# Overview of the Company

INEOS, one of the world’s largest manufacturing companies, has formed INEOS TEAM UK to challenge for the 36th America’s Cup to be held in New Zealand in 2021. INEOS has partnered with Sir Ben Ainslie, the most successful Olympic sailor in history, to skipper INEOS TEAM UK.

INEOS TEAM UK will use its world class technologies and manufacturing know-how to develop an internationally competitive race boat, giving the best possible chance to bring the oldest international sporting trophy and sailing’s premier contest back to Britain for the first time.

# Job: Embedded Systems Engineer

As part of the Systems Group, your role will be to develop the embedded / electronic control system for the hydraulic and power-electrical systems on our race boat (for daggerboard, rudder, wing & jib actuation).

Responsibilities will include:

* Control architecture - definition of the control layout of the boat (controllers, communication busses, HMI, hierarchy, component selection). Design of software architecture for sailability, robustness, and ease of development.
* System Architecture - working with the wider systems team and design team to ensure that our hydraulic & electrical component sizing, mechanical design, schematic layout, and software control strategy are joined up and will work effectively as a system.
* Analysis & Simulation - up-front simulation of the systems and control strategies using Simulink/Simscape. Use of these simulations for SIL and HIL rig development.
* Embedded Code - Writing control code for all parts of the system in C, Simulink, and other similar packages.
* Calibration and setup - commissioning and calibration of the system on our rigs and boats.
* Testing and development - development of new testing methods, notably SIL & HIL, running tests on boats and rigs to develop the system - including planning, execution, analysis & reporting.
* Coding standards and good practice - you would be responsible for defining and developing our processes, standards and tools to ensure our software and calibration are robust and reliable.
* Management of partners - we work closely with an external consultancy in this area. Your role would include working alongside them and managing their workload (we anticipate a work-split with them in this area).

We are looking for an experienced, intelligent, professional engineer, with particular attention to the following personal attributes:

* Intelligent and technically sharp - high grade MEng or similar level qualification from a reputable university.
* Experience:
	+ Designing and commissioning performance-critical electrical and / or hydraulic control systems in a similar field - e.g. Automotive, Aerospace, or Marine.
	+ Writing and calibrating embedded code - ideally both in C and Simulink.
	+ Writing plant-model simulations in a physical modelling tool (such as Simulink, Dymola, Amesim or similar)
	+ Whole-system understanding: including electrical, hydraulic, control, calibration, and mechanical aspects.
	+ Electrical / electronic experience would be useful but is not vital.
* High standard of care and attention to the quality of your work - including good practice record keeping, documentation, standards / conventions, and source control.
* Mature, responsible, autonomous, team player - capable of leading development projects.
* Experience of sailing is not required.

### Other Duties & Information

Flexible working hours and the ability to work well under pressure are both central to this role, along with excellent interpersonal and communication skills. We are a small team, and at busy times you may be asked to help support other areas of work within the design team.

You will be predominantly based in Portsmouth, UK. However, travel may be required, this might include extensive periods of time spent abroad.

This is a full-time fixed term contract until March 2021.

Interested individuals should submit a copy of their CV and a covering letter to Joanna Despard, HR Manager at INEOS TEAM UK to recruitment@ineosteamuk.com before the closing date of 1 August 2018.