Position Description

Research Associate

Position Number: 72113 *Position Title: Research Associate* *Date Written: March 2019*	*Faculty / Division: Faculty of Engineering* *School / Unit: School of Electrical Engineering and Telecommunications* *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.

Works effectively within and across teams. Builds relationships with internal and external stakeholders to deliver on outcomes.

Values individual differences and contributions of all people and promotes inclusion.

Treats others with dignity and empathy. Communicates with integrity and openness.

OVERVIEW OF RELEVANT AREA AND POSITION SUMMARY

The School of Electrical Engineering and Telecommunications has a vibrant research culture reflected in the achievements of its academic staff, and is currently rated as a level 5 ERA School ("Well above world standard") in each of the 2010, 2012 and 2015 Excellence in Research Australia evaluations. The School enjoys a world-leading reputation for research excellence, with six IEEE Fellows among our 44 academic staff. According to the Shanghai Jiaotong 2016 rankings, EE&T@UNSW is placed first in Australia. Nationally, the School offers the most complete range of undergraduate and postgraduate electrical engineering and telecommunications programs, and is the largest of its kind. The School community has just moved into a completely refurbished building equipped with state-of-the-art facilities for teaching and research. With a team that is recognised for its teaching excellence and innovative research, the School is producing the next generation of innovative engineers who will be equipped with the skills and knowledge to make a positive impact on industry and society. http://www.engineering.unsw.edu.au/electrical-engineering/.

The Research Associate will predominantly work on the innovative research project in Wireless Communications Laboratory, which is funded by an ARC Discovery Project Grant entitled "Millimetre wave (mmWave) communications for mobile broadband systems. The purpose of the position is to undertake research designing and developing efficient pragmatic transceiver designs, channel estimation algorithms, and network optimisation tools to fulfil the formidable demand for future ultra-fast and highly reliable data communication services under the supervision of Professor Jinhong Yuan and Dr Derrick Wing Kwan Ng

The role of Research Associate reports to Professor Jinhong Yuan and has no direct reports.

RESPONSIBILITIES

Specific responsibilities for this role include:

- Conduct research in the area of mmWave communications such as channel estimation, precoding design and beam alignment algorithm for mmWave MIMO systems;
- Assist with the coordination of research activities and actively contribute to research outputs to meet project milestones;
- Contribute to the writing of scientific papers and reports for international journals and progress reporting to other researchers and industry partners;
- Contribute to the preparation of research proposal submissions to funding bodies and actively seek collaboration with industry partners, as appropriate;
- Assist with the supervision and mentorship of research students in the research area, where required;
- Perform limited administrative and management work associated with the group program of research;
- Engage in the wider research and scholarly activities of the research group, School and institute;
- Participate in and/or present at conferences and/or workshops relevant to the project as required;

- 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

- A PhD (or soon to be awarded) in Electrical or Electronics Engineering, with Telecommunications and Signal Processing background, or related area;
- Demonstrated ability to conduct independent research with limited supervision Demonstrated track record of high-quality publications and conferences presentations in the related area relative to opportunity;
- Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships.
- Experience with software packages such as Matlab, C++.
- Strong interpersonal skills with demonstrated ability to communicate and interact with a diverse range of stakeholders and students;
- Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training.

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.