
Job Description – Flight Dynamics & Simulation Engineer

MGI Engineering Ltd is looking for a Flight Dynamics & Simulation Engineer to join our highly skilled team to deliver cutting-edge solutions in the aerospace, automotive, motorsport, marine and defence sectors. MGI Engineering is accelerating the creation of technologies towards a net carbon zero future.

Founded in 2003 by our CEO Mike Gascoyne, MGI Engineering has circa 40 full-time engineering staff based in Witney, Oxfordshire, delivering innovative technology solutions to wider mainstream and newly developing industry sectors. We are a very dynamic team with many exciting clients and projects. We pride ourselves on having a can-do attitude.

The technical team leverages its extensive experience in the F1 industry to deliver customised, highly innovative solutions to meet our client's specific requirements within different sectors. Our DNA is rooted in extensive, fast-paced R&D development, on-time and within-budget delivery, and reliance on a trusted international network of partners and specialists. We believe in sustainability, mobility and reusable energy technology across all our supported sectors.

Job Summary:

The ideal candidate will be a versatile engineer skilled in mathematical modelling and simulation of flight dynamics for aircraft, space vehicles or motorsport.

Reporting to the Head of Calculations, your role will include the following key responsibilities:

- Mathematical Modelling: Development of mathematical models for vehicles and aircraft.
- Concept Validation: Building and executing simulations to guide and validate initial concepts and designs.
- Dynamic Analysis: Analysing and interpreting customer requirements to define performance envelopes.
- Correlation: Interaction with Aerodynamic and Stress departments to ensure full compliance with concept intent through validated simulation data.
- Tooling Development: Continuous development of simulation processes and best practices. Also aiding CFD and stress teams with automation and coding.
- Validation Support: Supporting the Test team as required to explore and validate technical solutions using real-world data.
- Attribute ownership: Own dynamic, weight, inertia and load attributes for different programs.

Skills & Experience Required

- Education: Educated to a minimum of HND level in Mechanical Engineering, Aerospace Engineering, or equivalent.
- Core Software: Proficiency with Excel, MATLAB and coding.
- Technical Knowledge: Ability to apply physics knowledge to solve fundamental engineering solutions.
- Communication: Ability to communicate complex ideas and simulation results so that they are understood by different audiences.
- Language: Fluent in spoken and written English.

Skills & Experience Preferred

- Coding Skills: Ability to code in C and Python to support model automation and deployment. Experience with implementing collaboration toolsets.
- CAD Skills: Experience with NX or 3DX would be desirable.
- Experience with piloting drones or aircraft would be a bonus.

Benefits:

- Competitive salary
- 25 days holiday + bank holidays
- Flexible benefits scheme
- Free Breakfast
- Birthday day off
- Flexible working hours

Contract hours:

Full time, permanent

Primary location:

Witney, Oxfordshire, onsite

Salary:

Competitive