

1100-14-351

Annika Denkert* (annika.denkert@unl.edu). *Results on the Containment Problem $I^{(m)} \subseteq I^r$.*

For K be a field of arbitrary characteristic and I a nontrivial homogeneous ideal in $R = K[\mathbb{P}^N]$, we can consider symbolic powers $I^{(m)}$ and ordinary powers I^r of I . We discuss what we can say of the containment $I^{(m)} \subseteq I^r$ in general, what bounds we can give in specific situations, and what computational methods are available to calculate the resurgence $\rho(I) = \sup_{m,r} \{ \frac{m}{r} \mid I^{(m)} \not\subseteq I^r \}$ with any desired accuracy. (Received February 10, 2014)