A RESULT CONCERNING TWO–SIDED CENTRALIZERS ON ALGEBRAS WITH INVOLUTION

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Abstract. The purpose of this paper is to prove the following result. Let $X$ be a complex Hilbert space, let $\mathcal{L}(X)$ be the algebra of all bounded linear operators on $X$ and let $\mathcal{A}(X) \subseteq \mathcal{L}(X)$ be a standard operator algebra, which is closed under the adjoint operation. Let $T : \mathcal{A}(X) \to \mathcal{L}(X)$ be a linear mapping satisfying the relation $3T(AA^*A) = T(A)A^*A + AT(A^*)A + AA^*T(A)$ for all $A \in \mathcal{A}(X)$. In this case $T$ is of the form $T(A) = \lambda A$ for all $A \in \mathcal{A}(X)$, where $\lambda$ is some fixed complex number.


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REFERENCES


