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| Title | [Non-similar solution of g-jitter induced unsteady magnetohydrodynamic radiative slip flow of nanofluid](javascript:void(0)) | | |
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| Abstract |  |
| We present a mathematical model and numerical simulation of the unsteady 2-D g-jitter-free and forced the convective flow of water-based nanofluid from a flat plate, considering both the velocity slip and thermal slip conditions imposed on the wall of the plate. The Darcian model is used, and both cases of a calm and moving free stream are considered. In place of the extensively used linearly varying radiative heat flux, the nonlinearly varying heat flux calculation is applied to produce practically useful results. Further, we incorporate the “zero mass flux boundary condition” which is believed to be more realistic than the earlier extensively used “actively” controlled model. The parameter influences the non-dimensional velocity, temperature, nanoparticle volume fraction, skin friction and heat transfer rates are visualized graphically and discussed in detail. Special cases of the results are benchmarked with those existing in the literature, and a good arrangement is obtained. It is found that the rate of heat transfer is lower for the calm free stream rather than the moving free stream. | |