CV Evangelos Geber

Personal Information

Family name: Geber
First name: Evangelos - Maximilian
Nationality: Greek - German
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Education

10/2014 – 11/2019 **Studies at „National Technical University of Athens“, Athens, Greece**
Field of study: Mechanical Engineering
Final grade: 8.44 out of 10
Title and duration: Integrated Master’s (300ECTs) - 5 years

9/2011 – 10/2014 **High school education at „Evangeliki Sxoli Smyrnis“, Athens, Greece**
Final grade: 19.5 out of 20

Projects and competitions

03/2019 – 10/2019 **Diploma Thesis:** Computational study of external wind protection techniques
Details: Wind comfort assessment using CFD analysis **(OpenFoam)** and different wind comfort criteria, combined with a 3D analysis approach. Comparison between different heights and widths of the fence, between using a porous and a solid fence to provide shelter and between different values of turbulence intensity in the ABL

10/2016 – 10/2019 **FSAE team of the NTUA: Prom Racing**
I joined the team as one of the first members of the aerodynamics division, helping in the design and construction of the first aerodynamic package. I worked on **3D CAD** models of aerodynamic parts and assemblies with **SOLIDWORKS, CFD analysis** using **OpenFoam**, mesh generation and improvement, turbulence modeling, analyzing flow structures and post processing results with **Paraview**, **track testing** and **wind tunnel experiments** for car set up and correlation with CFD results. Finally I acted as **chief aerodynamicist** and worked on the team’s management.

Race participation and achievements:
2017 FS Austria at Red Bull Ring
2018 FS East at Zalazone
2019 FS Austria at Red Bull Ring and FS Germany at Hockenheimring
2019 **Design Finals** at FS Austria and FS Germany **(3rd and 7th place)**

11/2018 – 01/2019 **Group project** for the course Aeroelasticity and Aeroacoustics
Details: Dynamic analysis of a wind turbine model during different wind scenarios using an in house aeroelasticity **FORTRAN** code and FFT for data processing

10/2018 – 01/2019 **Group project** for the course Aircraft Engine Operation
Details: 1D modeling of a commercial aircraft engine and calculation of its fuel consumption at different operating points using **PROOSIS**

10/2018 – 01/2019 **Group project** for the course Biofluid Mechanics
Details: Simulation of the transient water flow inside a pipe caused by different excitation signals using **ANSYS Fluent** and comparison with experimental data.

10/2018 – 01/2019	**Group project** for the course Flight Dynamics **Details:** Creation of an aircraft model using **XFLR5** and simulation of the dynamic response of the model to a step input using **XFLR5** and **MATLAB**
02/2018 – 06/2018	**Group project** for the course Hydraulic and Pneumatic Systems **Details:** A complete design of a pneumatic tensile test machine using FEA **(ANSYS Mechanical)** and hand calculations for the evaluation of the static and dynamic stress of all components, as well as for an eigenfrequency analysis. Creation of 3D CAD models and 2D drawings with **SOLIDWORKS**
02/2018 – 06/2018	**Group project** for the course Dynamic Straining **Details:** Simulation of a destructive crash test on a steel specimen using **LS-DYNA** and comparison with the experimental data
10/2017 – 01/2018	**Group project** for the course Vehicle Design I **Details:** Design of a bike frame through CAD and FEA using **SOLIDWORKS** and **ANSYS Mechanical** respectively
10/2017 – 01/2018	**Group project** for the course Experimental Fluid Mechanics **Details:** Participation in PIV measurements inside a water tank, wind tunnel testing for turbulence intensity in a wake using a hot wire anemometer and wind tunnel measurements for the aerodynamic forces on an airfoil using pressure taps
7/2017	Scholarship for the "Systematic Product Innovation" summer school program at **RWTH Aachen University** Successful participation with a **final grade: 1.3 (very good)** **Details:** Theory classes in product design and systematic innovation, combined with hands on sessions for innovative improvement of a vacuum cleaner design through CAD and 3D printing. Presentation of the final concept and the design choices that were made
02/2017 – 06/2017	Participation in a group project for the course Environmental Technology **Details:** A case study of the pollutant dispersion caused by a pollution source in the outskirts of Athens based on real life data for the emission rate, geometry of the pollution source and the ground morphology.
02/2016 – 06/2016	Participation in a group project for the course Machine Elements II **Details:** Designing a CVT system with a clutch and differential using FEA **(SOLIDWORKS Simulation)** and hand calculations for the static and dynamic stress of all components. Creation of 3D CAD models and 2D drawings using **SOLIDWORKS**
10/2015 – 01/2016	Participation in a group project for the course Machine Elements I **Details:** Designing and modeling of a speed bump using hand calculations
03/2013	Participation in the Panhellenic competition in Physics
10/2012	Participation in the 1st stage and 2nd stage of the Panhellenic competition in Mathematics
10/2010	Participation in the 1st stage and 2nd stage of the Panhellenic competition in Mathematics

Software knowledge

CAD and CAE:

- Large experience in designing parts and assemblies with **SOLIDWORKS**
- Good knowledge of **SOLIDWORKS Simulation**

Finite Element Analysis:

- Good knowledge of **ANSYS Mechanical**
- Basic knowledge of **LS-DYNA**

Computational Fluid Dynamics:

- Excellent knowledge of **OpenFoam**
- Large post processing experience with **Paraview**
- Good knowledge of **ANSYS Fluent**
- Experience with **Linux**, parallel computing and the use of computer clusters

Other:

- Excellent knowledge of **MS Office**, especially **Excel**, through numerous applications like processing experimental data, solving nonlinear equations, generation of graphs and reports.
- Basic knowledge **MATLAB** and **FORTRAN** through script and code development for fluid dynamics, aeroacoustics and experimental data post processing.
- Basic knowledge of **PROOSIS**, a state of the art gas turbine engine simulation software
- Good knowledge of **XFLR5**

Languages

Languages:	German & Greek	native speaker
	English	fluently

11/2011	Certificate of Proficiency in English (University of Michigan)
05/2010	Certificate of Competency in English (University of Michigan)

Interests and activities

Freediving, football, skiing and painting

Athens, January 2020
Evangelos Geber