1035-65-1911 **Iuliana Stanculescu*** (ius1@pitt.edu), Thackeray Hall 301, Pittsburgh, PA 15260. *Numerical Analysis of Approximate Deconvolution Models of Turbulence.*

If the NSE are averaged with a local, spacial, convolution type filter the resulting system is not closed due to the term $g * (\mathbf{uu})$. A deconvolution operator D is one which satisfies: $D(g * \mathbf{u}) =$ approximation of $\mathbf{u}$. This yields the closure method $g * (\mathbf{uu}) \simeq g * (D(g * \mathbf{u})D(g * \mathbf{u}))$. We will review several solutions to the ill-possed deconvolution problem, present an "optimal" deconvolution procedure and present numerical analysis and numerical experiments with it. (Received September 20, 2007)