

1159-13-167

Christine Berkesch, C.Y. Jean Chan, Patricia Klein, Laura Matusevich, Janet Page
and **Janet Vassilev*** (jvassil@math.unm.edu). *The ring of differential operators on graded
quotients of affine semigroup rings.* Preliminary report.

For any ring R we denote the ring of differential operators on R by $D(R)$. For any $J \subseteq R$, the idealizer of J in $D(R)$, $\mathbb{I}(J)$, is the subset of differential operators which when applied to elements of J remain inside of J . If R is a regular ring and $J \subseteq R$ is an ideal, the ring of differential operators of R/J is equal to $\mathbb{I}(J)/JD(R)$. If R is not regular, we are able to give an alternate discription of the differential operators of R/J . Then using the description of the ring of differential operators on an affine semigroup ring given by Saito and Traves, we are able to describe the ring of differential operators on quotients of affine semigroup rings by certain multigraded radical ideals. (Received August 04, 2020)