

Job Description and Person Specification

Job Description	
Directorate/Group:	Location:
National Marine Facilities (NMF), Marine Autonomous and Robotic Systems (MARS)	National Oceanography Centre (NOC), Southampton
Post Title:	Grade:
Robotic Systems Electronics Engineer	NERC Band 6
Post responsible to:	Posts responsible for (and grade):
Electronic Lead	N/A

Context or Background (optional):		
<p>Through development and adoption of new technologies, the overall aim of the MARS group is to greatly improve the efficiency with which we operate autonomous vehicles in the world's oceans. The focus is to help scientists in their efforts to understand major issues such as global climate change, the sequestration of carbon, and monitoring of ocean resources.</p>		
Job Purpose:		
<p>Reporting to the Electronic Lead, the post holder will play a leading role in the development of Autonomous Underwater Vehicles (AUVs) and other Marine Autonomous Systems (MAS) being operated and developed at the National Oceanography Centre.</p> <p>The role may also involve supporting other MARS equipment, and more broadly other sea going equipment when necessary.</p>		
Expectations of the role:		
<p>The post holder will be a core member of the MARS Development Group and will be responsible for developing and testing electronic systems for the MARS fleet of Autonomous Underwater Vehicles. The post holder will primarily be responsible for the design, manufacture and testing of the on board electronics for the new Autosub6000 vehicle being developed with funding from the Natural Environment Research Council.</p> <p>The post holder will work across a portfolio of projects and will play a key role in development of new projects in collaboration with science and industry stakeholders.</p> <p>The ideal candidate will have experience in:</p> <ul style="list-style-type: none"> • Digital hardware design (Microcontroller, I2C, SPI etc) • C and/or C++ skills in an embedded environment • Electronic/Software system integration • Familiarity with quality management process relevant to electronic engineering <p>Additional desirable skills:</p> <ul style="list-style-type: none"> • Embedded Linux experience • Communications protocol experience TCP/IP, RS232/485, USB • Altium PCB layout & Schematic Design • Analogue electronics design experience 		
Key Accountabilities/Primary Responsibilities:		
% Time		
1	Development of electronic sub-systems for the MARS fleet.	50%
2	Developing and overseeing testing of electronics systems.	20%
3	Supporting the preparation of funding proposals and commercial projects.	10%
4	Supporting cruises and sea-going operations, including system configuration pre-mobilisation, time at sea supporting equipment, fault finding, repair and post cruise support.	10%
5	Liaising with the UK science community.	5%
6	Training and continuing professional development.	5%

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Expectations of all staff:
<ul style="list-style-type: none"> Comply with Research Council and NERC policies at all times, including Equal Opportunities Policies, and ensure that duties are carried out in accordance with relevant policies, procedures and guidance documents as directed by NOC. Promote and demonstrate a personal commitment to NOC values and People Strategy. Promote and demonstrate a personal commitment to Working with Respect – NOC Guidance. Attend relevant seminars, workshops and training events and maintain professional development by completing CPD (Continuous Professional Development) appropriate to the role. Maintain a safe working environment by attending Health and Safety training as required and follow local codes of safe working practices and actively contribute to embedding a safety culture across NOC. Adopt and promote awareness of NOC's environmental aims and other initiatives. Carry out other duties within the scope, spirit and general purpose of the post and adopt a flexible approach to work. As duties and responsibilities change this job description will be reviewed and revised in consultation with the post holder. Undertake such other duties within the scope of the post as may be reasonably requested by your Manager.

Personal Specification				
Criteria (Please list 3 key essential/desirable criteria for each of the following categories)		<u>Essential criteria to be measured for shortlisting purposes</u> (Add ✓ where appropriate)	<u>Essential criteria to be measured for interview purposes</u> (Add ✓ where appropriate)	<u>Desirable criteria to be measured where candidates may otherwise score equally on essential criteria.</u> (Add ✓ where appropriate)
Qualifications and Knowledge:				
1	Degree in Electronic Engineering, or closely related discipline (Masters, or bachelors at 2.1 or above).	✓		
2	Industry experience in electronics design, including the application of professional learning to deliver effective solutions to business.	✓	✓	
3	A higher degree in a similar discipline.			✓
Experience related to position:				
1	High level of proficiency in electronic design for robotic systems or related activity, including a good understanding of project management methodologies. The post holder will have taken a significant role in the success of complex projects.	✓	✓	
2	Extensive experience of working with microcontrollers, development boards and embedded systems, including the development and implementation of test procedures and best operational practices.	✓	✓	
3	Experience of marine instrumentation and technology development.			✓
4	Familiarity with quality management process relevant to electronic engineering.			✓
Skills:				

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1	Experience of working in small teams, both in a development and operational environment.	✓	✓	
2	Ability to demonstrate a pragmatic approach to problem solving and conflict resolution.		✓	
3	Self-motivated, pro-active, flexible and innovative with the ability to plan and organise own work and the work of others, manage unforeseen situations and produce efficient work practices, both at sea and on shore, within agreed standards and deadlines.		✓	
Behaviours:				
1	Self-confident with the ability to instil confidence in others with a proven track record of actively engaging with key stakeholders and able to build and maintain relationships across the wider organisation, stakeholders and suppliers.		✓	
2	Ensures a high degree of accuracy and close attention to detail and able to analyse and interpret complex customer requirements, provide advice in an understandable way to technical and non-technical experts and communicate and present information effectively, both verbally and in writing.		✓	
3	Capable of generating new ideas at a high level for the development of new systems and processes in line with changing business requirements.		✓	
Other requirements:				
1	Holder of a valid passport and able to apply for a US Visa (ESTA) or C1D Visa, where required.		✓	
2	Willingness to participate in sea trials and/or other off-site activities which at times may be outside of normal working hours.		✓	
3	This role will require mandatory training in Personal Survival Techniques and the ability to pass an ENG1 medical examination.		✓	