



FINAL PROJECT ASSIGNMENT

Publicly Available

Identification	Name: Marmol Dimitri Paul		ID: 73481992492	
	Code of the Curriculum: 2NAMW0		Specialisation:	Document ref. number:
	Curriculum: Master Program in Mechanical Engineering Modelling		2NAMW0-FM	GEÁT:2020-1:2NAMW0:GC6GXJ
	Final Project issued by: Department of Fluid Mechanics		Final exam organised by: Department of Fluid Mechanics	
	Supervisor: Dr. Joshua Patrick Davidson (71569852589), tudományos munkatárs			

Project Description	Titée	Modelling of a Wave Flume in OpenFOAM Hullámcsatorna modellezése OpenFOAM szimulációs környezetben
	Details	<ol style="list-style-type: none"> 1. Literature survey - surveying and analysing relevant resources of technical literature 2. Geometry and mesh generation <ol style="list-style-type: none"> a. Replicate the geometry of the wave flume from the experiment in Plymouth University; b. Create a mesh for the wave flume; c. Perform a mesh convergence study 3. Moving wall wave maker <ol style="list-style-type: none"> a. Replicate the motion of the moving wall wave maker measured from the physical experiment 4. Wave probes <ol style="list-style-type: none"> a. Create wave probes located at the same positions as in the physical experiments; b. Measure and record the free surface elevation in the simulations 5. Simulations <ol style="list-style-type: none"> a. Single frequency waves; b. Multi-frequency focussed waves 6. Comparison and validation: Compare the results from the simulation against the values recorded in the experiments 7. Reporting: Summarise the work in the required document format of the MSc Thesis
	Advisor	Advisor's Affiliation: -

Final Exam	1 st subject (group)	2 nd subject (group)	3 rd subject (group)	4 th subject (group)
	ZVEGEÁTNW02 Computational Fluid Dynamics	ZVEGEÁTMW03 Flow Measurements	ZVEGEÁTNW11 Open Source Computational Fluid Dynamics	ZVEGEÁTMW19 Aerodynamics and Its Application for Vehicles

Authentication	Handed out: 15 September 2020		Deadline: 11 December 2020		
	Compiled by: Dr. Joshua Patrick Davidson (71569852589) Supervisor		Verified by: <i>Dr. János Vad</i> (signed) Head of Department		Approved by: <i>Dr. Péter Bihari</i> (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. <i>Marmol Dimitri Paul</i>				