

SINGULARITIES IN PRIME CHARACTERISTICS

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For a commutative ring R of prime characteristic $p > 0$, the map $F : R \rightarrow R$ sending $r \mapsto r^p$ is a ring endomorphism, called the Frobenius homomorphism. The Frobenius map plays an important role in studying singularities. The singularities that have been defined in terms of the Frobenius map are called F -singularities. F -singularities have close connections with various singularities in characteristic zero. In this talk we will discuss various techniques to study F -singularities.