1144-13-148 **Srikanth B Iyengar*** (iyengar@math.utah.edu), Department of Mathematics, University of Utah, 155 South 1400 East, Room 233, Salt Lake City, UT 84112-0090. *Finite free complexes over polynomial rings.*

This talk will be about various results (some of recent vintage) and conjectures concerning finite free complexes over polynomial rings. Many of these concern numerical invariants associated with such a complex; notably, the length of the complex, and the ranks of the free modules that appear in it. This thread of research can be traced back to Hilbert's Syzygy Theorem (1890) that states that each finitely generated module over a polynomial ring over a field has a finite free resolution. The modern developments in this subject started with the work of Auslander, Buchsbaum, and Serre in the 1950s, and have since then been a centerpiece in commutative algebra. Another impetus for the subject has come from results and conjectures of Adem, Browder, Carlsson, Halperin, and Swan, among others, on obstructions to groups acting freely on spaces. (Received August 22, 2018)