Influence of Navier slip and cross diffusion effects on natural convection flow through annulus region

K. Kaladhar and E. Komuraiah\*

*Department of Mathematics, NIT Puducherry, Karaikal, India*

\* ek.nitpy@gmail.com

This research is to examine the laminar, incompressible free convective Navier slip flow between concentric cylinders with cross diffusion effects. This investigation includes the first order chemical reaction also. The resulting equations with boundary conditions are reduced into dimensionless form using suitable transformations. Homotopy Analysis Method (HAM) has been applied to solve the system. The influence of emerging parameters on fluid flow quantities have been presented graphically. Also, the nature of physical quantities are shown in tabular form.