



Job Title: Senior Research Engineer
Location: Wrexham Technology Park
Salary/Package: Competitive Salary + Medical benefits
Vacancy Type: Permanent

Company Background

Motor Design Limited (MDL) is the developer of Motor-CAD, the most complete and integrated electrical and thermal motor design software. As world leaders, they provide advanced tools and engineering services for the design of electrical machines. MDL software is distributed worldwide. Their clients include major manufacturing companies in the automotive, aerospace and industrial sectors like Daimler, BMW, JLR, BAE Systems, Siemens, ABB and GE.

MDL's expert knowledge is used to design electric machines on many cutting-edge research and innovation projects; including electric and hybrid vehicles, aerospace components and wind turbines.

To support their growing software business, MDL is looking to recruit a Senior Research Engineer.

Vacancy Description

As a recent PhD graduate in the field of electric motors, you will join a growing and dynamic team working on the cutting edge of research and development. Reporting to the Head of Engineering, you will work on the design, modelling and analysis of multi-physics aspects of electrical machines, and also get the opportunity to broaden your knowledge in modelling system interactions with inverter and/or mechanical system. We are constantly developing our software, and you will work on a range of cutting-edge research projects with leading academic and industrial partners, providing plenty of opportunities to develop new methods and processes.

- You will be a self-starter, responsible for managing your own tasks and work collaboratively.
- You will mainly work on cutting-edge research projects to design or analyse electrical machines, and work on the development of new modelling methods and techniques.
- You will have the opportunity to expand your expertise to learn about a range of motor technologies, system interactions with the inverter and/or mechanical systems, and a range of modelling techniques.
- You will be involved in the development and testing of the Motor-CAD software and the implementation of new features.
- You will also assist in the support and training of engineers using the newly developed features in Motor-CAD software.

- There are opportunities for international travel to IEEE conferences, industry seminars and customer visits.

This is an excellent opportunity to utilise your engineering skills to make a big impact in electric motor design and sustainable clean energy products.

Job Description

Your tasks may vary based on the priorities of the business. Main responsibilities will include:

1. Development of modelling techniques and design methods for electrical machines.
2. Development of modelling techniques to analyse system interactions, i.e. inverter modelling and/or bearing and gearbox modelling.
3. Design of electrical machines and modelling of existing machines.
4. Working with experimental data to compare against modelling results.
5. Writing technical reports, papers and presentations.
6. Development of technical materials, such as presentations, papers and tutorials, and presenting of technical content at project meetings, conferences and seminars.
7. Use of other engineering software's such as Ansys Maxwell & Fluent.

Skills Required

Essential:

- A PhD in electrical or mechanical engineering or an MEng/MSc and minimum of 3 years relevant experience working with electrical machines and/or power electronic drives for automotive or aerospace.
- Experience in electrical machine design using electromagnetics, thermal and/or mechanical modelling
- Experience with FEA modelling (e.g. Motor-CAD, FEMM, Ansys Maxwell, JMAG etc.)
- Experience with programming (e.g. Python, Matlab etc)
- A professional approach towards work relationships and customer engagement
- Good written and verbal skills in English
- Competent in using Microsoft office or similar
- Self-motivated and can manage one's own workload
- A passion for creating something new and exciting

Desirable, but not essential:

- Experience with customer engagements and building relationships
- An understanding of working with large engineering organisations

Contact:

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