1145-VC-2884 **Anilkumar Devarapu*** (`anilkumar.devarapu@asurams.edu`), 504 College Drive, Albany, GA 31705, and **Zephyrinus C. Okonkwo** and **Robert S. Owor**. *Mixed Convection Flow Over a Slender Cylinder.*

This paper deals with the similarity solution of double-diffusive mixed convection flow over a vertical slender cylinder due to the combined effects of thermal and mass diffusion. With the help of a set of suitable similarity transformations, the nonlinear coupled partial differential equations governing select phenomena (such as flow, thermal and concentration field) have been reduced to a set of nonlinear coupled ordinary differential equations. Numerical solution of the resultant system of nonlinear ordinary differential equations is derived using an implicit finite difference scheme along with quasilinearisation technique. (Received September 25, 2018)