MULTIPLICATIVE MIXED BI-SKEW LIE AND BI-SKEW JORDAN TRIPLE DERIVATIONS ON ALGEBRAS

Adnan Abbasi

School of Advanced Sciences and Languages,

VIT Bhopal University, Bhopal-Indore Highway Kothrikalan, Sehore Madhya Pradesh-466114

E-mail: adnan.abbasi001@gmail.com

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Abstract. Let $\mathcal{A}$ be a $*$-algebra. For any $A, B \in \mathcal{A}$, the products $A \diamond B = AB^* + BA^*$, $[A, B]_* = AB^* - BA^*$ are called a bi-skew Jordan product and bi-skew Lie product respectively. In this paper, it is shown that every bi $*$-Jordan and bi-skew mixed Lie triple derivation $\psi : \mathcal{A} \to \mathcal{A}$ is an additive $*$-derivation.

Keywords: Bi-$*$-Jordan product, bi-skew Lie product, bi-skew Lie triple deriva- tion; $*$-derivation; $*$-algebra..

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