1086-13-646   **Susan E. Morey*** (`morey@txstate.edu`), Department of Mathematics, Texas State University, 601 University Dr., San Marcos, TX 78666. *Algebraic Properties of Square-free Monomial Ideals.*

In recent years, combinatorial representations of square-free monomial ideals, for example, edge ideals, clutters, or facet ideals, have proven fruitful in determining algebraic properties of the ideals. This talk will focus on classes of square-free monomial ideals that have a graphical representation, such as edge ideals or path ideals of a graph. The goal will be to use a combination of algebraic and combinatorial techniques to determine information about algebraic properties of these ideals, particularly those that are of interest in both commutative algebra and algebraic geometry, such as depths, Cohen-Macaulayness and associated primes. (Received September 10, 2012)