

Hello,

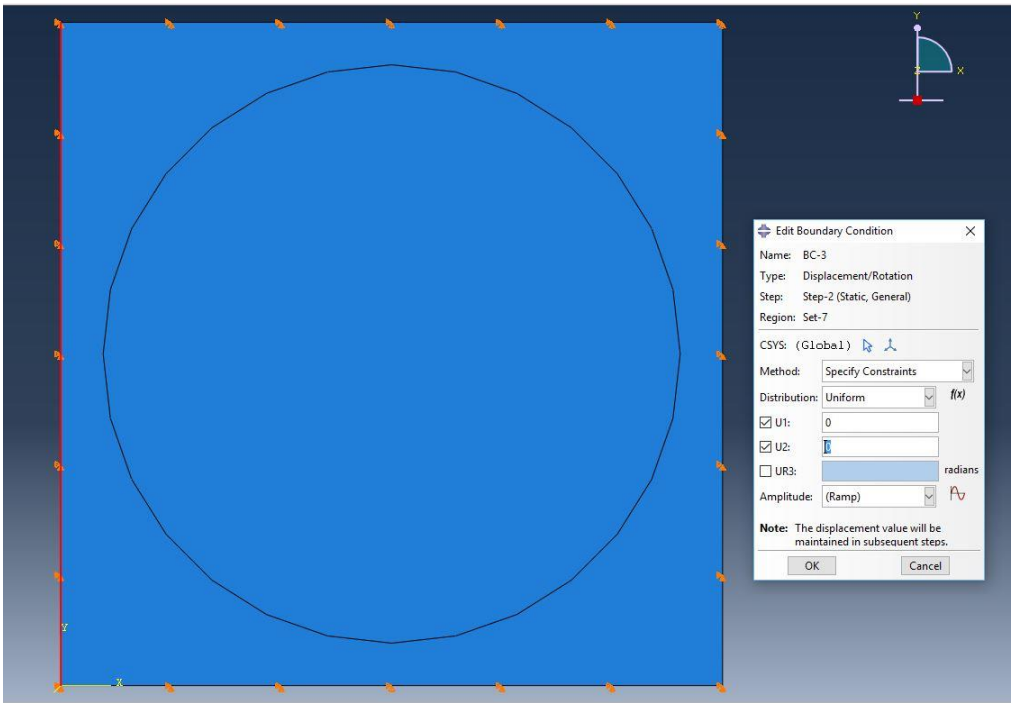
I am trying to draw a two phase RVE of composites. It consists of graphite fiber and epoxy matrix. I am working in ABAQUS CAE. I am trying to apply periodic boundary condition (PBC) to the RVE. The PBC I am trying to impose is shown below.

Constraint between left and right faces	Constraint between top and bottom faces	Out of plane strains
$U_i(L_2,x_3)-U_i(0,x_3)=0, \quad i=2,3$	$U_i(x_2,L_3)-U_i(x_2,0)=0, \quad i=2,3$	$e_{11}=1,\gamma_{12}=0,\gamma_{13}=0$



I don't know how to work with the inp file. So I am trying to apply PBC from CAE. To apply the above PBC, I am fixing U_1, U_2 degrees of freedom like the following figure. Will it work?

Another inquiry is, how can I apply $e_{11}=1$ (out of plane strain=1). Noteworthy that this is a 2D plane strain problem.



Thank you!