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David A. Jorgensen* (djorgens@uta.edu), Department of Mathematics, University of Texas at Arlington, Box 19408, Arlington, TX 76019, and **Graham J. Leuschke**. *Bounds on Betti numbers and criteria for the Gorenstein property.*

In this talk we will give bounds on the Betti numbers of finitely generated modules over a local ring in the presence of certain vanishing Exts or Tors. We then will use these bounds to give criteria for a local Cohen-Macaulay ring to be Gorenstein. (Received March 06, 2006)