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**Yu Xie\*** (xieyucn@gmail.com), 750 COE, 7th floor, 30 Pryor Street, Atlanta, GA 30303.

*Formulas for the generalized Hilbert Coefficients.*

Let  $(R, m)$  be a Cohen-Macaulay local ring of dimension  $d$ . In 1996, S. Huckaba provided a  $d$ -dimensional version of 2-dimensional formula due to C. Huneke in 1987, which relates the length  $\lambda(I^{n+1}/JI^n)$  to the difference  $P_I(n+1) - H_I(n+1)$ , where  $I$  is an  $m$ -primary ideal of  $R$ ,  $J$  is a minimal reduction of  $I$ ,  $H_I(n) = \lambda(R/I^n)$ , and  $P_I(n)$  is the Hilbert-Samuel polynomial of  $I$ . S. Huckaba also used this formula to establish some formulas for the higher Hilbert coefficients of  $I$ . We extend S. Huckaba's work further to non  $m$ -primary ideals. (Received September 23, 2012)