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Title: Generalized skew derivations on nest algebras characterized by acting on zero products

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Let $\mathcal{N}$ be a nest on a Banach space X with $N \in \mathcal{N}$ complemented in X whenever $N_- = N$, and let Alg$\mathcal{N}$ be the associated nest algebra. Assume that $\phi : \text{Alg}\mathcal{N} \to \text{Alg}\mathcal{N}$ is an automorphism and $\delta : \text{Alg}\mathcal{N} \to \text{Alg}\mathcal{N}$ is an additive map. It is shown that, if δ is ϕ-derivable at zero point (i.e., satisfies $\delta(A)B+\phi(A)\delta(B) = 0$ whenever $AB = 0$), then there exists an additive ϕ-derivation $d : \text{Alg}\mathcal{N} \to \text{Alg}\mathcal{N}$ such that $\delta(A) = d(A)+\delta(I)A$ for all $A \in \text{Alg}\mathcal{N}$. Moreover, by use of this result, the linear maps generalized ϕ-derivable at zero point are also characterized.

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