

1145-VU-2699 **Jonah Amundsen*** (amundsjj3573@uwec.edu). *On the Indeterminacy of the Triple Linking Number.*

In the 1950s, Milnor defined a family of higher order linking invariants generalizing the linking number. Even the first of these new invariants, the triple linking number, has been of intense and fruitful study since its inception. In the case of a link with vanishing pairwise linking numbers, this triple linking number gives an integer valued invariant. When the linking numbers fail to vanish, this invariant is only well defined modulo their greatest common divisor. In recent work, Davis-Nagel-Orson-Powell produce a single invariant refining the triple linking number taking values in some abelian group which we call the total Milnor quotient. The goal of this talk is to compute this group and show that when the number of components $n \geq 6$, it is nontrivial. Thus, this refined triple linking number carries information for every $(n \geq 6)$ -component link, even when the classical triple linking number carries no information. (Received September 25, 2018)