Budapest University of Technology and Economics
Faculty of Mechanical Engineering
Department of Fluid Mechanics
http://www.ara.bme.hu/

FINAL PROJECT ASSIGNMENT

Publicly Available

Identification

Name: **Varga Bálint József**			ID: **78987969369**
Code of the Curriculum: 2N-MW0		Specialisation: 2N-MW0-FM	Document ref. number: GEÁT:2024-1:2N-MW0:ZHRP0V
Curriculum: Master Program in Mechanical Engineering Modelling			
Final Project issued by: Department of Fluid Mechanics		Final exam organised by: Department of Fluid Mechanics	
Supervisor: Dr. Suda Jenő Miklós (71958230447), assistant professor			

Project Description

Title	**Analysis of the aerodynamic parameters of the DrivAer generic car model using wind tunnel testing and CFD modelling** A DrivAer járműmodell aerodinamikai paramétereinek elemzése szélcsatorna mérések és CFD modellezés segítségével
Details	1.) Summarise the reference literature on the previous DrivAer studies. 2.) Conclude on the drawbacks of the aerodynamic balance design. 3.) Redesign, calibration and testing of the aerodynamic balance system. 4.) Compare the aerodynamic test results performed in the Blackbird "I" and in the NPL-type wind tunnels using the notchback version of the DrivAer model vehicle. 5.) Design and perform a CFD study of the notchback version of the DrivAer model vehicle. 6.) Evaluate and compare your measurement and simulation results. 7.) Summarise the work in the required document format of the MSc Thesis.
Advisor	Advisor's Affiliation: Dept. Fluid Mechanics GPK BME, 1111 Budapest, Bertalan Lajos 4-6. Advisor: Dr. Balázs Farkas, assistant professor

Final Exam

1st subject (group)	2nd subject (group)	3rd subject (group)	4th subject (group)
ZVEGEÁTNW02 Computational Fluid Dynamics	**ZVEGEÁTNW03** Fluid Mechanics Measurements	**ZVEGEÁTNW08** Building and Environmental Aerodynamics	**ZVEGEÁTNW19** Vehicle Aerodynamics

Authentication

Handed out: 4 September 2023		Deadline: 8 December 2023
Compiled by: Dr. Suda Jenő Miklós (71958230447) Supervisor	Verified by: *Dr. János Vad* (signed) Head of Department	Approved by: *Dr. Gábor Györke* (signed) Vice-Dean

The undersigned declares that all prerequisites of the Final Project have been fully accomplished. Otherwise, the present assignment for the Final Project is to be considered invalid.

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Varga Bálint József