

# ***F*-SINGULARITIES OF COMMUTATIVE ALGEBRAS**

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**Abstract:** For a commutative ring  $R$  of prime characteristic  $p$ , the map  $F : R \rightarrow R$  sending  $r \mapsto r^p$  is a ring endomorphism, called the Frobenius morphism. Frobenius morphism plays an important role in studying singularities of such rings. The singularities that have been defined in terms of the Frobenius map are called  $F$ -singularities. In this talk we will look at various ways to study  $F$ -singularities. As an illustration we will look at  $F$ -singularities of Rees algebras. This talk is based on my joint works with M. Kummini; K. Goel, J. K. Verma; and M. Varbaro.