1047-13-259   **Livia M Hummel*** (`hummell@uindy.edu`), Department of Mathematics, and Computer Science, 1400 E. Hanna Ave, Indianapolis, IN 46227. *Coherent Gorenstein Rings.*

Removing the Noetherian assumption, Bertin (1971) defined a ring to be regular if every finitely generated ideal has finite projective dimension. Answering a question posed by Glaz, Hamilton and Marley (2007) developed a theory of non-Noetherian Cohen-Macaulay rings for which coherent regular rings are Cohen-Macaulay. How does Gorenstein fit into this structure for coherent rings? The answer requires an extension of Gorenstein dimension to the non-Noetherian case and leads to a generalization of the Auslander-Bridger formula. In this talk I will introduce a theory of (non-Noetherian) Gorenstein rings such that coherent regular rings are Gorenstein, and coherent Gorenstein rings are Cohen-Macaulay. (Received January 30, 2009)