**Meshing of multilayered hemispherical 3-D geometry and Time dependant heat flux at the boundary**

Hello Sir,

I am trying to simulate a 3D tissue model, which is hemispherical in shape. I am imposing a sinusoidal heat flux on the top curved surface of hemisphere. After solving the transient bio heat equation, I am converting the same in ‘avi’ format for further image processing in MATLAB. But, the problem is that the image frames at each time step appears in patches on the surface (spatial contrast) of irradiated boundary. It is not continuous over the surface of irradiation in case of curved face case when compared to flat face case. I am attaching the images of first few time steps. I am not sure whether the patches are because of meshing or because the heat flux is not uniformly distributed over the curved surface. I am attaching the images of the simulation for your understanding. I will be grateful for your kind advice.

Thanking You

Arka Bhowmik

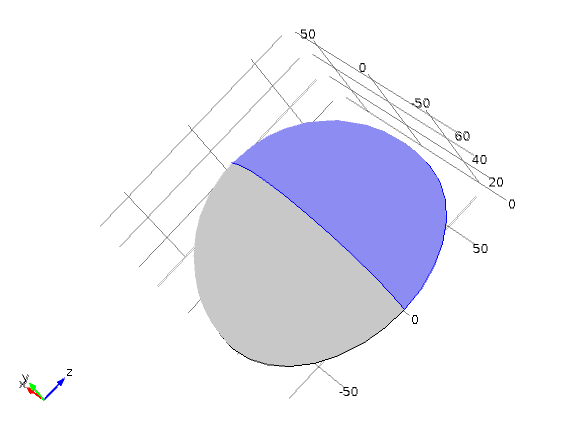


Fig. 1 3D model

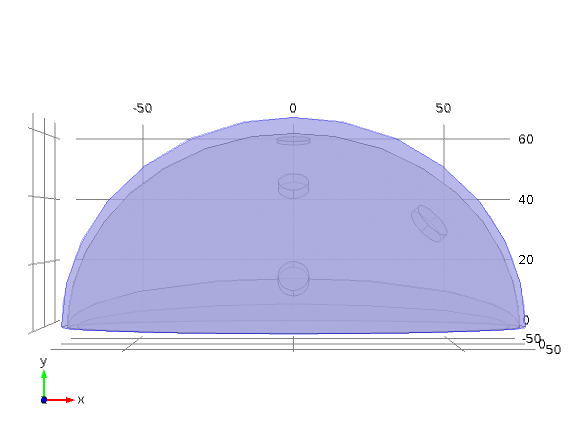


Fig. 2 Multilayered model 2d view

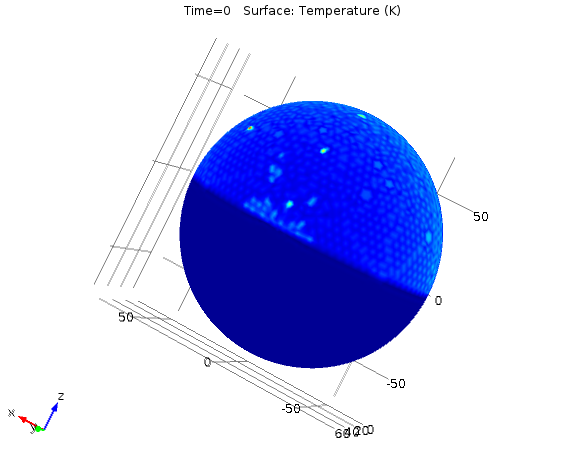


Fig. 4 Result at t=0

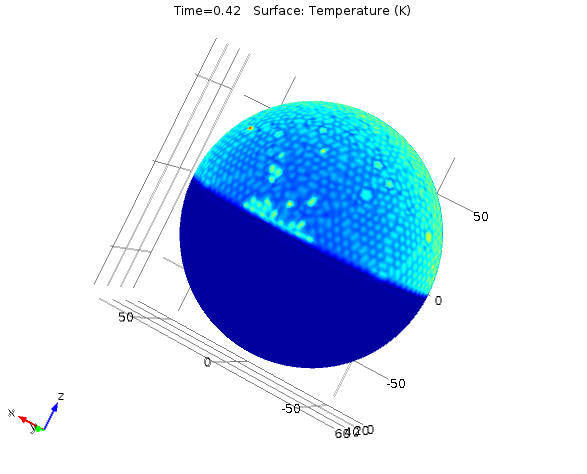


Fig.5 Result at t =0.42 sec

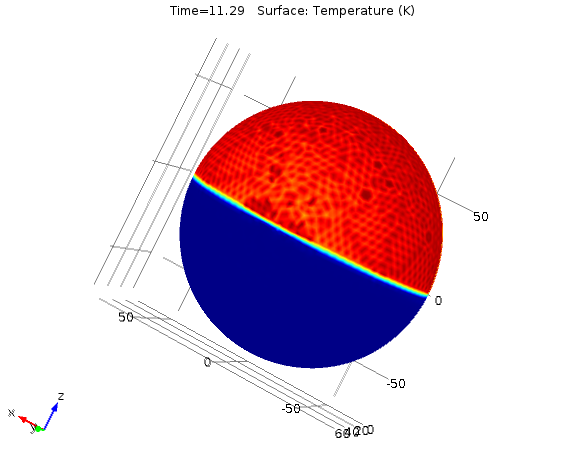


Fig. 6. Result at t = 11.29 sec