QUANTUM SUBGROUPS OF $GL_{\alpha,\beta}(n)$

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ABSTRACT

Let $\alpha, \beta \in \mathbb{C} \smallsetminus \{0\}$ and $\ell \in \mathbb{N}$, odd with $\ell \geq 3$. We determine all Hopf algebra quotients of the quantized coordinate algebra $\mathcal{O}_{\alpha,\beta}(GL_n)$ when $\alpha^{-1}\beta$ is a primitive ℓ-th root of unity and α, β satisfy certain mild conditions, and we caracterize all finite-dimensional quotients when $\alpha^{-1}\beta$ is not a root of unity. As a byproduct we give a new family of non-semisimple and non-pointed Hopf algebras with non-pointed duals which are quotients of $\mathcal{O}_{\alpha,\beta}(GL_n)$.