

1135-13-2644 **Janet Page*** (jpage8@uic.edu). *Frobenius Complexity for Pairs*. Preliminary report.

Central to the study of singularities in characteristic p is the Frobenius morphism and its splittings. Given a commutative ring R of positive characteristic, the total Cartier algebra is the ring of all potential Frobenius splittings of R , or all p^{-e} linear maps on R . This ring need not be finitely generated over R , which led Enescu and Yao to define Frobenius complexity as a measure of its non-finite generation. In this talk, I will review some results on Frobenius complexity, and introduce a notion of Frobenius complexity for pairs. I will give some examples which are a part of ongoing work. Many of the examples we discuss will be on a certain class of toric rings called Hibi rings, which are defined in terms of finite posets. (Received September 26, 2017)