HYDROMAGNETIC FALKNER-SKAN FLOW OF HYBRID NANOFLUID OVER A MOVING WEDGE

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ABSTRACT

The concept of hybrid nanofluids to improve heat transfer has resulted in fairly reasonable expectations for their applications. This study focuses on the unsteady flow of a Falkner-Skan hybrid nanofluid over a moving wedge. This study focuses on hybrid nanofluids composed of water as the base fluid and copper and alumina as nanoparticles. The governing equations are solved using the Keller-Box Method. The effects of various parameters on fluid flows and heat transport, such as magnetic field, moving wedge parameter, porosity, and unsteady parameter are investigated and graphically presented. Furthermore, the obtained results are validated by comparing them to the earliest published paper, and they are found to be in excellent agreement.

Keywords: Falkner-Skan Flow; Hybrid Nanofluid; Moving Wedge; Unteady Flow