Zero product determined algebras

Matej Brešar

University of Ljubljana, Slovenia

matej.bresar@um.si

A not necessarily associative algebra A over a field F is said to be zero product determined if every bilinear functional $\varphi : A \times A \to F$ with the property that $xy = 0$ implies $\varphi(x, y) = 0$ is of the form $\varphi(x, y) = \tau(xy)$ for some linear functional τ on A. These algebras have been studied in pure algebra as well as in functional analysis where one additionally assumes that φ and τ are continuous.

The talk will survey the general theory and applications of zero product determined algebras.