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## POSITION DESCRIPTION

# Research Associate / Senior Research Associate

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Position Level	A/B
Faculty/Division	Engineering
Position Number	00202736
Original document creation	12/09/ 2024

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### Position Summary

A **Research Associate (Level A) / Senior Research Associate (Level B)** is expected to carry out independent and/or team research within the field in which they are appointed and to carry out activities to develop their research expertise relevant to their particular field of research. In this role, the Research Associate / Senior Research Associate will be characterising and improving the cryogenic performance of carbon fibre reinforced polymer composites. The cryogenic materials will be assessed for their use in novel cryocompressed hydrogen storage systems.

The role of **Research Associate (Level A) / Senior Research Associate (Level B)** reports to A/Prof Garth Pearce, and has no direct reports.

### Level A Accountabilities

Specific accountabilities for this role include:

- Contribute independently or as a team member in collaborative research with a focus to enhance the quality of research outcomes in the discipline area.
- Conduct research (as per the norms of the discipline) and/or enable research teams to create scholarly output that is recognised by peers.
- Undertake specific research project/s under the guidance of a research leader and contribute to development of research activities.
- Support the dissemination of research outcomes through appropriate channels and outlets.
- Undertake discipline-appropriate research activities, e.g. surveys, literature reviews, data gathering and/or recording of results using appropriate research methods.

- Participate in and/or present at conferences and/or workshops relevant to the project as required.
- Assist with the supervision of research students in the research area where required.
- Contribute to the multi-organisation HyZEM project under the Australia-UK Renewable Hydrogen Innovation Partnership Programme
- Conduct fundamental composite materials research into materials for cryo-compressed storage tanks operating under very low temperatures
- Align with and actively demonstrate the [UNSW Values in Action: Our Behaviours](#) and the [UNSW Code of Conduct](#).
- 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.

### **Level A Skills and Experience**

- A PhD (or soon to be awarded) in a related discipline, such as Mechanical/Aerospace/Materials/Manufacturing Engineering
- Research experience developing and characterising high-performance cryogenic composite materials
- Demonstrated ability to work with analytical materials characterisation tools (SEM, Raman, FTIR, etc).
- Proven commitment to proactively keeping up to date with discipline knowledge and developments
- Demonstrated ability to undertake high quality academic research and conduct independent research with limited supervision.
- Demonstrated track record of publications and conference presentations relative to opportunity.
- Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships.
- Evidence of highly developed interpersonal skills.
- Demonstrated ability to communicate and interact with a diverse range of stakeholders and students.
- An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.
- Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training

### **Level B Accountabilities**

Specific accountabilities for this role include:

- Engage in individual and/or collaborative research in a manner consistent with disciplinary practice.
- Create scholarly impact in the discipline which is recognised by peers in the advancement of disciplinary knowledge.
- Conduct research/scholarly activities under limited supervision, either independently or as a member of a team (as per the norms of the discipline).

- Contribute to the multi-organisation HyZEM project under the Australia-UK Renewable Hydrogen Innovation Partnership Programme
- Conduct and supervise fundamental composite materials research into materials for cryo-compressed storage tanks operating under very low temperatures
- Establish a personal research portfolio and start developing independent research proposals.
- Contribute to the development of applications for competitive funding under the guidance of senior colleagues.
- Participate as co-investigator or chief investigator in competitive grant applications, or show evidence of active participation in research collaborations funded by competitive grants.
- Design research projects.
- Mentor and guide students and colleagues and develop the next generation of academics through involvement in supervision of HDRs (as per the norms of the discipline).
- Align with and actively demonstrate the [UNSW Values in Action: Our Behaviours](#) and the [UNSW Code of Conduct](#).
- 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.

### **Level B Skills and Experience**

- A PhD in a related discipline, and/or relevant work experience.
- Demonstrated research achievements developing and characterising high-performance cryogenic composite materials.
- Demonstrated research achievements obtained with analytical materials characterisation tools (SEM, Raman, FTIR, etc).
- Proven commitment to proactively keeping up to date with discipline knowledge and developments.
- Demonstrated excellent track record in research with outcomes of high quality and high impact with clear evidence of the desire and ability to continually achieve research excellence as well as the capacity for research leadership.
- A track record of significant involvement with the profession and/or industry.
- A strong practice of maintaining open-source code repository.
- High level communication skills and ability to network effectively and interact with a diverse range of students and staff.
- Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships.
- Evidence of highly developed interpersonal and organisational skills.

- Ability to build effective networks with colleagues and generate alternative funding and/or industry projects through effective liaison with external local and international researchers, industry and government
- An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.
- Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training

### **Pre-employment checks required for this position**

- Verification of qualifications

#### **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.