



JORDAN TRIPLE PRODUCT HOMOMORPHISMS ON TRIANGULAR MATRICES TO AND FROM DIMENSION ONE*

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Abstract. A map Φ is a Jordan triple product (JTP for short) homomorphism whenever $\Phi(ABA) = \Phi(A)\Phi(B)\Phi(A)$ for all A, B . We study JTP homomorphisms on the set of upper triangular matrices $\mathcal{T}_n(\mathbb{F})$, where \mathbb{F} is the field of real or complex numbers. We characterize JTP homomorphisms $\Phi : \mathcal{T}_n(\mathbb{C}) \rightarrow \mathbb{C}$ and JTP homomorphisms $\Phi : \mathbb{F} \rightarrow \mathcal{T}_n(\mathbb{F})$. In the latter case we consider continuous maps and the implications of omitting the assumption of continuity.

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