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**Unsteady flow of a Maxwell nanofluid over a stretching surface in the presence of magnetohydrodynamic and thermal radiation effects**
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**Abstract**
The problem of unsteady magnetohydrodynamic (MHD) boundary layer flow of a non-Newtonian Maxwell nanofluid over a stretching surface with thermal radiation is considered. The Maxwell model is used to characterize the non-Newtonian fluid behaviour. An appropriate similarity transformation is employed to transform the governing partial differential equations of mass, momentum, energy and nanoparticle concentration into ordinary differential equations. The coupled non-linear ordinary differential equations are solved by using the variational finite element method. The flow features and the heat transfer characteristics and nanoparticle volume fraction are analyzed and discussed in detail for several sets of values of the governing flow parameters. The results for the skin-friction coefficient, local Nusselt number and the local Sherwood number are presented in tables for various values of the flow controlling parameters. © 2017 National Laboratory for Aeronautics and Astronautics

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