Position Description

Research Associate

Position Number: Multiple *Position Title: Research Associate-Capability Systems* *Date Written: November 2019*	*Faculty / Division: UNSW Canberra* *School / Unit: Capability Systems Centre / SEIT* *Position Level: Level A*

ORGANISATIONAL ENVIRONMENT

UNSW is currently implementing a ten-year strategy to 2025 and our ambition for the next decade is nothing less than to establish UNSW as Australia's global university. We aspire to this in the belief that a great university, which is a global leader in discovery, innovation, impact, education and thought leadership, can make an enormous difference to the lives of people in Australia and around the world.

Following extensive consultation in 2015, we identified three strategic priority areas. Firstly, a drive for academic excellence in research and education. Universities are often classified as 'research intensive' or 'teaching intensive'. UNSW is proud to be an exemplar of both. We are amongst a limited group of universities worldwide capable of delivering research excellence alongside the highest quality education on a large scale. Secondly, a passion for social engagement, which improves lives through advancing equality, diversity, open debate and economic progress. Thirdly, a commitment to achieving global impact through sharing our capability in research and education in the highest quality partnerships with institutions in both developed and emerging societies. We regard the interplay of academic excellence, social engagement and global impact as the hallmarks of a great forward-looking 21st century university.

To achieve this ambition, we are attracting the very best academic and professional staff to play leadership roles in our organisation.

VALUES IN ACTION: OUR UNSW BEHAVIOURS

UNSW recognises the role of employees in driving a high-performance culture. The behavioural expectations for UNSW are below.

Values in Action
Our UNSW Behaviours

Demonstrates Excellence	Delivers high performance and demonstrates service excellence.
Drives Innovation	Thinks creatively and develops new ways of working. Initiates and embraces change.
Builds Collaboration	Works effectively within and across teams. Builds relationships with internal and external stakeholders to deliver on outcomes.
Embraces Diversity	Values individual differences and contributions of all people and promotes inclusion.
Displays Respect	Treats others with dignity and empathy. Communicates with integrity and openness.

OVERVIEW OF RELEVANT AREA AND POSITION SUMMARY

The Research Associate Position supports the research and teaching activities of the Capability Systems Centre within the School of Engineering and IT (SEIT). The Position will be involved in advancing the School's international profile by conducting scholarly research, contributing to the supervision of research students, and undertake range of teaching duties. The position will also contribute to the effective functioning of the School by undertaking a range of other administrative duties.

The role of Research Associate reports to Director, Capability Systems Centre, and has no direct reports.

RESPONSIBILITIES

Specific responsibilities for this role include:

1. Actively contribute to the research directions of the Capability Systems Centre, particularly in the areas of systems thinking, systems science, system dynamics modelling and simulation.
2. Conduct research as directed by the Director, Capability Systems Centre.
3. Work with stakeholders of studied systems to elicit objectives, threats and feasible management actions.
4. Develop and parameterize models that describe dynamics of studied systems and evaluate the efficacy of alternative strategies for their management.
5. Prepare reports summarizing the results gained from the research.
6. Prepare journal and conference publications based on the research.
7. Contribute to the preparation of research proposal submissions to external funding bodies.
8. Contribute to School teaching activities as required.
9. Interact with undergraduate and postgraduate students and assist in their supervision.
10. Undertake a range of administrative tasks as directed.
11. Contribute to the common activities of the School, Faculty and University.
12. 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.

SELECTION CRITERIA

1. A PhD, or close to completion, in computer science, systems science / dynamics / modelling, systems engineering, or related applied discipline.
2. Demonstrated experience in mathematical and statistical modelling including experience in writing computer code to develop optimization algorithms and undertake statistical analysis of complex datasets.
3. Demonstrated ability to use and apply systems modelling approaches, in particular system dynamics, agent-based modelling and discrete-event simulation, effectively to address complex problem solving in real life situations (Experience with hybrid-modelling approaches and coupled simulation-optimization frameworks will be an advantage).
4. Excellent written communication skills demonstrated by accepted journal articles, reports or relevant material.
5. Demonstrated ability to complete tasks within agreed time frames, with suitable supervision.

6. Excellent interpersonal skills and oral communication skills appropriate for interacting effectively with other team members and project stakeholders (Previous experience using structured decision making to engage with stakeholders is advantages).
7. Demonstrated ability to work, with suitable supervision, as a member of a small team showing initiative and taking direction as appropriate to the situation.
8. Ability to conduct high quality teaching in a University environment.
9. Knowledge of health and safety responsibilities and the ability and capacity to implement required UNSW health and safety policies and procedures.

It is not the intention of the position description to limit the scope or accountabilities of the position but to highlight the most important aspects of the position. The aspects mentioned above may be altered in accordance with the changing requirements of the role.