

Requisition Number:

Job Description. Electromagnetic Resilience Engineer

Are you a development engineer with an automotive background, with a detailed understanding of vehicle features & functions architectures, networks, hardware, and software? Do you have a fundamental grasp of vehicle engineering to meet one or more attributes? Are you looking for your next challenge? Do you want to be part of a growing team that develop and deliver advanced test and engineering services for new vehicle technologies? Do you want to contribute to the future of global road transport solutions? If you are a dynamic and proactive engineer this could be the role for you!

As off-board information relating to the current environment and position of a vehicle become key, and the role of the driver is progressively being removed from vehicle control; the electronic systems that replace the human inputs need to provide extremely high levels of dependability to ensure public acceptability of these technologies.

The implications of new technologies for connectivity, autonomy and electromobility are driving significant changes in the way that the industry must engineer, test, and verify next-generation transport solutions.

We are recruiting an engineer with an aptitude for risk-based EMC engineering including verification and validation experience to join our growing team and help us implement and develop advanced services through long-term targeted research, advanced test development and key investments to ensure that our customers are ready for the challenges ahead.

We are offering the chance to work in a world-class, independent engineering consultancy, operating in multiple locations around the world, to support vehicle manufacturers and their supply chain with cutting-edge engineering and testing expertise. We offer full-system design, test and integration expertise to automotive, defence, rail and transport industries and also specialise in developing low carbon and autonomous and co-operative driving technologies.

At our headquarters in the Midlands, we have access to one of the most comprehensive vehicle proving grounds which boasts 93km of test tracks and over 35 world-class test facilities and laboratories. Our facilities, combined with the engineering expertise of our 600 strong team makes MIRA Technology Park Europe 's number one location for transport sector R&D.

Title of Job:	Electromagnetic Resilience Engineer		
Department:	Vehicle Resilience 0473		
Grade:			
Date Required:	ASAP		
Salary Range:	Competitive		
Number Required:	1		
Location:	HORIBA MIRA, Nuneaton		
Reason for Vacancy:	Technology Team Expansion		
Contract Type:	Permanent:	Y	Contractor: N
Responsible To:	Chief Engineer – Vehicle Resilience		
Subordinates:	None		

Main Purpose of Job

MIRA is looking for a dynamic and proactive technologist to join its team in Nuneaton. Based in the Vehicle Resilience department and working within our new Vehicle Resilience Technology Centre, you will form part of the growth strategy within HORIBA MIRA. This role will include, but not be limited to, increasing MIRAs new technology automotive service offerings, including:

- Structured risk-based systems engineering
- The development and review of component and vehicle EM standards and processes
- Advanced test methods for complex and future technologies related to:
 - Vehicle connectivity (wired and wireless)
 - Vehicle autonomy
 - Cybersecurity (RF physical elements)
 - Future technologies
- Data analysis and problem-solving

Key Functions

This technical role requires a highly motivated individual who can demonstrate structured systems engineering and problem resolution.

An excellent knowledge of hardware and software architectures and their role in creating vehicle features and functions is vital.

A working knowledge of EM theory, antenna performance, communication protocols and EM standards (component and vehicle) is required.

The following activities cover the typical requirements of the role:

- Supporting Electromagnetic Engineering Delivery & Development, including:
 - Undertaking a systems engineering approach to EM programme management covering standards reviews and generation, supplier review activities, test management and problem resolution.
 - Research into new technology standards and test parameters / equipment
 - Optimisation of new services through structured continuous improvement
- Consultancy
 - Assist MIRA specialists in:
 - Delivering large / complex, customer programmes
 - Providing technical support to cross-discipline team
 - Providing internal support to product development areas of HORIBA MIRA
 - Leading / assisting research and development projects

Experience in data analytics and data visualisation will be an advantage along with an ability to code.

Essential Qualifications	Preferred Qualifications
<ul style="list-style-type: none"> Bachelors degree (minimum 2:1) or equivalent qualification in electrical / electronic engineering or other relevant discipline 	<ul style="list-style-type: none"> Relevant Masters Degree or PhD Professional membership of a relevant engineering or computing institution for example Chartered Engineer

Essential Experience	Preferred Experience
<ul style="list-style-type: none"> Minimum 5+ years of experience in a relevant field covering some combination of the key functions detailed previously. <p>Experience in all of the following:</p> <ul style="list-style-type: none"> Systems Engineering: <ul style="list-style-type: none"> Threat and risk analysis Design Verification process for component or vehicle platforms Supplier or component management EM problem resolution Understanding of EMC theory with experience of practical implementation of testing, ideally specific to EDUs, HV systems and LV & HV components, but not essential Working knowledge of EMC and Electrical Automotive Standards. <p>Experience in some combination of the following:</p> <ul style="list-style-type: none"> Wireless technologies (e.g., Wi-Fi, Bluetooth, NFC) Wired networking technologies (e.g., CAN, Automotive Ethernet) Sensing technologies (e.g., RADAR, ultrasonic) HV technologies that support EV, PHEV or HEV 	<ul style="list-style-type: none"> Experience of running complete vehicle or product EMC programmes Knowledge of JIRA, DOORS, Polarion and other requirements / task tracking databases Experience of EM circuit design, review and validation Experience of vehicle homologation for one or more attributes

What are the candidates likely to be doing now?
<p>Engineer or specialist for automotive OEM</p> <p>Engineer or specialist for military prime</p> <p>Engineering consultant</p>

Other information
<p>The successful candidate should:</p> <ul style="list-style-type: none"> Be capable of delivering a high standard of technical writing Be capable of presenting technical information confidently to customers Be a self-starter and able to take ownership of and execute designated tasks accurately within timing and budget constraints Have well-developed analytical skills – rigorous but pragmatic, being able to justify decisions with solid rationale

- Have good interpersonal skills – a consensus-builder not confrontational
- Be able to maintain discretion and confidentiality
- Be capable of working under pressure, individually and as part of a team
- Hold a full driving licence
- Be willing to travel and work flexibly: The job is likely to involve trips or extended placements at customer facilities within the UK or overseas
- Be willing to engage in the security clearance process and work on defence related projects