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Leo Rebholz* (rebholz1@bettis.gov), University of pittsburgh, 301 Thackeray Hall,
Pittsburgh, PA 15260, and **W Layton, M Neda** and **C Manica**. *Numerical Analysis and
Computational Testing of a Leray-deconvolution Turbulence Model.*

In this talk I present a study of a numerical scheme for the Leray-deconvolution turbulence model. After introducing the model, which is derived by applying van Cittert approximate deconvolution to the filtered term of Leray-alpha, the scheme is given and its stability and convergence properties are discussed. This analysis shows that Leray-dc can have increased convergence rates over those of Leray-alpha. Numerical experiments for flow over a forward and backward facing step are given that show Leray-dc can recover unsteady effects lost by Leray-alpha. (Received August 07, 2007)