1146-13-106   **Susan Morey*** (`morey@txstate.edu`), Department of Mathematics, Texas State University, San Marcos, TX 78666. *Algebraic Properties of Monomial Ideals.*

In recent years there has been a considerable body of work centered around exploiting the connection between square-free monomial ideals and combinatorial objects. This talk will focus on examining various algebraic invariants for monomial ideals that are not necessarily square free. Of particular interest will be how altering the powers of variables within the generators affects the algebraic properties of the ideals. The algebraic invariants focused on in this talk will be on the depth, Cohen-Macaulayness, and regularity of monomial ideals, as well as applications to powers and symbolic powers of square-free monomial ideals. The talk will include results from recent joint work with Jose Martinez-Bernal, Rafael Villarreal, and Carlos Vivares, where polarization was used to examine how altering the powers of variables in monomial generators affects the depth and regularity of the ideal. (Received January 11, 2019)