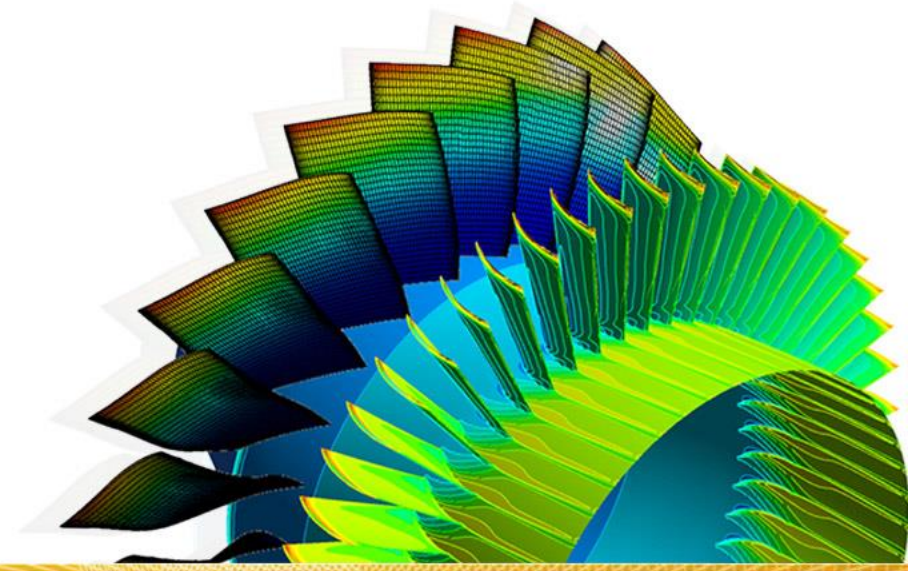
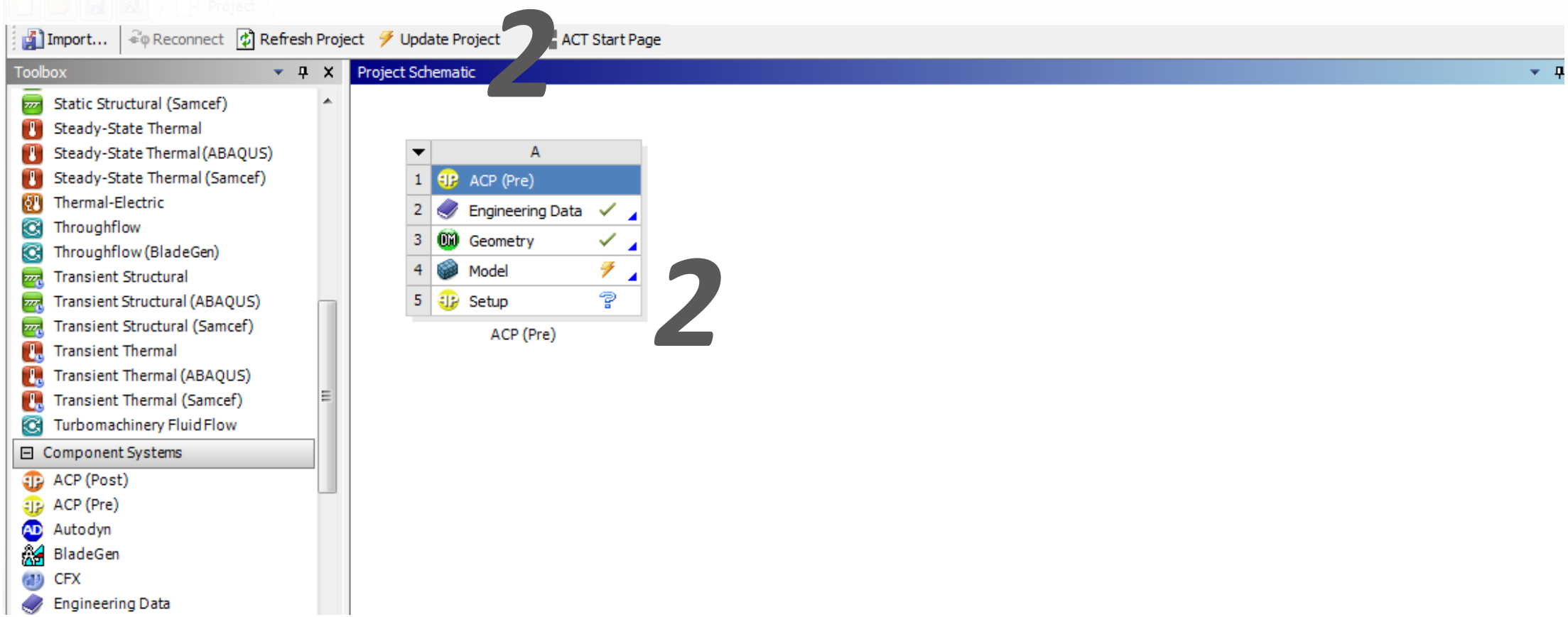
ANSYS Composite PrepPost 19.0

Workshop 06.1 – Draping



6. Workshop Draping

Start ANSYS Workbench and Restore Archive



1. Start ANSYS Workbench and restore Archive *Draping_FROM_START_19.0.wbpz*
2. Update Project and Edit ACP Setup (Right mouse button on Setup → Edit)

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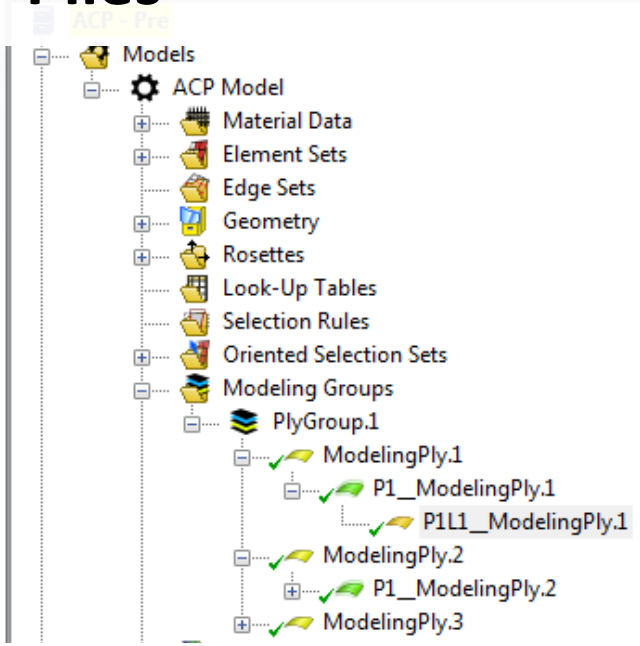
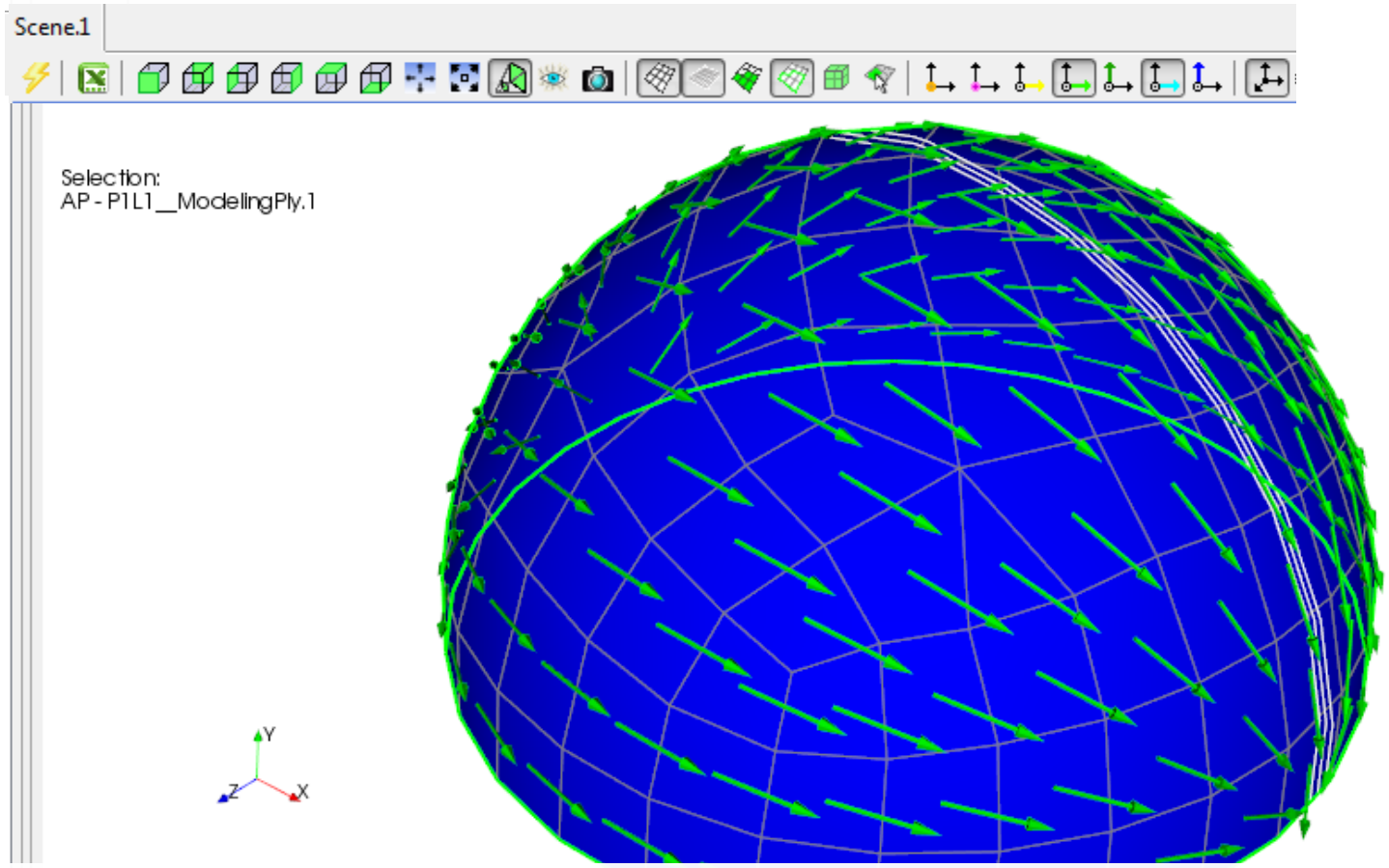
6. Workshop Draping

Plies





Three layer of a woven fabric have been defined

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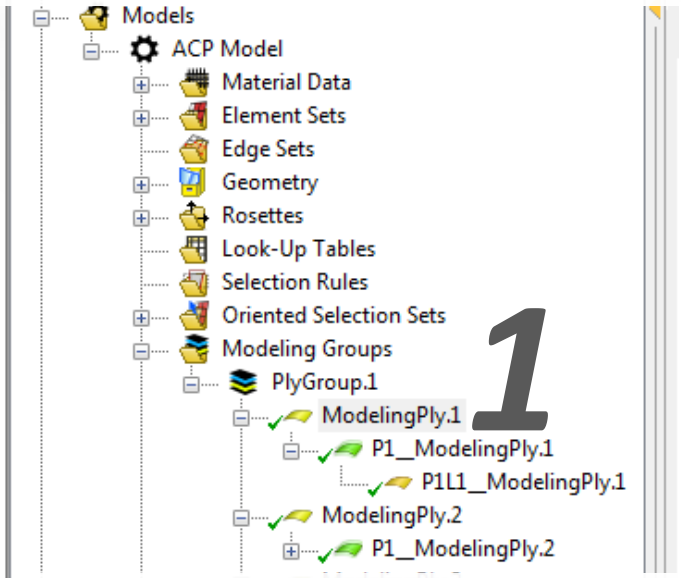
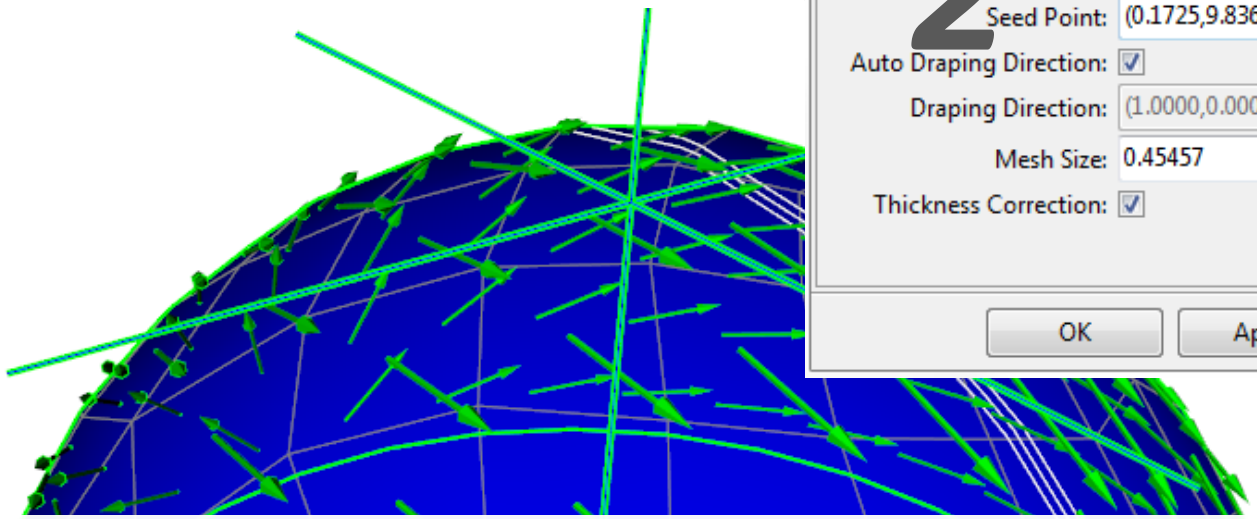
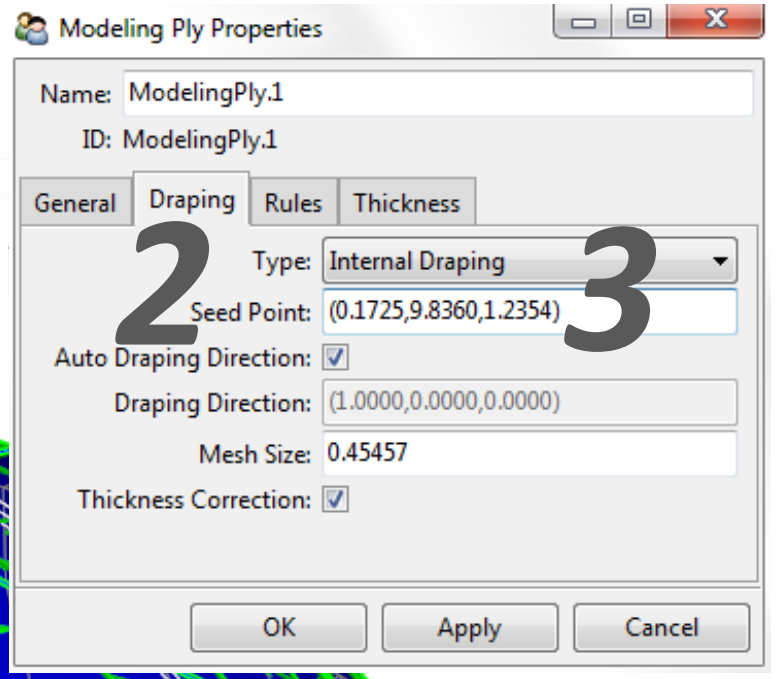
6. Workshop Draping

Calculate Draping







1. Edit the properties of the first modeling ply.
   (Right mouse button on *ModelingPly.1* → Properties)
2. Switch to tab Draping.
3. Select a seed point at the top of the sphere and leave other settings to their defaults.

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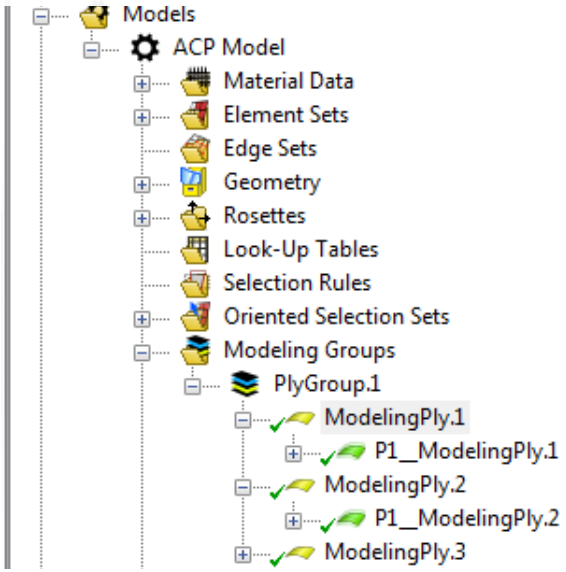
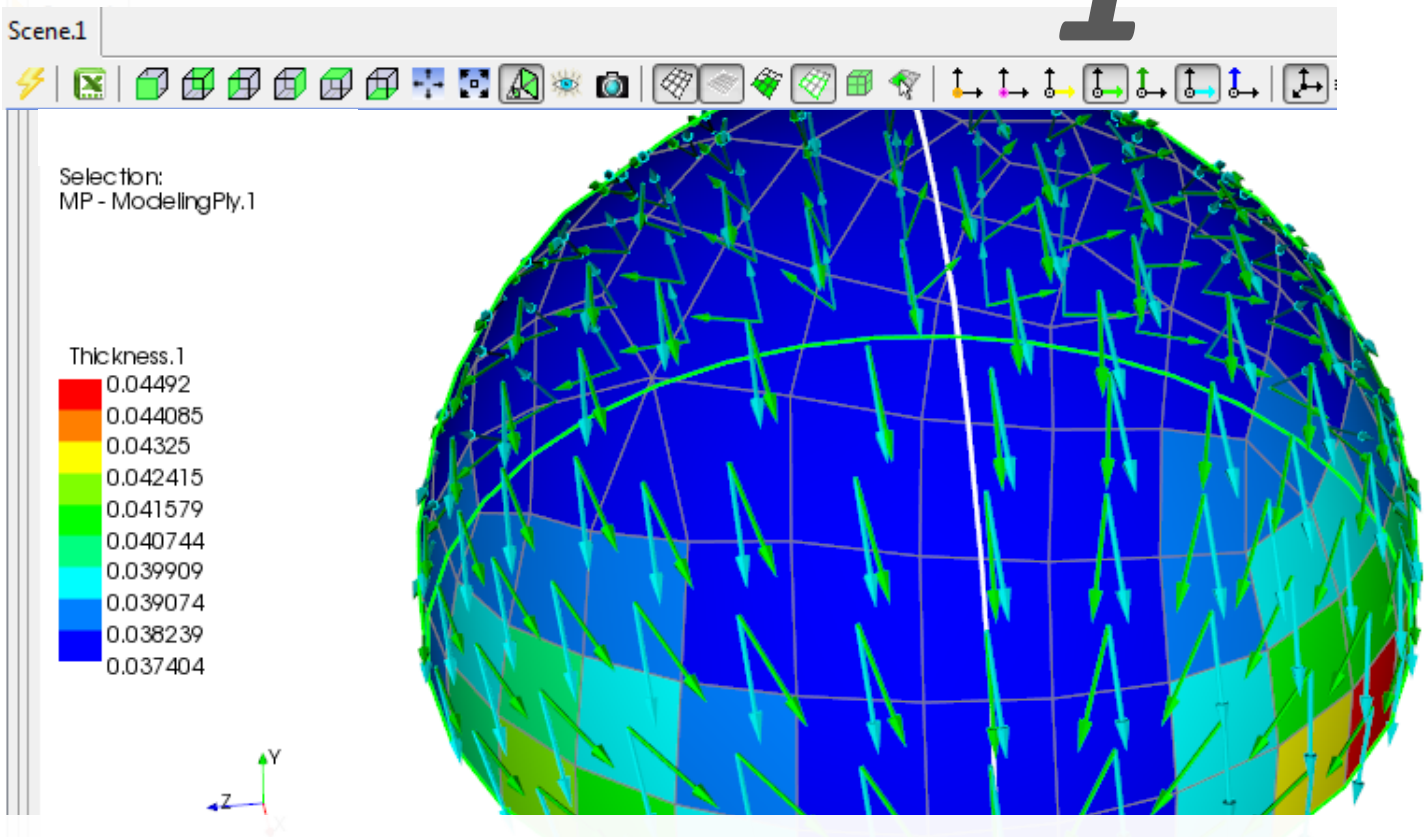
6. Workshop Draping

Show Draped Fiber Direction

1





1. Show Fiber Directions and Draped Fiber Directions
2. Compare the corrected fiber directions to the fiber directions without draping.

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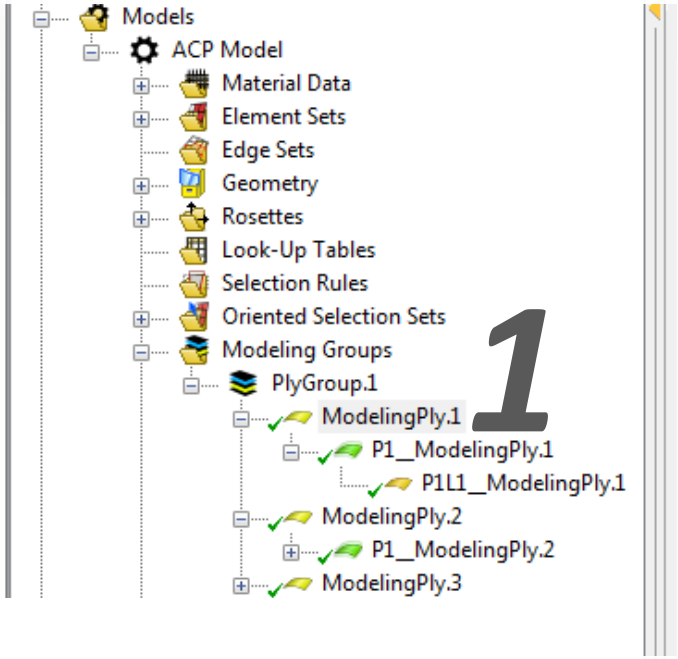
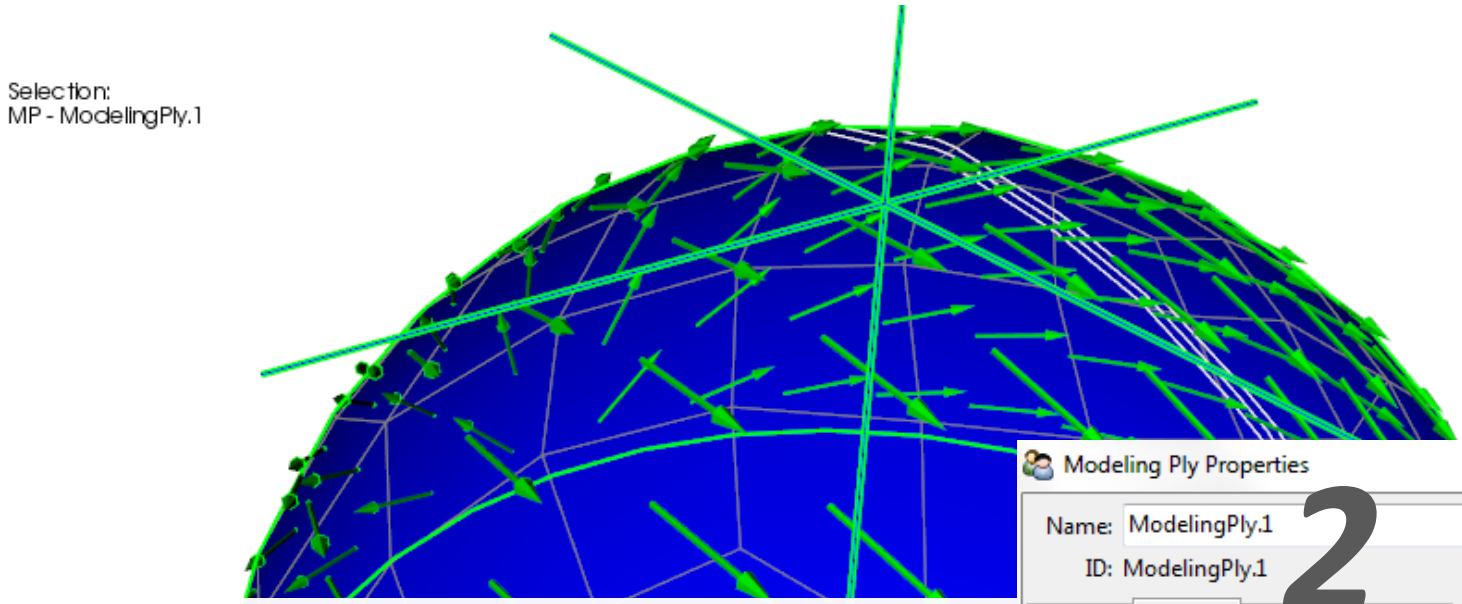
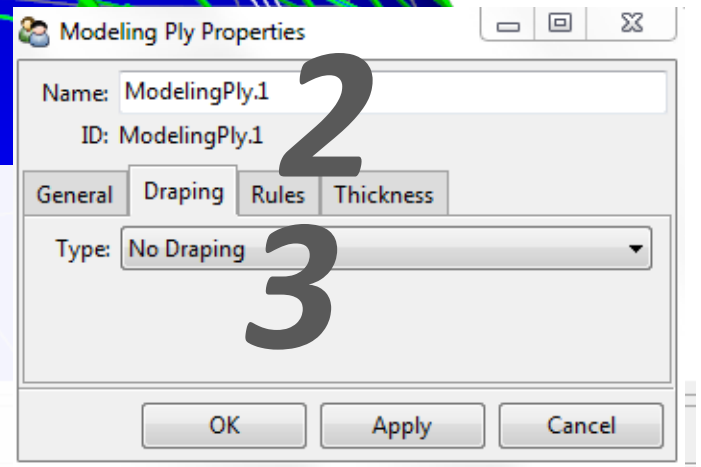
6. Workshop Draping

Calculate Draping based on the Oriented Selection Sets







1. Edit the properties of the first modeling ply.
   (Right mouse button on ModelingPly.1 → Properties)
2. Switch to tab Draping.
3. Turn off draping for this ply, Type: No Draping.

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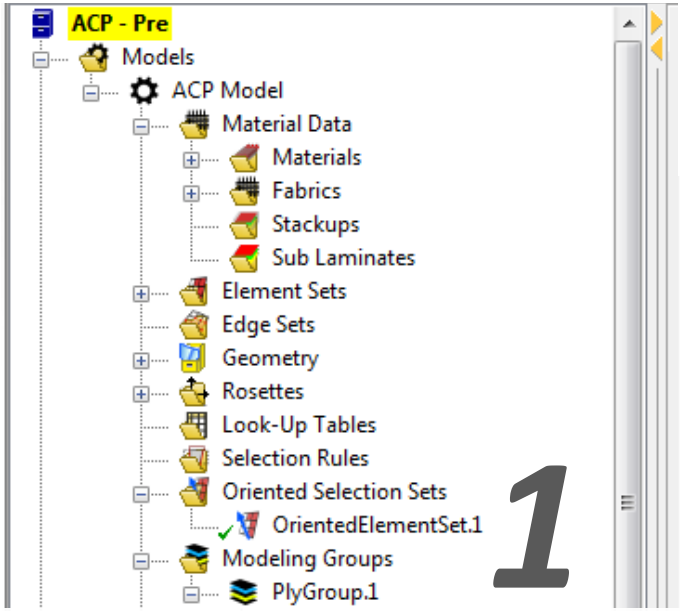
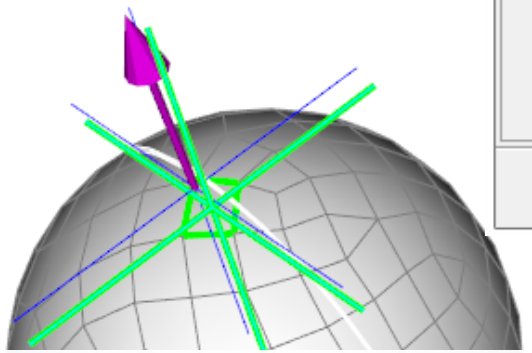
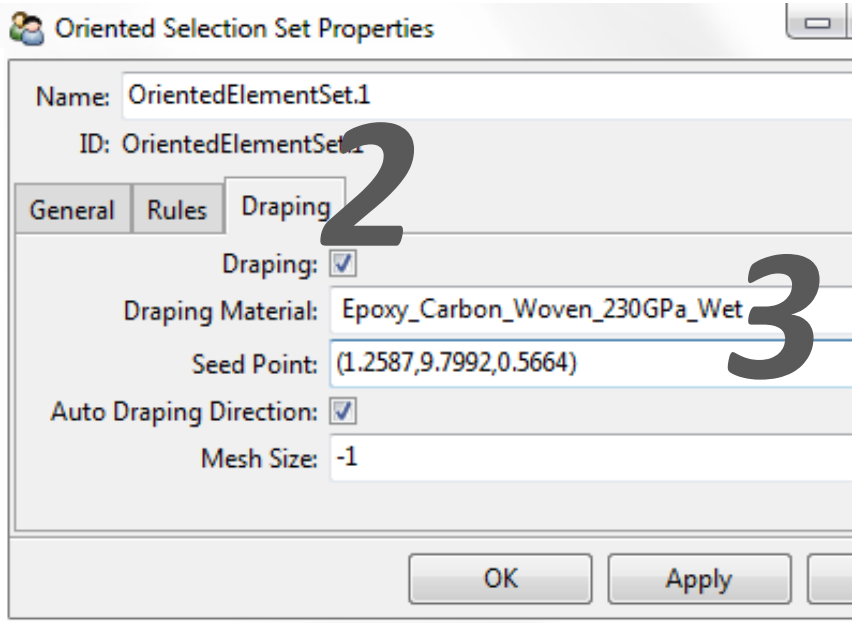
6. Workshop Draping







1. Edit the properties of the Oriented Selection Set.
   (Right mouse button on *OrientedElementSet.1* → Properties)
2. Switch to tab Draping.
3. Select draping and a draping material. Define a seed point at the top of the sphere. Draping Direction and mesh size can be left to the default values.

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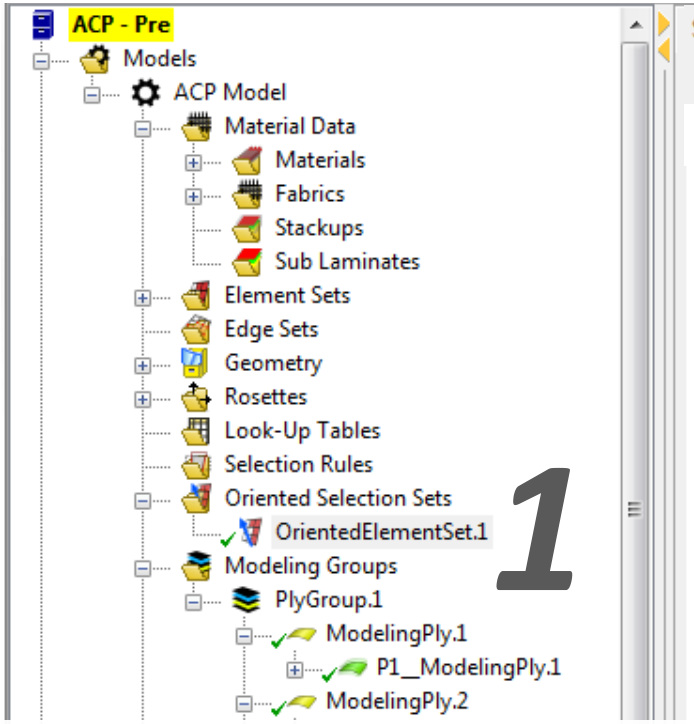
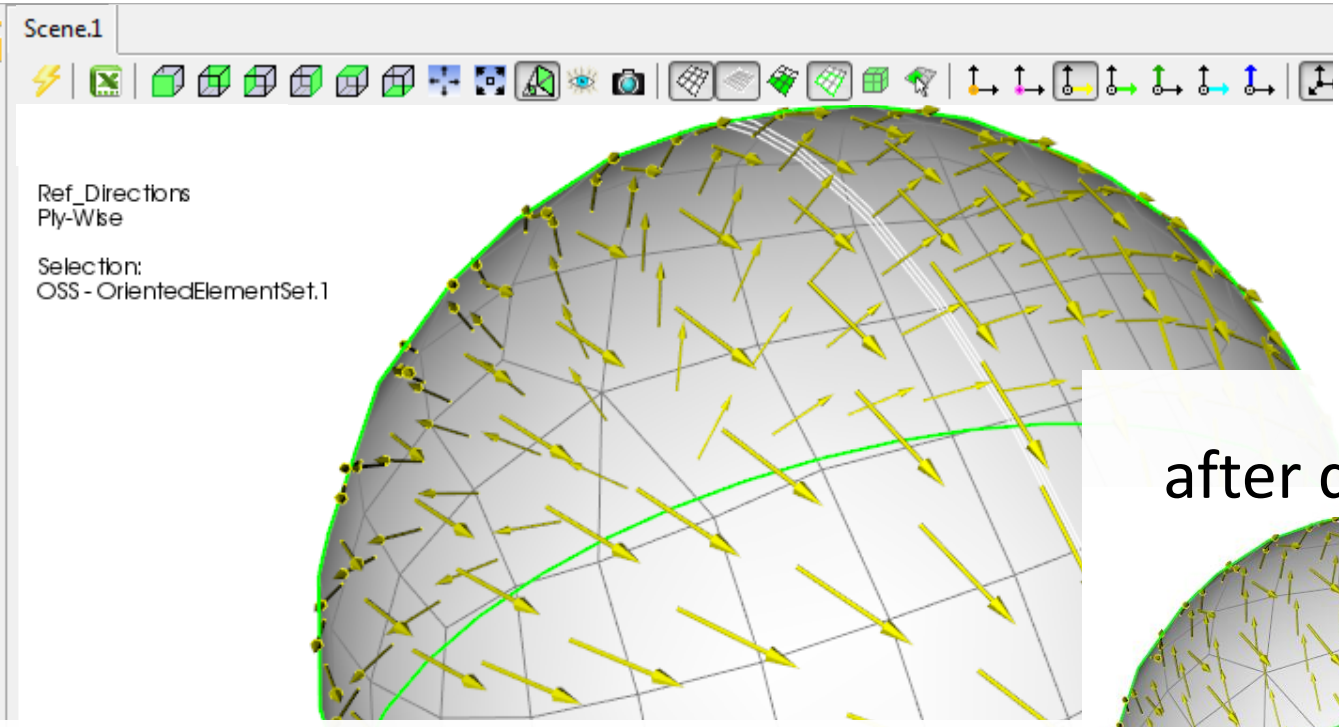
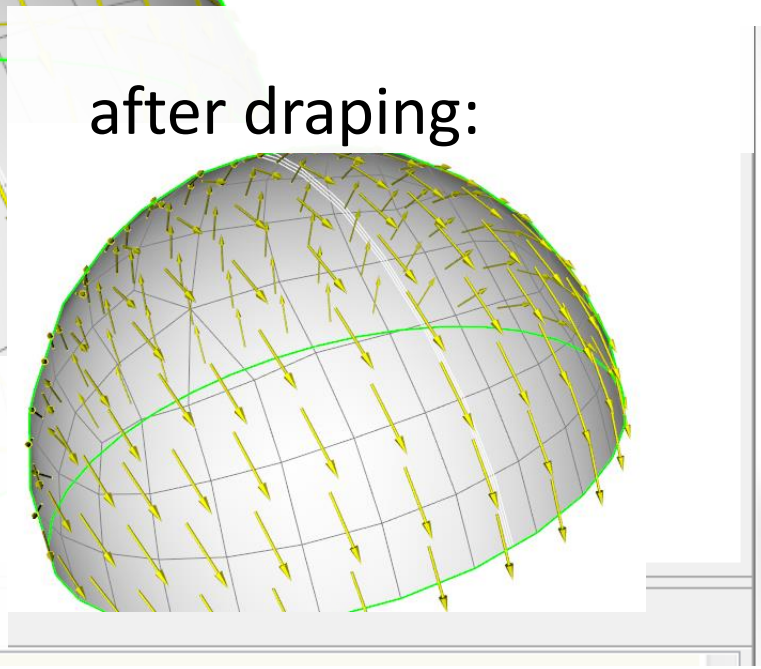
6. Workshop Draping



1





1. Check reference direction for the oriented selection set. Layers based on this oriented selection set are now referring to the reference direction determined using the draping capabilities.

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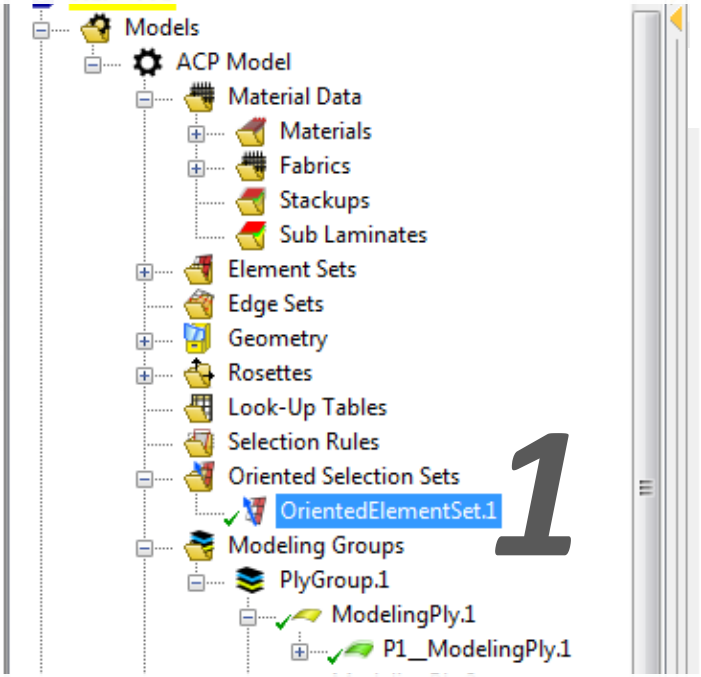
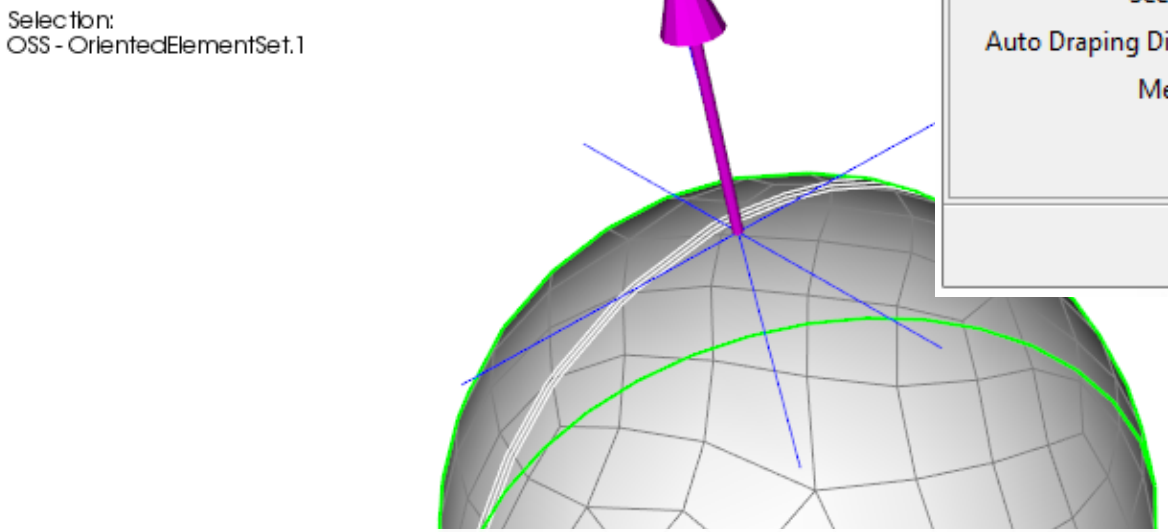
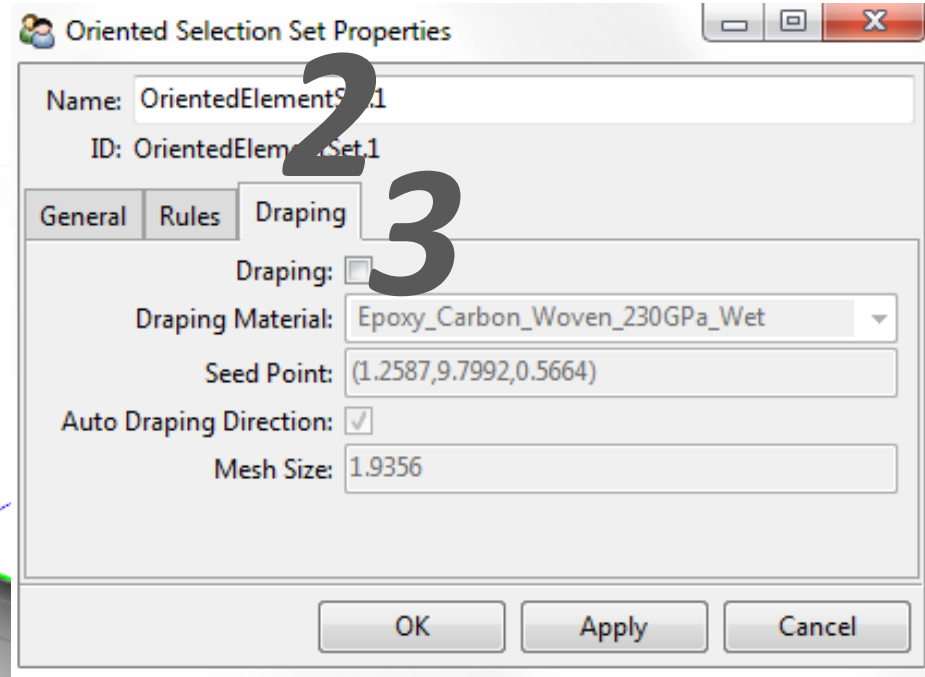
6. Workshop Draping

The effect of the Seed Point







1. Edit the properties of the Oriented Selection Set.
   (Right mouse button on *OrientedElementSet.1* → Properties)
2. Switch to tab Draping.
3. Switch draping off.

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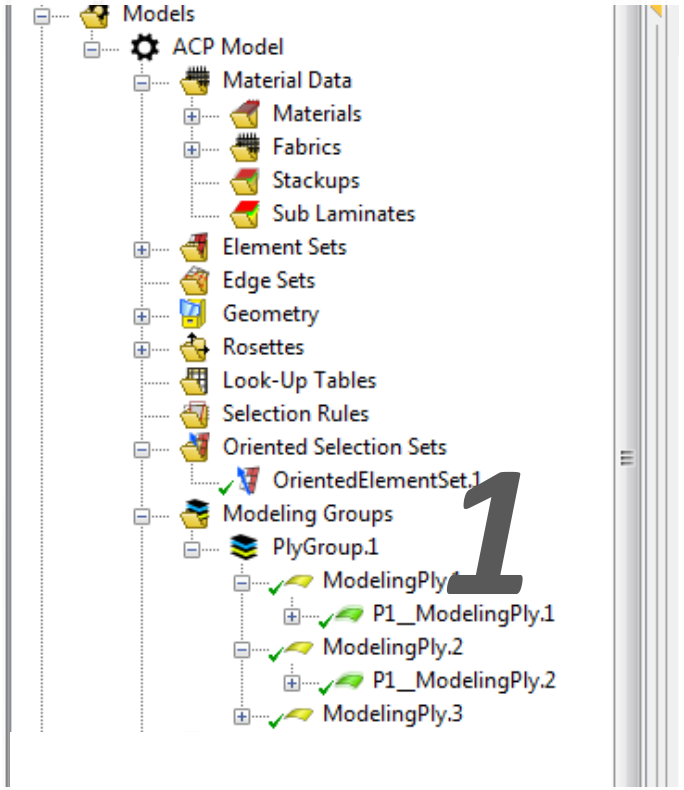
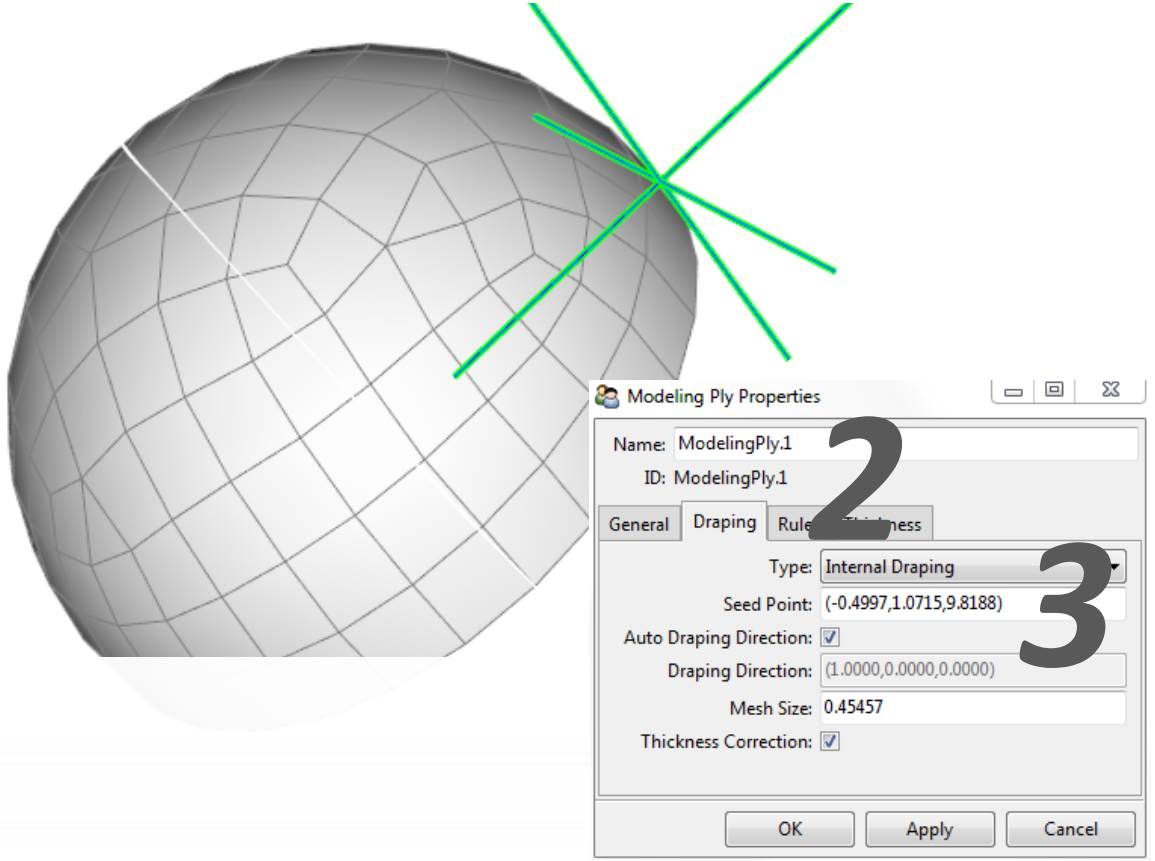
6. Workshop Draping

Calculate Draping





1. Edit the properties of the first modeling ply.
2. Switch to tab Draping.
3. Select a new seed point as shown above.

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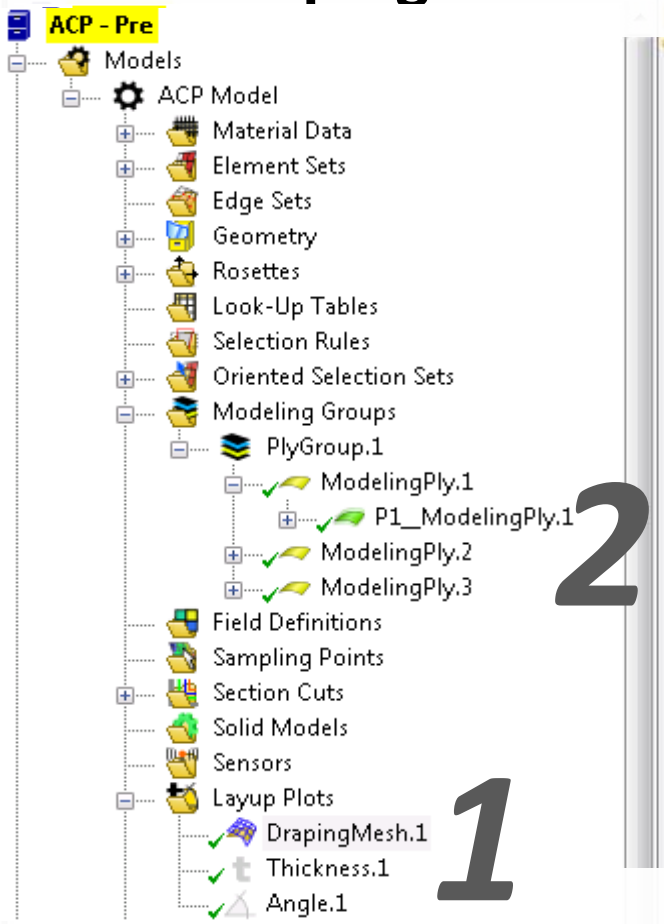
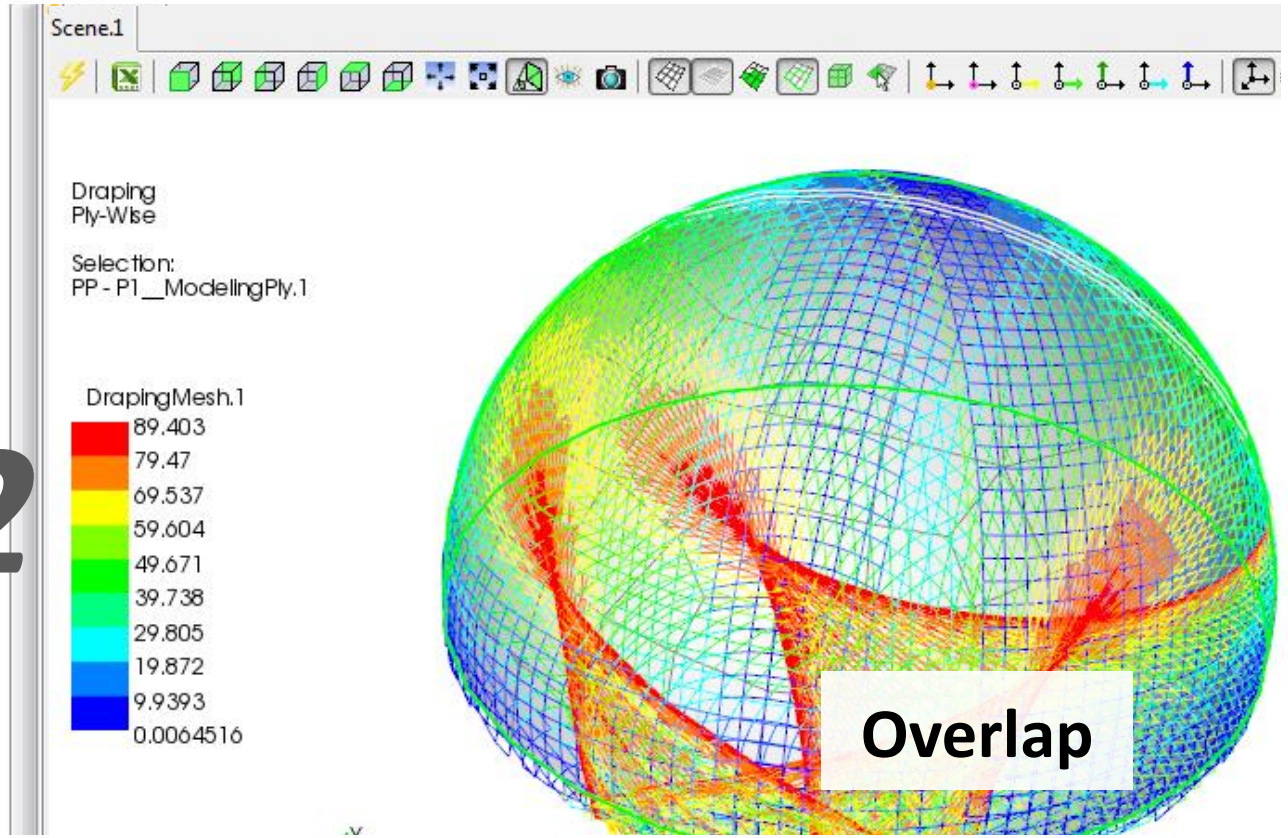
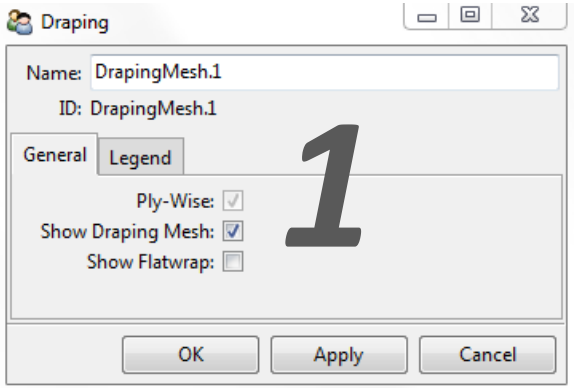
6. Workshop Draping

Show Draping Shear Angle







1. Right-click on Layup Plots in the tree and add Create Draping Mesh and Flatwrap (double click on DrapingMesh.1 and select Show Draping Mesh among the options)
2. Update and select the P1_ModelingPly.1 among the modeling plies to show the average shear (distortion)

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