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Tai Ha* (tha@tulane.edu), Tulane University, Department of Mathematics, 6823 St. Charles Avenue, New Orleans, LA 70118. *Asymptotic linearity of regularity and a^* -invariant of powers of ideals.*

Let $X = \text{Proj } R$ be a projective scheme and let $I \subseteq R$ be a homogeneous ideal. It is known that the regularity and the a^* -invariant of I^n are asymptotically linear functions for n large. In this talk, I will discuss how the free constants of these functions can be related to collections of local data associated to fibers of certain projection map from the blowup of X . (Received September 19, 2010)