

LUSZTIG'S PBW BASES FROM THE PERSPECTIVE OF BRAIDED HOPF ALGEBRAS

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Abstract: Lusztig defines PBW bases of quantum groups using certain algebra automorphisms and a reduced expression of the longest element of the Weyl group. In the talk it is explained how these bases can be obtained naturally using sequences of right coideal subalgebras of the quantum group and how to generalize this to much larger classes of (braided) Hopf algebras. The material is part of the book “Hopf algebras and root systems”, joint with Hans-Jürgen Schneider, appearing soon in the MSM series of AMS.