Model Based Development Engineer - Powertrain

Location : *Zaventem*

Team/division description

Our client works in the automotive sector and his Technical Center (R&D) in Europe is responsible for the planning, development and production of attractive, superior quality cars matching European market requirements. R&D aims to strengthen our client's image in Europe.

The Model Based Design department is responsible for investigating and pre-development through simulation activities of European technology which can be implemented in powertrain system to reduce emission, fuel consumption, cost, weight in our client's vehicles as well as improving their performance.

Your project

The complexity of the vehicle development process has increased significantly the last decade. A modern vehicle system has to respect traffic and environmental restrictions by fluently integrating all its different vehicle modules. The integration and selection of this wide assortment of propulsion possibilities requires the implementation of a virtual approach, to evaluate drivetrain performance in early development stages.

This project is to model and predict drivetrain performance in the domain of durability and NVH. Supported by ongoing academical research and state of the art FE software, virtual analysis of drivetrain components and systems have to be made.

Your tasks

- To develop modelling and evaluation tools: standardizing the virtual development process.
- To accordingly modify existing drivetrain models: increasing functionality and prediction quality.
- To implement multi-objective optimization algorithms: targeting a balanced vehicle performance.
- To analyze simulation and measurement data: evaluating the reliability and extracting the trends.

Profile

- Master degree in mechanical engineering.
- Five years of professional experience in FE numerical modelling.
- Structural Analysis. Expert level (Nastran, Abaqus,…)
- Acoustics, NVH. Working proficiency (Actran,…)
- Tribology, CFD Experience (OpenFOAM,…)
- Numerical computing. Strong working proficiency (MatLab, Python, Octave, …)
- Basic knowledge of drivetrain mechanics and vehicle propulsion is essential.
- Experience in design of experiments is a strong advantage.
- Able to work in an independent way with an output minded mentality.
- Fluent in English, any other European language is a plus.
- Owner of a driving license is preferred