TORSION MATRICES OVER
COMMUTATIVE INTEGRAL GROUP RINGS

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Abstract

Let $\mathbb{Z}A$ be the integral group ring of a finite abelian group $A$, and $n$ a positive integer greater than 5. We provide conditions on $n$ and $A$ under which every torsion matrix $U$, with identity augmentation, in $GL_n(\mathbb{Z}A)$ is conjugate in $GL_n(QA)$ to a diagonal matrix with group elements on the diagonal. When $A$ is infinite, we show that under similar conditions, $U$ has a group trace and is stably conjugate to such a diagonal matrix.

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