



## DRIVING THE FUTURE OF ELECTRIC VEHICLES

We are the world leader of in-wheel motors for passenger cars, light commercial vehicles and future transport solutions.

Protean Electric is an automotive technology firm with over 150 talented people globally. Our mission is to drive sustainable transport through innovation, and we are the imagination behind vehicles that travel further, perform better and use fewer components.

We believe that freedom of ideas, integrity of response, desire to improve, and collaborative thinking drive innovation. Joining Protean means working with talented experts across the organisation who value your ideas, empower you to make a difference, and encourage you to challenge yourself and others.

## Power Electronics Research Engineer

Farnham, UK

### The Role

We are seeking the right individual to join our Advanced Motor Research team.

### Main Duties & Responsibilities

The Power Electronics Research Engineer works as part of the Advanced Motor Research Team (AMR) to innovate, design, test and analyse with the goal of ensuring that Protean's products are the best on the market over the long term.

### Reporting, Location & Travel

This role reports to the AMR Manager and is based in Farnham, Surrey with an occasional requirement for national and international travel.

### Key Responsibilities

Responsibilities include, although are not limited to the following:

- Generate ideas for improvements to Protean's custom power electronics system for its in-wheel electric motors
- Develop, test and analyse design improvements
- Develop high-level concept designs to support feasibility work with prospective customers;
- Develop simulation models and environments for power electronics systems and promote use within Protean

Cont/...

### Key Responsibilities Cont/...

- Interface with external research establishments
- Actively participate in international conferences and meetings
- Build and maintain relationships with leading suppliers of power electronics components to ensure good knowledge of relevant technology developments

### Relevant Skills & Behaviours

We value and measure ourselves against the following 'Best-Self' Behaviours:

- Pioneering
- Driven
- Tenacious
- Collaborative
- High Integrity
- Responsible

Successful candidates should be able to demonstrate the following relevant skills and behaviours:

- Research and development
- Analysis of experimental data
- Technical leadership
- Accuracy and attention to detail
- Presentation skills
- Experienced in using PLECS, MathCAD, Simulink, Altium

### Relevant Knowledge & Experience

Candidates should assess their suitability against the following essential and/or desirable relevant knowledge and experience:

#### Essential:

- Design and analysis of inverters for electric motors
- IGBT & Wide band-gap power devices
- Electrical/electronic thermal modelling and simulation

#### Desirable:

- Phd qualified
- Experienced at working in a laboratory environment
- Previous experience of technical innovation
- Test, evaluation and life testing of power electronics systems
- Electronics cooling system design
- Designing to relevant legislation, standards and guidelines
- An understanding of motor control
- An automotive OEM or tier 1 supplier background
- Design of electronics for vehicle powertrain systems
- Familiar with DFMEA
- PCB design



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## Employee Benefits

In return for a rewarding and fulfilling career, all Employees can look forward to receiving a competitive salary, plus a number of additional employee benefits:

- **Core hours:** we offer a flexible approach to working hours, with core hours available to all Employees, requiring them to be in the office between 10:00 and 16:00 each day, from Monday to Friday. This provides Employees with the flexibility to start work, and finish work at a time that is convenient to them providing a little more freedom to take into account the journey to work and family commitments.
- **Performance Bonus:** Employees are eligible to receive a discretionary bonus of up to 15% of annual salary; this is paid annually and is subject to the company meeting its agreed performance targets.
- **Life Assurance:** Employees are automatically enrolled into the company's Life Assurance scheme; this provides the sum of four times annual basic salary in the event of death during employment.
- **Pension Scheme:** Employees are automatically enrolled into the Company's Group Personal Pension Scheme, with the company matching contributions from a minimum of 5% up to a maximum of 7%.
- **Private Healthcare:** subject to completion of probation, Employees, their partners and dependents, are able to join the company's private healthcare scheme with BUPA, in addition to an accompanying cash plan with BHSF.
- **Learning & Development:** Employees are encouraged to continue their career development with a variety of training courses and development opportunities available to them, including the offer of learning Mandarin.
- **Relocation:** we are able to offer a relocation package to assist Employees and their families when relocating to within a designated distance/duration from the company's offices.

Full details of the Employee Benefits are available upon request, or will be made available on provision of an offer of employment.

Should you wish to apply for this role, please e-mail your CV, covering letter and salary expectations to: [ukjobs@proteanelectric.com](mailto:ukjobs@proteanelectric.com) – please be sure to **quote the full Job Title in the subject line** and read our Privacy Notice.

Thank you for your interest, we wish you every success with your application.

