1082-53-222   **William Wylie*** (`wwylie@syr.edu`), 215 Carnegie Building, Mathematics Department, Syracuse University, Syracuse, NY 13244. *Some uniqueness theorems for the Ricci curvature of warped products.*

We will discuss a uniqueness theorem for prescribing the Ricci curvature on a warped product manifold with a fixed base and a space form fiber. The cases of Einstein metrics and gradient Ricci solitons will also be addressed. These theorems come from analyzing an very general over determined system of linear equations involving the hessian of a function on a Riemannian manifold. This is joint work with Chenxu He and Peter Petersen. Time permitting, we may also discuss a uniqueness theorem for gradient Ricci solitons with a fixed potential function within a conformal class, this is joint work with Jeff Jauregui. (Received July 09, 2012)