BETWEEN SEMI-ABELIAN AND ABELIAN - A REVISION OF RECENTLY INTRODUCED INTERMEDIATE CONDITIONS

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We usually say that semi-abelian categories are to groups, rings, and algebras over rings as abelian categories are to abelian groups and modules over rings. However, there are what we call intermediate conditions, those that hold in all abelian categories and often in some semi-abelian varieties of algebras, but not in all semi-abelian categories. Several of them are very important since they allow to generalize important constructions and results of group/ring theory. The purpose of the talk is to review these intermediate conditions, and describe what we know and what we don't know about their relationship to each other.