

Master Thesis – Analytical preditctions of Cavity Fluid Instabilities (30 credits/20 weeks – 1

student)

About us

GKN Aerospace is the world's leading multi-technology tier 1 aerospace supplier. With 55 manufacturing locations in 15 countries, we serve over 90% of the world's aircraft and engine manufacturers. We design and manufacture innovative smart aerospace systems and components. Our technologies are used in aircraft ranging from the most used civil aircraft to the world's advanced 5th generation fighter aircraft and the Ariane orbital rockets used by ESA.

Project Background

The occurrence of Cavity Fluid Instabilities (CFIs) in turbines has a potential critical failure mode and consequently the turbine design methods aspirates to prevent them. Currently, GKN is working on improving the simulations models used to predict the CFIs analytically. Therefore, we are looking for a master thesis student who would be interested in contributing to this development. The thesis is suitable for a student who has a passionate interest in CFD analysis and enjoys working with complicated physics.

Assignment Description

- Literature study about CFIs
- Deepen understanding about CFIs and how to predict them analytically
- Working with transient CFD simulations and meshes
- Documentation of results

Qualifications

Student in the final year of their M.Sc. studies in the field Mechanical or Aerospace engineering with an interest in fluid mechanics. It is meritorious to have previous experience using CFD software such as CFX or Fluent, using mesh software such as ANSYS, ANSA or ICEM as well as programing experience using Matlab or Python. Due to export control, only students with Swedish or EU citizenship are eligble for admission.

Apply by

Send your resume and cover letter to:

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Last date for application is 2023-12-31 but interviews will be held continuously so the position can be filled prior to the final application day.