

# 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  $R = \mathbb{M}_n(S)$  over a (not necessarily commutative) base ring  $S$ . This is joint work with D. Khurana and V. Kodiyalam.