



ME 733 - CFD

Ansyes Tutorials

Tutorial List:

Tutorial links can be found at the following folder:

<https://drive.google.com/open?id=1ZUvD2FpTo2qJFyAdv77BQ-xLmZ0c2vPQ>

CFD Tutorials

<u>Number</u>	<u>Tutorial Name</u>	<u>Location</u>	<u>Due Date</u>
1	Flow over an Airfoil	Link	10/11/2018
2	Flow over an Airfoil at different angle of attack	Link	10/11/2018
3	Turbulent Flow past a backward step	Tutorial Folder	17/11/2018
4	3D Transonic Flow over a Wing	Link	24/11/2018
5	Vertical Axis Wind Turbine (Part 1) – Steady	Link	1/12/2018
6	Vertical Axis Wind Turbine (Part 2) – Transient	Link	8/12/2018
7	Horizontal Axis Wind Turbine	Link	15/12/2018

Meshing Tutorials

<u>Number</u>	<u>Tutorial Name</u>	<u>Location</u>	<u>Due Date</u>
1	Tee Pipe	Tutorial Folder	17/11/2018
2	Ventilation System	Tutorial Folder	17/11/2018
3	Main Gear	Tutorial Folder	24/11/2018
4	Automotive External Body	Tutorial Folder	1/12/2018

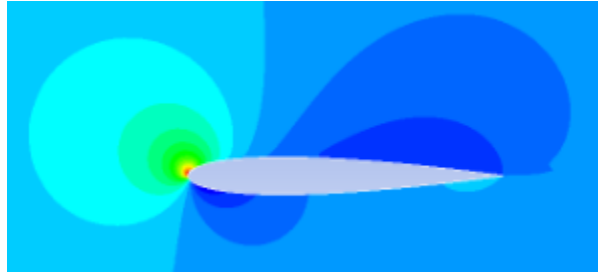
Tutorial Report Requirements

- Each student Should submit the tutorials at the posted due dates.
- Late Tutorials will not be graded.
- The student should follow all tutorial instructions.
- The Report should include the following
 - Problem Description
 - Used Boundary Conditions
 - Pressure and Velocity Contours
 - Comparing with the provided experimental data if provided.

Detailed Description of Tutorials

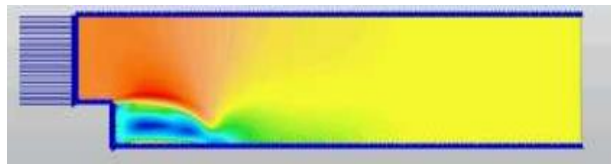
- **CFD Assignments**

1. Flow around Airfoil

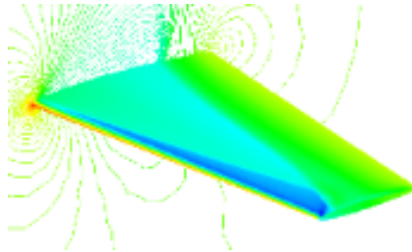


2. Flow over an Airfoil at different angle of attack

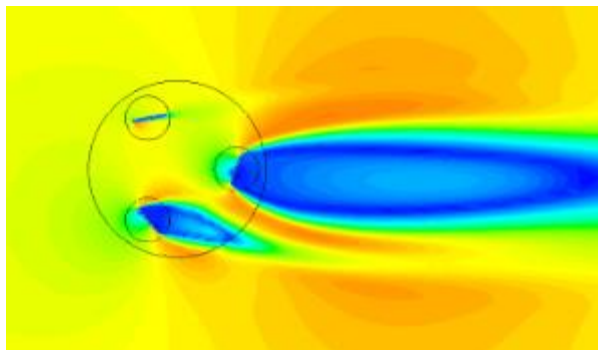
3. Turbulent Flow past a backward step



4. 3D Flow around a transonic Wing

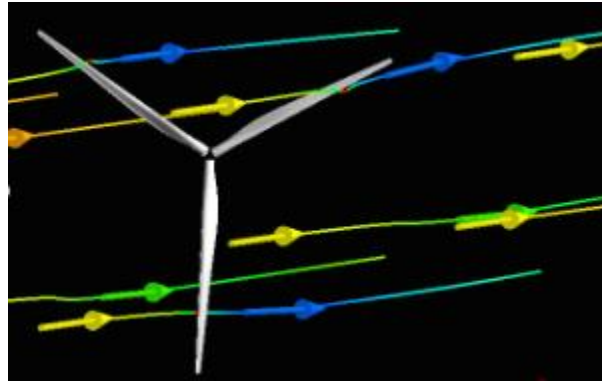


5. Vertical Axis Wind Turbine (Part 1) – Steady



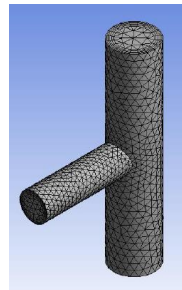
6. Vertical Axis Wind Turbine (Part 2) – Transient

7. Horizontal Axis Wind Turbine

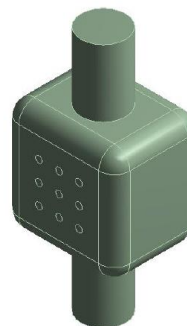


- **Meshing Assignments**

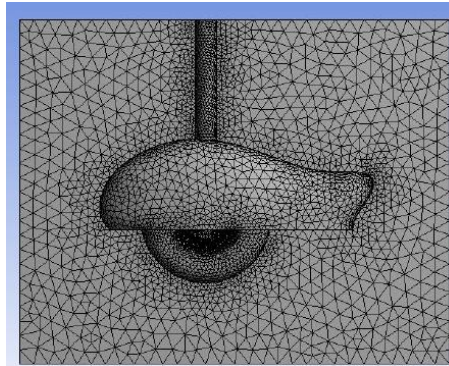
1. Tee pipe



2. Ventilation System



3. Main Gear



4. Automotive External Body

