UNIVERSITY OF LEICESTER

Job Summary

Job Title: Principal Electronics Engineer
Grade: 9
Salary: £61,165 to £68,817 per annum, pro-rata if part-time
Department: Space Park Leicester
Hours/Contract: Full time or job share, permanent
Job Family: Technical and Experimental
Reference: 14055

Role Purpose

Space Park Leicester is a major centre for space research, spaceflight engineering and technology development. The Principal Electronics Engineer will provide senior electronics engineering leadership across SPL's engineering function and, together with the Principal Mechanical Engineer, form the Office of Chief Engineering, providing engineering leadership, governance and assurance across SPL's portfolio.

The role will lead and assure electronics engineering delivery across space and flight projects and technology development, commercial research and engineering, and test and service activities. This includes electronic system and subsystem architecture, analogue, digital and RF electronics, embedded systems, electronic design and development, EMC/EMI, manufacture, assembly, integration, commissioning and verification, and the electronics aspects of space instrumentation, missions and payloads.

The post holder will work with the Principal Mechanical Engineer, Senior Electronics Production Engineer, Principal Investigators, project managers, commercial partners and engineering teams to translate requirements into robust technical solutions, coordinate engineering delivery across multidisciplinary teams, manage technical risk and change, and ensure appropriate engineering governance, product assurance and configuration control.

The Principal Electronics Engineer will take a hands-on senior technical role where required, providing expert electronics engineering judgement, supporting key design and technical trade decisions, resolving significant technical issues, and assuring delivery from concept and design through manufacture, integration, verification, test and deployment.

Working jointly with the Principal Mechanical Engineer through the Office of Chief Engineering, the Principal Electronics Engineer will provide oversight across SPL's engineering portfolio, maintaining continuity of engineering practice, resources and technical knowledge from the development of future opportunities through to funded project delivery. The post holder must be comfortable and willing to contribute to defence- and security-related projects under appropriate professional, contractual, ethical and regulatory controls.

Resources Managed

The role provides technical leadership and management of electronics engineering and associated technical resources across SPL's engineering function, with responsibility for engineering assurance, technical delivery, resource coordination and relevant technical budgets. The post holder will provide line management for engineering staff primarily aligned with electronics and electrical engineering and matrix management or technical oversight of staff working across multidisciplinary activities, in coordination with the Principal Mechanical Engineer.

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Main Duties and Responsibilities

- Lead and assure electronics engineering delivery across SPL's engineering function, establishing and maintaining the technical approach, engineering plans, design maturity and delivery standards required to meet project, research, commercial and service objectives. Working through the Office of Chief Engineering, contribute to engineering governance and assurance across multidisciplinary activities.
- Provide senior technical leadership for electronics project design and development, including electronic system and subsystem trade-offs, analogue, digital and RF electronics, embedded systems, design reviews, EMC/EMI, technical analysis, manufacture, assembly, integration, verification, commissioning, and resolution of significant engineering issues.
- Coordinate engineering resources and technical work across multidisciplinary project teams, working with the Principal Mechanical Engineer, Principal Investigators and project managers to manage priorities, interfaces, risks, changes, milestones and technical budgets.
- Act as a senior technical interface with space agencies, funders, research and commercial partners, customers, suppliers, assurance bodies and other stakeholders, representing SPL at technical and project reviews.
- Undertake professional development, knowledge sharing and activities that strengthen electronics engineering capability and consistency of engineering practice across SPL.

Internal and External Relationships

- Internal relationships include the SPL senior management team, to whom the post holder reports, with direct input to business plan development and delivery; the Principal Mechanical Engineer, with whom the post holder forms the Office of Chief Engineering; Principal Investigators and academic leads; engineering and technical staff; project managers; and quality, operations, procurement and professional-services teams, with close integration with the commercial function.
- External relationships include space agencies, funding bodies, research and commercial partners, customers, assurance organisations, suppliers, contractors and stakeholders associated with projects, research, tests and services.

Planning and Organising

- Lead electronics engineering planning and delivery across SPL's engineering function, including space and flight projects, technology development, commercial research and engineering, and tests and services.
- Working with the Principal Mechanical Engineer, plan and oversee engineering lifecycle activities including requirements, design and stage-gate reviews, manufacture, integration, verification and deployment.
- Coordinate electronics engineering resources, technical budgets, priorities, risks, interfaces, changes and milestones across matrix-managed project teams.
- Provide senior reporting and advice on technical delivery, engineering risks, resource pressures and significant technical decisions.

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- Maintain continuity of engineering oversight between future opportunities, commercial activity and funded project delivery, working through the Office of Chief Engineering where activities span mechanical and electronics disciplines.

Qualifications, Knowledge and Experience

Essential

- M-level or equivalent degree in electronics, electrical or electronic engineering or a closely related engineering discipline, or equivalent substantial professional engineering experience.*
- Significant experience delivering complex space or closely related high-technology engineering projects through electronics design, manufacture, integration and verification. *
- Senior-level engineering leadership experience, including responsibility for multidisciplinary technical delivery, technical decisions and engineering assurance. *
- Experience managing technical risks, interfaces, change, resources and engineering delivery within funded project constraints. *
- Experience working with project partners, space agencies, funders, suppliers and assurance or regulatory stakeholders. *

Desirable

- Experience delivering spaceflight electronics or instrumentation through formal reviews and project lifecycle gates.
- Experience leading matrix-managed engineering teams and developing engineering capability and practice.
- Experience in applying radiation-assurance practices

Skills, Abilities and Competencies

Essential

- Proven engineering leadership and strong specialist judgement in electronics engineering for spaceflight or high-technology applications.
- Strong technical capability in electronic system and subsystem design, including appropriate experience of analogue, digital and/or RF electronics, embedded systems, EMC/EMI, integration, mixed-signal and power-electronics design, microcontroller hardware, PCB implementation, commissioning and verification. *
- Experience using EDA and PCB design software e.g. eCADSTAR, PADS Pro, Altium, or equivalent. *
- Ability to provide authoritative electronics technical direction while working constructively with the Principal Mechanical Engineer, Principal Investigators, project managers and multidisciplinary engineering teams.
- Ability to identify, assess and resolve complex technical issues and make proportionate engineering decisions under project constraints. *

- Strong communication and influencing skills, including representation at technical reviews and with senior external stakeholders.
- Strong understanding of engineering governance, product assurance, configuration control, technical risk and project-delivery expectations. *
- Ability to manage competing priorities and perform effectively under uncertainty and delivery pressure.

Desirable

- Experience with FPGA architectures and HDL/VHDL programming languages

**Criteria to be used in shortlisting candidates for interview*

Criminal Declaration

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

Supporting University Activities

As a University of Leicester citizen, you are encouraged to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We encourage all staff as citizens to work flexibly across the University if required. If supporting these activities is likely to affect your workload, please speak to your line manager in the first instance

University Values

Inclusive - We are diverse in our makeup and united in ambition. Our diversity is our strength and makes our community stronger.

Inspiring - We are passionate about inspiring individuals to succeed and realise their ambitions. We challenge our community to think differently, to get involved, and to constantly embrace new ideas.

Impactful - As Citizens of Change we will generate new ideas which deliver impact and empower our community

Freedom of Speech

The University is committed to upholding freedom of speech and academic freedom within the law throughout our recruitment processes. We ensure that all candidates are considered based on merit and suitability for the role, without regard to their lawful viewpoints or the expression of challenging or controversial ideas. Our recruitment policies and practices are designed to protect applicants from discrimination or adverse treatment on the basis of their opinions, and to foster an environment where open debate and diverse perspectives are valued as essential to our academic mission.

Equity and Diversity

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We believe that equity, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.