POSITION DESCRIPTION

Research Associate in Hypersonic Vehicle Design

Position Level | Level A
Faculty/Division | UNSW Canberra (ADFA)
School | School of Engineering and Information Technology
Position Number | 00084680
Original Document creation | 01/05/2020

Position Summary

The Research Associate in Hypersonic Vehicle Design position is situated within the School of Engineering & Information Technology, UNSW Canberra. As a member of a research team, the Research Associate will undertake research as directed by the Team Leader. The position will involve research activity in multidisciplinary settings requiring skills in high-speed aerodynamics, vehicle shape optimisation and numerical simulation. The Research Associate will contribute to the development of research results and their publication in reports and international journals, participate in national and/or international conference/s and in reporting of results to the sponsor.

Where negotiated with the Chief Investigator and Head of School, the Research Associate may undertake teaching responsibilities as appropriate.

The role of Research Associate reports to the Chief Investigator (CI) of the project and has no direct reports.

Accountabilities

Specific accountabilities for this role include:

- Develop methodologies to optimise the shape of high-speed vehicles under a range of mission constraints.
- Perform rigorous simulation of these designs to determine their aerodynamic performance.
- Assist in the validation of these design predictions using experimental wind tunnel testing.
- Conduct other research as directed by the research team leader.
- Prepare reports summarizing the results gained from the research.
- Prepare journal and conference publications based on the research.
- Contribute to the preparation of research proposal submissions to external funding bodies.
- Interact with undergraduate and postgraduate students and assist in their supervision.
- Undertake a range of administrative tasks as directed.
- Teaching responsibilities as negotiated with the Chief Investigator and the School.
- Contribute to the common activities of the School, Faculty and University.
- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health and safety of yourself or others.
- Align with and actively demonstrate the UNSW Values in Action: Our Behaviours and the UNSW Code of Conduct.

**Skills and Experience**

- Must be an Australian Citizen, and able to obtain & maintain an NV1 security clearance.
- A PhD in Engineering or Science specialising in high-speed flow, shape optimisation, aerodynamic simulation or a relevant area / discipline.
- A demonstrated ability to conduct innovative and independent research.
- A record of papers in high quality journals and/or conferences of high ranking in the field.
- Excellent interpersonal, oral and written communication skills appropriate for interacting effectively team members, collaborators and colleagues across the Faculty.
- Demonstrated ability to work as a member of a multi-disciplinary team showing initiative and taking direction as appropriate to the situation.
- Demonstrated ability to complete tasks within agreed time frames, with suitable supervision.
- Knowledge of health and safety responsibilities and the ability and capacity to implement required UNSW health and safety policies and procedures.

**Pre-Employment checks required for this position**

- Verification of Qualifications
- Criminal History Check
- Identification Check

**About this document**

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.