

## Job Description

<b>Job title</b>	Research Assistant in Radial Turbine Optimization
<b>Department/School</b>	<b>Mechanical Engineering</b>
<b>Job family</b>	Education and Research
<b>Grade</b>	6
<b>Reporting to</b>	Principal Investigator (PI) or Co-Investigator (CI) for area of research
<b>Responsible for</b>	No staff management responsibilities
<b>Location</b>	University of Bath premises

### Background and context

This post will undertake research work within the [Institute of Advanced Automotive Propulsion Systems \(IAAPS\)](#) on the multi-point and multi-objective design optimization of radial turbomachinery.

The Research Assistant will support turbomachinery parametric design optimization using CFD coupled to algorithms in Matlab. This will require a good background in Matlab programming and CFD modelling of turbomachinery. An objective function will be created to achieve multiple performance objectives at multiple design points.

### Job purpose

To provide subject-specific research assistance to a Principal Investigator (PI)/Co-Investigator (CI) and their research team for a specified grant.

### Main duties and responsibilities

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| <b>1</b> | <p>Assist with research by typically (<i>as appropriate to discipline</i>):</p> <p>Support the execution of tasks for the project. Design and upgrading of experimental facilities, execute simulation and practical experiments, collect and analyse data using qualitative and quantitative techniques</p> |
| <b>2</b> | <p>Provide support to PI and other research staff with project management (for example, organising meetings and corresponding with partners).</p>  |

<b>3</b>	Contribute to the production of research reports and publications.
<b>4</b>	Participate regularly in group meetings and prepare and deliver presentations to research team.
<b>5</b>	Assist with supervising undergraduate student projects.
<b>6</b>	Continually update knowledge and understanding in field or specialism to inform research activity.
	You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager. You are required to follow all University policies and procedures at all times and take account of University guidance.

## Person Specification

Criteria	Essential	Desirable
<b>Qualifications</b>		
A first degree (BA/BSc) in a subject relevant to the research activity	√	
Master level qualification		√
<b>Experience/Knowledge</b>		
Relevant work experience in a related area to the project		√
Demonstrated depth and breadth of specialist knowledge of subject matter to effectively contribute to the research programme	√	
Demonstrated awareness of latest developments in the field of research	√	
<b>Skills</b>		
Ability to organise and prioritise own workload to meet required deadlines	√	
Ability to write research reports and to effectively disseminate outcomes	√	
Excellent verbal, interpersonal and written communication skills	√	
Highly competent in IT packages as appropriate to discipline/area of research	√	
<b>Attributes</b>		
Commitment to working within professional and ethical codes of conduct	√	
Innovation and developing creative solutions	√	
Self-confidence when communicating with a wide range of stakeholders	√	
Commitment to safe working practices	√	
Ability to work independently	√	
Commitment to excellence in research	√	
Ability to be an effective team worker	√	