

NCCAT Technical Manager

REQ230261

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

The National Centre for Combustion and Aerothermal Technology (NCCAT)

The National Centre for Combustion and Aerothermal Technology (NCCAT) opened in 2020 and is a global centre of excellence that was funded through a partnership comprising the Department for Business, Energy and Industrial Strategy, the Aerospace Technology Institute, Innovate UK and with support from Rolls-Royce. The Centre builds on the long-standing strategic partnership between Loughborough and Rolls-Royce which was formalised in 1991 when the Loughborough based Rolls-Royce University Technology Centre in Combustion System Aerothermal Processes (UTC) was established. The UTC (which is located within NCCAT) is an innovative strategic partnership which brings together a leading UK University with one of the world's foremost aerospace companies. The partnership provides a unique infrastructure in which Rolls-Royce and University staff work together to advance understanding and provide design capability in the field of Combustion Aerodynamics and Aerothermal technology. This cutting-edge collaborative research is driven by real industrial challenges and generates innovative technologies for current and next generation low emission gas turbine engines.

Building on the experience of working with industry over the last 30 years, the National Centre incorporates a world leading research group of multi-disciplinary researchers within the fields of fluid mechanics and combustion, primarily targeting highly applied challenges faced by the aerospace gas turbine industry. With Rolls-Royce as a lead industrial partner, NCCAT primarily focuses on the development of future low emission aerospace combustion systems and will play a key role in moving towards sustainability and meeting the Government target of a carbon neutral economy by 2050. NCCAT is an open-access facility, and beyond aerospace, supports commercial customers with the development of key technologies across several UK sectors, such as distributed power generation and the development of measurement technology for harsh environments. This necessitates the development and application of highly specialised research techniques in bespoke facilities that are used for commercial activities. In addition, the Centre acts as a training ground for current and future aerospace engineers in a critical skill area for the UK, partially achieved through the current EPSRC Centre for Doctoral Training for Future Propulsion and Power (CDT) also hosted within NCCAT.

The group now represents a critical mass of circa 55 personnel including academic staff, researchers, specialist technical staff, technicians, and an admin support team. To deliver its objectives NCCAT has developed a state-of-the-art laboratory which incorporates highly bespoke, unique, and technically complex facilities. The facilities are required to develop technology through a range of Technology Readiness Levels and include facilities which operate at high temperature and pressure conditions (as occurs within a gas turbine under normal operating conditions) through to sub-atmospheric conditions typical of those that can occur at high altitudes. In addition, as NCCAT continues to grow and evolve into new areas of research, so the laboratory will continue to evolve and identify/develop new infrastructure and facilities to meet future technical challenges

Job Description

Job Grade: Management and Specialist Grade 7

Job Purpose

Working closely with the Head of Technical Operations and other senior managers, the postholder will play a lead role

in overseeing the centre's daily technical operations across the highly specialised and complex NCCAT facilities. This will include maintenance, planning and implementation of the facilities, providing high level technical advice, enforcement of H&S and regulatory requirements, and problem-solving to ensure optimal operational efficiency and a high quality of service for NCCAT's users. A significant proportion of the role will cover front-line management of the groups specialist technical staff, including planning and overseeing work schedules and productivity, and training and developing the team.

This is a senior position and the post requires a highly motivated professional with experience and skills in manufacturing, machining, and fabrication techniques, along with excellent time management, problem-solving, planning and leadership skills.

Job Duties

- Lead the planning, and organisation of the technicians work schedule, assigning tasks and reviewing progress. Determine priorities for the work schedule in consultation with relevant stakeholders to consider broader plans across the group.
- To lead the weekly technicians' meeting, assigning tasks to the team and ensuring the timely completion of those tasks.
- Deputise for the Head of Technical Operations on technical matters when required.
- To be a member of the NCCAT Technical Management Board and deputise for the Head of Technical Operations as chair when needed. To present complex information verbally or in writing at an appropriate level of professional complexity.
- Work closely with the Head of Technical Operations to ensure the experimental activities of the Centre are delivered as planned.
- To work with the Head of Technical Operations in liaising with other University departments, and outside contractors with regards to the maintenance, planning and implementation of the Centre's complex facilities.
- To act as onsite point of contact for staff, students, and commercial customers on technical matters
- Provide specialist technical advice and develop collaborative relationships with staff, students, and external users of the NCCAT facility.
- Manage and maintain a "fit for purpose" workshop to support the experimental facilities, ensuring good maintenance, health and safety, compliance with regulatory requirements, security and condition of buildings and equipment.
- Using creativity and initiative, to investigate and research complex problems relating to the technical operation of both existing and any proposed new facilities and propose, test, and deliver solutions. Use diplomacy, judgement, and political awareness, to persuade others about new ways of delivering services and the use of improved working practices.
- Ensure that risk assessments are produced to cover all workshop activities. Review risk assessments and ensure they are kept updated.
- To contribute to the on-going review and development of the Centre's experimental facilities. To include making proposals and advising on future requirements, in some cases being the lead in taking specific projects forward.
- In conjunction with other staff provide hands-on support within the NCCAT laboratories as and when required. Be proactive in formulating and progressing solutions to faults and mechanical issues affecting NCCAT lab operation and efficiency.
- To manage the workshop budget, advise on annual budget requirements, operate effectively within budgetary constraints, use appropriate internal procurement and financial management procedures.
- Advise on the procurement of workshop equipment and consumables, propose suitability and specification. Lead the procurement for workshop equipment items in consultation with the University's procurement team, assessing

best value, and terms and conditions.

- Provide line management for the NCCAT technical team and participate in their development, selection and recruitment, performance, and support.
- To undertake annual Performance & Development Reviews for the technical team.
- To keep under review technical staff resource allocation and deployment and to bring about changes where necessary in the pursuit of strategic aims and objectives.
- Ensure that technical staff are appropriately trained for the duties they undertake, and that any training qualifications are kept up to date.
- Create a collaborative work environment which encourages, supports, and empowers colleagues.

Other

- To play an active part in the project management of specific projects. In some cases, the postholder will take the lead role in project managing particular ventures.
- To engage in professional level development which is consistent with the needs and aspirations of the post-holder and NCCAT.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

Points to Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Special Conditions

Some flexibility in working hours may be required from time to time to meet external deadlines.

Organisational Responsibility

Reports to the Head of Technical Operations. Will have significant professional autonomy

Is responsible for the following roles: Specialist Research Technicians (5FTE), plus an Apprentice Technician.

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Familiarity with manufacturing, machining, and fabrication techniques	1, 2, 3
	Line management experience, including experience of conducting staff performance development reviews and management of HR issues	1, 3
	Experience of planning, including budget/resource allocation	1, 3
	Thorough understanding of relevant H&S regulations/procedures	1, 2, 3
	Experience of communicating to staff at all levels internally and externally	1, 3
	Experience of training staff in the use of workshop equipment	1, 3
	Familiarity with the use of Computer Aided Design software packages (AutoCAD, Nx)	1, 2, 3
	Ability to perform thorough risk assessments in relation to workshop and other mechanical activities related to technical staff.	1, 3
	Skills and abilities	High level of interpersonal and communication skills, ability to deal with a wide variety of people at all levels using judgement, diplomacy, tact, and political awareness, commensurate with working at a senior level
An innovative, proactive, and dynamic approach. Possesses determination and tenacity		1, 3
Possess complex high level analytical and problem-solving skills		1, 3
Ability to manage a variety of on-going projects, to proactively prioritise tasks and to plan for the long term		1, 3
Ability to work under pressure and to take responsibility for meeting agreed targets.		1, 3
Ability to learn independently and to master new areas of knowledge and skills rapidly		1, 3
Excellent project management and ICT skills.		1, 3
Training	A self-motivated approach to professional updating in relevant key areas.	1, 3
Qualifications	Educated to at least HND, or equivalent level, e.g., completion of an apprenticeship in a relevant subject area to level 4 or above	1
Other	Detailed understanding of the University's Equal Opportunities policy at all times	1, 3
	A commitment to equality and diversity with the ability to role model, adhere to and advocate Equality and Diversity policies	1, 3
	Full UK Driving Licence	1

Desirable Criteria

Area	Criteria	Stage
Experience	Substantial technical operations experience within a notable research facility	1, 3
	Awareness of developments in higher education and the external professional environment	1, 3
	Substantial related experience in the design and operation of technically complex test facilities in relation to aero-thermal processes and gas turbines	1, 3
	Experience of working in a highly confidential environment	1
	Awareness of developments in and experience of working in a modern production engineering environment	1, 3
	Experience of planning, installation, and development of specialist experimental facilities, working with external contractors, consultants, and equipment manufacturers	1, 3
	Experience of procurement procedures	1, 3
Skills and abilities	Managing H&S requirements. Knowledge of PUWER, LOLER, COSHH.	1, 3
Qualifications	A degree or equivalent qualification	1
	Recognised management qualification, ILM or equivalent	1
	First Aid at Work Qualification	1
Other	Member of relevant professional bodies	1, 3

Conditions of Service

This is a full-time open-ended post. Salary will be on Management and Specialist Grade 7 (£44,414 - £52,841 per annum), at a starting salary to be confirmed on offer of appointment.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff, details of which can be found [here](#).

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which are available at <http://www.lboro.ac.uk/services/hr/a-z/family-leave-policy-and-procedure---page.html>. We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>). In addition, the University is supportive, wherever possible, of flexible working arrangements.

We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>