1003-20-1172 **David J Benson***, Department of Mathematics, University of Georgia, Athens, GA 30602.
Varieties and injective modules over group cohomology.

The theory of varieties for finitely generated kG-modules was developed in the late 1970s and 1980s by Carlson and others. The corresponding theory for infinitely generated modules was developed in the 1990s by Benson, Carlson and Rickard. I shall describe recent joint work with Srikanth Iyengar showing how to compute the variety of an infinitely generated module from an injective resolution of its cohomology, and recent joint work with John Greenlees showing how this is related to Gorenstein duality in localizations of the stable module category. (Received October 04, 2004)