

1145-VL-2344 **Alison Becker*** (aebecker@uwm.edu). *Finding Relations Between Invariants of Representations Using a Monte Carlo Method.*

Invariant theory looks at the polynomial functions that remain unchanged as a result of actions of linear groups. The Second Fundamental Theorem of Invariant Theory (SFT) states what the relations are between the generating invariants. In many cases, these relations are unknown. This talk provides an overview of a Monte Carlo method of finding the relations between invariants given by the SFT, and will give several examples from actions of Gl_k , O_k , and Sp_{2k} on algebraic varieties. (Received September 25, 2018)