COMMUTATORS AND GENERALIZED COMMUTATORS IN MATRIX RINGS

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Abstract. An element of the form $[a, b] = ab - ba$ in a ring $R$ is called an (additive) commutator, and an element of the form

$$[a, b, c] = abc - cba$$

in $R$ is called a generalized commutator. In this talk, we present some recent results (and problems) on commutators and generalized commutators in a matrix ring $R = M_n(S)$ over a (not necessarily commutative) base ring $S$. This is joint work with D. Khurana and V. Kodiyalam.