Partially Premixed Combustion - Verification & Validation

Author: Lara Backer, Cornell University - taken from ANSYS Inc. tutorial

Verification & Validation

The baseline verification and validation is to refine the mesh and ensure that there are no large mesh-dependent errors. However, as you downloaded the mesh file directly, this cannot be done from the Mesh option in Workbench.

Create a copy of the project in your workbench that will contain the refined mesh.

One possibility to alter the mesh is to go back to Region Adaptation, select a region of the mesh, and to click on "Controls". From there, you can select Refine as the only option, and select a minimum number of cells to adapt the mesh with. Click "Ok" and then click "Adapt" in the original Region Adaptation dialogue. Re-run your solution as you did in the previous sections. Exporting the same data, create Charts with plots of the variables of the solution at different locations (click the Location button at the top menu in CFD post, select "Line" and select the endpoints that you wish to use as the locations in your plot). You can compare the data between the un-refined and the refined mesh by dragging the Results box of the unrefined mesh in your workbench file into the Results box of the refined mesh.

Go to Exercises

Go to all FLUENT Learning Modules