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ahmet yildirim* (ahmetyildirim80@gmail.com), ege university, department of mathematics, 35100 izmir, izmir, Turkey, and **yasir khan, Qingbiao wu** and **naeem faraz**. *RELIABLE ANALYSIS FOR THE EFFECTS OF VARIABLE VISCOSITY AND THERMAL CONDUCTIVITY ON THE FLOW AND HEAT TRANSFER IN A LAMINAR LIQUID FILM ON A HORIZONTAL SHRINKING/STRETCHING SHEET.*

We analyzed the effects of variable viscosity and thermal conductivity on the flow and heat transfer in a laminar liquid film on a horizontal shrinking/stretching sheet. The similarity transformation reduces the time independent boundary layer equations for momentum and thermal energy into a set of coupled ordinary differential equations. The resulting five-parameter problem is solved by homotopy perturbation method. The results are presented graphically to interpret various physical parameters appearing in the problem. (Received October 16, 2011)