europass

Kacper Frelek

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Date of birth: 11/03/2001 **Nationality:** Polish

WORK EXPERIENCE

[01/06/2023 – Current] **Junior Aeromechanic Engineer**

Warsaw Institute of Aviation (EDC)

City: Warsaw | **Country:** Poland

I am responsible for running aeromechanical analyses using GageMap and ANSYS, interpreting the obtained results, and participating in test campaigns. My role also includes preparing the necessary documentation for certification reports, analyzing and post-processing aeromechanical test data, and collaborating with international teams to ensure accurate and reliable outcomes.

[01/02/2022 – 05/2024] **Analysis team member**

Students' Space Association - Rocketry Division

City: Warsaw | **Country:** Poland

I conducted CFD analyses for various rocket components, including the split canards of the FOK Rocket and the nose cone and fins of the GROT Rocket, evaluating their aerodynamic performance and optimizing their designs.

[01/07/2022 – 31/08/2022] **Engineering Apprentice**

The Space Research Centre of the Polish Academy of Sciences

City: Warsaw | **Country:** Poland

I was involved in conducting research necessary for testing, modeling required components in NX, and preparing engineering drawings for the designed parts. Moreover, I worked with thermal vacuum tests, being in a team responsible for proper test setup.

EDUCATION AND TRAINING

[02/2024 – Current] **Master's in Aerospace Engineering**

Warsaw Univeristy of Technology

City: Warsaw | **Country:** Poland |

[01/10/2020 – 06/02/2024] **Bachelor of Aerospace Engineering**

Warsaw Univeristy of Technology

| **Thesis:** Aerodynamic Performance Analysis of Falcon 9 Grid Fins: CFD

In my thesis, I focused on evaluating the aerodynamic characteristics of reentry control surfaces across all Mach regimes. As part of my research, I performed mesh sensitivity studies, developed a simplified CAD model, and conducted CFD simulations for both 2D and 3D structures. Additionally, I compared the results obtained from these simulations and carried out post-processing in ANSYS Post to analyze the aerodynamic behaviour comprehensively.

Impinging Jet CFD analysis in Ansys CFX for Framatome

City: Warsaw | **Country:** Poland |

Certificate of course completion - fundamental modelling of single 3D objects and assemblies, basics of drafting in the NX system

Siemens Industry Software

City: Warsaw | **Country:** Poland |

Certificate of course completion - Geometry, mesh and introduction to flow analysis based on Ansys programs.

Warsaw Univerisity of Technology

Certificate of course completion - Basics of Altair HyperMesh

Endego, Altair Channel Partner

LANGUAGE SKILLS

Mother tongue(s): Polish

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

NX Siemens | Ansys | Matlab | Hypermesh-Hyperworks | Simulink | Microsoft Office | GageMap | Python

HOBBIES AND INTERESTS

Interests

1. Bodybuilding
2. Learning new programmes
3. Aerodynamics
4. Travelling