

# Control Engineer

## Náplň práce

The Control Engineering role is to conceptualise and design primarily modelled solutions that can be realised in practical real time solutions to meet the requirements of the projects. The control engineer is required to determine the feasibility of cascaded requirements, deriving known or new concepts from first principles, and validating through demonstration using Model based design tools in desktop modelling and finally realising and proving with a physical test. You will work closely with other engineering disciplines to design and develop appropriate solutions within the time and cost budgets of the project. The role includes the specification and execution of appropriate tests to verify the success of the developed systems.

## Responsibilities

- Develop & Maintain control algorithms for use in a range of state of the art power electronics of multiple architectures, namely multi-phase inverters and DCDC converters. Day to day activities will include optimizing the control systems of tractions inverters for machine control - typically Synchronous permanent magnet, and Asynchronous machines.
- Use of proven design methodologies to develop elegant efficient solutions using analysis of control system design & modelling to drive subsystem component optimisations and safety driven redundancy requirements, to meet the project requirements.
- Work closely with other engineering disciplines to develop physics based analytical tools to be translated into desktop models for proof of concept, yielding a system design specifications and algorithms that translate to realtime embedded code.
- Support the system architecture definition and interact with other design disciplines ensuring the needs of the control system design are met.
- Measurement and calibration of system functions to comply with project requirements. Complete sign-off procedures for vehicle algorithms, calibrations and final product testing. Undertake system and vehicle development and problem-solving within tight timescales.

## Profil kandidáta

### Essential:

- Degree-qualified in a relevant science or Engineering discipline, preferably Electronics or Controls Engineering.
- Core understanding and proven experience developing & maintaining control algorithms for Permanent Magnet Synchronous electric Machine, ASynchronous electric Machines, and associated machine control functions.
- Core understanding and proven experience developing & maintaining control algorithms for power electronics specifically high voltage



ID pozície  
**REF44825D**

Pracovná oblasť  
**Strojárstvo**

Miesto práce  
**Lichfield**

Úroveň vedenia ľudí  
**Leading Self**

Flexibilita  
**Hybrid Job**

Právnická osoba  
**CES Ltd**

inverters / DCDC converters and their associated control functions.

- An ability to consider problems and identify solutions from the system level.
- Good test and analysis skills.
- Good written & verbal communication skills.
- Proficiency with standard office tools: Microsoft Word, Excel, PowerPoint etc.
- A team player with the additional ability to work alone unsupervised.

#### **Desirable:**

- Experienced in a simulation, analysis & development environment - model architecture definition, tool-chain setup, model and boundary condition set up, data processing and reporting.
- Proven experience in a similar Control Systems Engineering role - previous design consultancy experience is also highly desirable.
- Proven experience in Control system calibration, Simulation & test bench.

#### **Čo ponúkame**

##### **What we offer:**

- Competitive salary
- 25 days holiday plus statutory holidays
- Additional holiday buying and selling scheme
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- Income protection and Life Assurance
- Company Pension scheme
- Enhanced Maternity/Paternity/ Adoption Leave
- Training Opportunities
- Modern working environment
- Flexible working practices

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#### **O nás**

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