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Convective heat transfer of a nanofluid over a stretching sheet with variable viscosity and hall effect

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Abstract

This paper presents a numerical study of Hall current effect and variable viscosity in a convective heat transfer flow over a stretching sheet. A fifth-order Runge-Kutta-Fehlberg method with shooting technique was employed for solving governing non-linear boundary layer equations for two types of nanoparticles, namely copper (Cu) and alumina (Al₂O₃) in the base fluid (H₂O). The effects of velocity, temperature, skin friction and Nusselt number are discussed and analysed through graphs. Comparison of numerical results is made with published literature under limiting cases. (Comparison table will be provided in the full length paper). © 2018 by the authors of the abstracts.

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