

1171-13-16

Hannah Altmann* (hannah.altmann@dsu.edu) and **Keri Sather-Wagstaff**. *On Gerko's Strongly Tor-independent Modules.*

Let (R, \mathfrak{m}_R) be a local ring. A sequence N_1, N_2, \dots, N_n of R -modules is *strongly Tor-independent* provided $\text{Tor}_{\geq 1}^R(N_{j_1} \otimes_R \cdots \otimes_R N_{j_t}, N_{j_{t+1}}) = 0$ for all distinct j_1, \dots, j_{t+1} . Gerko proves that if R is artinian and possesses a sequence of strongly Tor-independent modules of length n , then $\mathfrak{m}_R^n \neq 0$. This generalizes readily to Cohen-Macaulay rings. Using differential graded algebra techniques, we discuss a complement to this result for non-Cohen-Macaulay rings. (Received July 29, 2021)