1023-13-1144   **Tai Huy Ha*** (`tai@math.tulane.edu`), Tulane University, Department of Mathematics, 6823 St. Charles Ave., New Orleans, LA 70118. *Resolutions of square-free monomial ideals.*

Let I be a square-free monomial ideal in a polynomial ring of n variables. The ideal I can be associated to a hypergraph H on n vertices. We discuss how the minimal free resolution of I is reflected in the combinatorial data of H. We define and concentrate on properly-connected hypergraphs, which naturally generalize simple graphs. In particular, we bound the regularity of I when H is properly-connected, and identify a large class of properly-connected hypergraphs for which the minimal free resolution of I is independent of the characteristic of the ground field. The materials in this talk are based on recent joint work with Van Tuyl. (Received September 25, 2006)