

The hyperoctahedral quantum group

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Abstract. We consider the hypercube in \mathbb{R}^n , and show that its quantum symmetry group is a q -deformation of O_n at $q = -1$. Then we consider the graph formed by n segments, and show that its quantum symmetry group is free in some natural sense. This latter quantum group, denoted H_n^+ , enlarges Wang's series S_n^+, O_n^+, U_n^+ .

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