra $\mathfrak{g}[z, z^{-1}]$ of \mathfrak{g} .

Although they share very many similarities, and were long thought to have the same representations, no precise relation between them existed until recently.

I will explain how to construct a faithful functor from the finite-dimensional representations of $Y\mathfrak{g}$ to those of $U_q(\mathfrak{Lg})$ which restricts to an equivalence on an explicitly defined subcategory of $Y\mathfrak{g}$.

A similar construction yields a faithful functor from representations of $U_q(\mathfrak{Lg})$ to those of the elliptic quantum group corresponding to \mathfrak{g} .

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