Meeting: 998, Houston, Texas, SS 21A, Special Session on Homological Algebra of Commutative Rings

998-18-286 **Lars Winther Christensen** (`winther@math.ku.dk`), Deparment of Mathematics, University of Copenhagen Copenhagen , Denmark, **Anders Frankild*** (`frankild@math.ku.dk`), Department of Mathematics, University of Copenhagen Copenhagen , Denmark, and **Henrik Holm** (`holm@math.ku.dk`), Department of Mathematics, University of Copenhagen Copenhagen , Denmark. *Adjoint functors and Gorenstein Dimensions.*

Over a commutative, noetherian ring admitting a dualizing complex we characterize modules (more generally, complexes) of finte Gorenstein projective, flat, and injective dimension.

In this talk, we employ this result to establish a well rounded theory for Gorenstein injective dimension which has been elusive for over 10 years. This is joint work with Lars W. Christensen (KU) and Henrik Holm (KU).

(Received March 01, 2004)