

Another Free Boson Representation of Yangian Double  $DY_{\hbar}(sl_N)$  with Arbitrary Level

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Abstract: We derive a free boson representation of the Yangian double  $DY_{\hbar}(sl_N)$  with arbitrary level  $k$  by the observation that there is a correspondence between the  $q$ -affine algebra and Yangian double associated with the same Cartan matrix. Vertex operator and screening currents cannot be obtained in the same way. From this point of view, the Yangian double with centre cannot be regarded as the degenerated case of the quantum affine algebra.

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