



Individual Project Meeting Record

Project Title	Design and manufacture of an aerodynamic undertray for Formula Student		
Supervisor	Dr Rob Watson	Student	Dennise Zefanya Tohpati
Date and time	MEETING 15 – 5th February 2021	Location	MS TEAM [ONLINE]

Review of actions from previous meeting


- The first 3D undertray design with bluff body has been successfully analysed using k-e scalable wall function.
- 3D open-flow analyses are still ongoing to find out the trend based on diffuser and inlet angle variables.

Discussion, decisions, assignments

- Discussed the feedback on progress report: reduction on some report section is required due to the amount of data acquired and limited pages, & peer review and proofread are required to increase the quality of the overall report
- The convergence in 3D undertray design was solved with the removal of inflation layer on the moving floor, supervisor suggested that investigation of the type of flow (Couette or Poiseuille) on 2D analysis to justify if the inflation removal is plausible for the undertray case.
- It was found that with additional strakes (fences) on a diffuser created a strong vortex on the outer fences; therefore, it was suggested to have variations in fences height as it gets near the centre to let vortices form more uniform in the inner side of the undertray diffuser.
- Discussed potential collaboration with Will Sherwood (Meng) to get the complete result of the overall car with the front wing and the undertray.

Agreed actions and completion dates

- Plotting and gathering data from all analyses required up to date to be put into the report.
- Continue the 3D undertray analysis with several geometry modifications 1. Reducing the fence's length on the inner side of the diffuser to see how the vortices
- Continue the analysis on 3D Bluff body open flow.
- Start to write the results section for the report and revise several sections of the report based on the progress report feedback.

Date and time of next meeting	Friday 12 th February 2021	Location of next meeting	MS TEAM [ONLINE]
Supervisor signature		Student signature	Dennise Tohpati