1125-VH-2936   **Anilkumar Devarapu***, Department of Mathematics and CS, 504 College Dr, Albany, GA 31705, **Zephyrinus C Okonkwo**, 504 college Dr, Albany, GA 31705, and **Manjuladevi Gottapu**. *Similarity Solutions For a Class of Mixed Convection Heat Transfer Problems.*

This research article deals with similarity solutions for unsteady mixed convection flow. The parameter that characterizes mixed convection flow is Gr , where the Grashof number (Gr) and the Reynolds number (Re) represent the vigor of the natural convection and forced flow effects , respectively. The limiting case of $\frac{Gr}{Re^n} \to 0$ and $\frac{Gr}{Re^n} \to \infty$ correspond to the forced and natural convection limits, respectively. The non-linear coupled partial differential equations governing the mixed convection flow have been solved using different similarity methods, namely self-similar, semi-similar and non-smilar transformation methods. We will show the detail analysis of these methods. (Received September 20, 2016)