Zero product determined algebras

Mateja Grašič, Institute of Mathematics, Physics and Mechanics, Slovenia

An algebra A is said to be zero product determined if for every bilinear map $\{.,.\}$ from $A \times A$ into a vector space X the following holds: if $xy = 0$ implies $\{x, y\} = 0$, then there exists a linear map T such that $T(xy) = \{x, y\}$ for all $x, y \in A$. It turns out that the most standard examples of associative, Lie and Jordan algebras are zero product detremined. However, there do exist algebras that do not have this property.