

Hi there

I need some help/information about the handling of initial data.

Suppose I solved a 2-D steady-state problem in Flexpde to get field data of velocity (u,v), temperature (Temp). For example, I can use the buoyant.pde (Samples-steady_state-fluid-bouyant.pde) in the Flexpde's sample files.

Now, I want to solve the following equation: “dxx(H)+dyy(H)=source” for the same geometry, where H is a variable and source is a function of already obtained steady-state data of u, v, and T. How can I set this problem, where source is related to some given data? For one boundary, the boundary condition is an integral function similar to the following equation:

“Integral(C1*normal(grad(Temp)))” along the line ‘ac’ as shown in the attached figure.

Other boundary conditions are either “value()” or “natural()” boundary condition.

$$H_{ac} = \int_a^c \frac{\partial T}{\partial n} ds$$

where s is the small arc length along ab

