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VISUALIZATION OF HEAT TRANSFER BY FREE CONVECTION WITH RADIATION IN A VERTICAL CONE EMBEDDED WITH POROUS MEDIUM

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Abstract

In this paper, we concentrate on the study of heat transfer by Free convection including Radiation confined in a vertical cone embedded with porous medium. In this study, Finite Element Method (FEM) has been used to solve the governing partial differential equations. Results are presented in terms of average Nusselt number ($\overline{Nu}$), streamlines and Isothermal lines for various values of Rayleigh number (Ra), Cone angle (C_A), Radius ratio (R_r) and Radiation parameter (R_d).

Key Words : *Nusselt number* ($\overline{Nu}$)*, Rayleigh number* (Ra)*, Cone angle* (C_A)*, Radius ratio* (R_r) *and Radiation parameter* (R_d).