



FINAL PROJECT ASSIGNMENT

Publicly Available

Identification	Name: Wermeser Zsombor András		ID: 78892769339	
	Code of the Curriculum: 2N-MW0	Specialisation: 2N-MW0-FM	Document ref. number: GEÁT:2023-1:2N-MW0:CFTOB7	
	Curriculum: Gépészeti modellezés mesterképzési szak			
	Final Project issued by: Department of Fluid Mechanics	Final exam organised by: Department of Fluid Mechanics		
Supervisor: Dr. Horváth Csaba (71949162105), associate professor				

Project Description	Title	Multidisciplinary Design Optimization of Flexible Aircraft with Flutter Suppression Control Rugalmas repülőgép modell multidiszciplináris tervezése és optimalizálása flutter elnyomás szabályozással
	Details	Project A 1. Literature research 2. Determination of the optimal parameter range of the aeroelastic wing model, integration into Matlab / Simulink environment. 3. Setting up a Multidisciplinary Design Optimization (MDO) framework and integrating an active flutter suppression controller into the MDO process. 4. Summary of the results according to the requirements of M.Sc. Thesis Project A., Documentation Project B 5. Parameterization and development of a simplified aeroelastic aircraft model for MDO analysis, implementation in Matlab / Simulink environment. 6. Integration of a flutter suppressive controller into the MDO process 7. MDO analysis for simultaneous optimization of the model and controller design 9. Validation, Documentation, Summary
	Advisor	Advisor's Affiliation: Intitute of Computer Science and Control, 1111 Budapest, Kende utca 13-17. Advisor: Béla Takarics, Senior Research Fellow

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

Authentication	Handed out: 5 September 2022		Deadline: 9 December 2022			
	Compiled by: Dr. Horváth Csaba (71949162105) Supervisor		Verified by: <i>Dr. János Vad</i> (signed) Head of Department		Approved by: <i>Dr. Gábor Györke</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>Wermeser Zsombor András</i>					