

# Essentially ADS modules and rings

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**Abstract:** The main objective of the talk is to present significant structural properties of *essentially absolute direct summand modules* (e-ADS), i.e. such modules  $M$  that for every decomposition  $M = S \oplus T$  and every complement  $T'$  of  $S$  with  $T' \cap T = 0$  and  $S \cap (T' \oplus T) \leq^e S$ , we have  $M = S \oplus T'$ . This notion generalizes the notions of ADS modules (introduced by Fuchs) as well as automorphism invariant modules and it appears to be useful as a tool for characterization of various classes of rings. Finally, we describe basic properties of right e-ADS rings, i.e. rings which are e-ADS as right modules over itself, in particular, we prove a criterion of this condition for non-singular rings.