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*Chevalley restriction theorem for vector-valued functions on quantum groups.*

For  $\mathfrak{g}$  a simple finite dimensional Lie algebra,  $\mathfrak{h}$  its Cartan subalgebra, and  $W$  the Weyl group associated to it, Chevalley's classical theorem states that the restriction  $\text{Res} : \mathbb{C}[\mathfrak{g}]^{\mathfrak{g}} \rightarrow \mathbb{C}[\mathfrak{h}]^W$  is an isomorphism. The talk will show how to generalize this statement to the case when  $\mathfrak{g}$  is replaced by a quantum group and the target space  $\mathbb{C}$  of the polynomial maps is replaced by a finite dimensional representation  $V$  of this quantum group. The main theorem is injectivity of the restriction map  $\text{Res} : (O_q(G) \otimes V)^{U_q(\mathfrak{g})} \rightarrow O(H) \otimes V$  and the description of its image. (Received September 14, 2010)