1067-35-1188   **Aghalaya S Vatsala*** (`Vatsala@Louisiana.edu`), Department of Mathematics, Lafayette, LA 70504-1010. *Existence of Coupled Extremal Solutions for Nonlinear Caputo Fractional Reaction Diffusion Equations.* Preliminary report.

We develop iterative methods for nonlinear fractional reaction diffusion equations using coupled upper and lower solutions. This is achieved using a comparison results related to fractional reaction diffusion equations. The iterative scheme provides sequences which converge uniformly and monotonically to coupled minimal and maximal solution of the nonlinear reaction diffusion equation. (Received September 19, 2010)