INEOS BRITANNIA

Job Title:	Performance and Simulation Engineer
Reporting to:	Head of Performance
Contract Type:	Full time, Fixed term contract to October 2024
Location:	Brackley, UK
Start Date:	ASAP

TEAM OVERVIEW

Backed by INEOS Founder and Chairman Sir Jim Ratcliffe and led by the most successful Olympic sailor of all time, Sir Ben Ainslie, **INEOS Britannia**, who has joined forces with the **Mercedes-AMG Petronas F1 Team**, as the Challenger of Record for the **37th America's Cup**. The British team, who will race for the Royal Yacht Squadron, was formed in 2014 before joining forces with INEOS in 2018 and is now embarking on their third consecutive campaign to finally bring home the Auld Mug, the oldest trophy in international sport. A trophy that Britain has never won.

Everyone in the team from the ground up is rooted in the same belief, that we are here to win and our laser focus extends to the whole of the support team, which needs to cope with the challenges of a three year campaign.

ROLE OVERVIEW

High-fidelity performance simulation and optimisation tools are fundamental for successful performance design of the racing yacht. The Performance and Simulation Engineer will support the deployment, development, and validation of these tools, providing simulation capability to all other technical groups for design iteration in line with the development direction set by the Chief Designer.

CONTRACT DETAILS

This role is a full time, fixed term contract through to October 2024. You will be based in Brackley, UK and some international travel may be required.

KEY RESPONSIBILITIES

- To deploy the suite of static VPP and dynamic simulation tools at the team's disposal and to contribute to their continuous advancement, improving the Team's ability to analyse and develop yacht performance
- To assist in the further development of the optimisation tools, both with mathematical approaches and in code creation.

- To support the assessment of performance discovery proposals from Design and Fluids groups using the appropriate simulation tools and analyses to aid holistic boat performance development
- To support the assessment of current performance relative to our targets and (where relevant) competitors enabling us to correctly target performance development.
- To monitor and assess correlation of the boat and sub-system models, ensuring validity of simulation results.

CANDIDATE PROFILE / EXPERIENCE REQUIRED

- Mechanical engineering degree or other relevant degree required (preferably masters, 2:1 minimum grade)
- Ability to work collaboratively in interdisciplinary teams, to ambitious deadlines and work autonomously.
- Highly motivated and focused self-starter with excellent communication skills.
- Experience with modelling, simulation, and analysis projects and familiar with optimisation techniques and mathematical tools such as automatic differentiation, response function / surface fitting etc.
- Experience in mathematical programming, for example Python, MATLAB, C++, Fortran, Modelica, etc.
- Knowledge of hydrodynamic modelling, for example lifting line, structural models, fluid structure interaction, dynamic models.
- Marine background is preferred but not required