Position Description

Senior Research Fellow
Ethical Autonomous Systems

Position Number: 00030766 *Position Title: Lecturer* *Date Written: March 2020*	*Faculty / Division: UNSW Canberra* *School / Unit: School of Engineering and IT (SEIT)* *Position Level: Level B/C*

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.
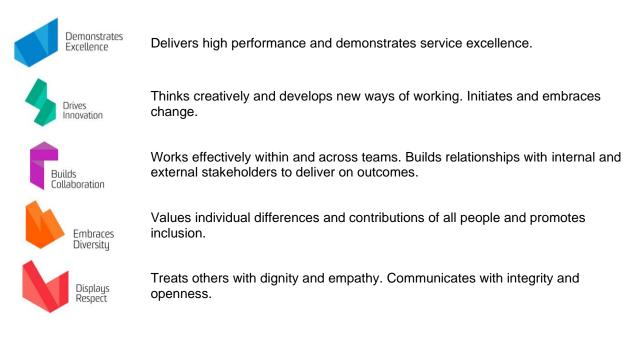
Following extensive consultation in 2015, we identified three strategic priority areas. Firstly, a drive for academic excellence in research and education. Universities are often classified as 'research intensive' or 'teaching intensive'. UNSW is proud to be an exemplar of both. We are amongst a limited 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.

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 Senior Research Fellow Position is situated within the Values in Defence & Security Technology (VDST) Group, housed in the School of Engineering and Information Technology (SEIT) at UNSW Canberra. The Position will undertake research focused on enhancing the ethical and legal interpretability of autonomous systems, conducted in collaboration with a Defence partner. The Project aim is to provide value-sensitive input to guide the responsible design and development of future weapons.

The Senior Research Fellow will, depending on research background, investigate how an ethical intent and action can be modelled or ask questions such as: *"Can robots have emotions; can robots recognise surrender; can robots be morally prejudiced in war?".* The Senior Research Fellow will also be required to travel to attend meetings both nationally and internationally as well as present findings at national and/or international conferences.

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

The Senior Research Fellow Position reports to the Director of the Values in Defence & Security Technology Group.

RESPONSIBILITIES

Specific responsibilities for this role include:

1. Successfully complete and manage pre-defined collaborative and co-authored research on autonomy in the military, including timely publication of results in peer reviewed journals and international conferences.

2. Develop and contribute to ideas for new research projects, work independently to identify ways in which disruptive technologies are likely to impact soldiers, the military and technical design.

3. As appropriate, participate in the definition of research directions and actively contribute to the coordination of research activities and research outputs to meet milestones.

4. As appropriate, independently seek and apply for external funding opportunities to grow and enhance the research of the VDST, including seeking collaboration with external stakeholders.

5. Supervise and/ or Co-supervise postgraduate research and offer expert advice within the field of the staff member's area of research.

6. Prepare independently and collaboratively research proposal submissions to external funding bodies.

7. Attend domestic and international meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental meetings.

8. Manage relationships with external stakeholders upon the advice of the Group Director of VDST.

9. Make a high-quality contribution to the development of workshops and other research-related administrative efforts, as directed by the Director of VDST.

10. Teaching responsibilities as negotiated with the Chief Investigator and the School.

11. Ensure hazards and risks are identified and controlled for tasks, projects and activities that pose a health and safety risk within your area of responsibility.

Appointment at Level C, the position holder will undertake the above duties with greater influence and autonomy and possess greater expertise and experience relevant to the position. Appointment at level C is based upon successful previous employment at level B.

SELECTION CRITERIA

At Level B:

1. PhD in the Humanities/Social Sciences/Socio-technical field, or an equivalent combination of qualifications and experience appropriate to level of appointment, in an area relevant to the ethics and law of military robots/AI/autonomous systems.

2. A demonstrated ability to undertake an internationally recognised analytical research program on the ethics/law autonomous systems or closely related area, demonstrated by achievement across (one or both of) the following: Practical understanding of, or training in, a relevant technical field (AI, machine learning, etc) and/or practical experience in a relevant military field.

3. A track record of relevant publication in high quality refereed journal articles and/or military outlets and evidence of applications to/involvement in research projects sponsored by external agencies and/or industry.

4. Strong interpersonal skills with good oral communication ability, demonstrated by effectively influencing others.

5. Ability to produce co-authored deliverables to fixed deadlines and willingness to co-publish in an interdisciplinary research group environment.

6. Ability and willingness to contribute to the development of workshops, policy briefs and other aspects of research-related administration as required by the Research Group Director of VDST and appropriate to level of appointment.

7. Demonstrated ability to deliver high quality teaching.

8. Ability and capacity to implement required UNSW health and safety policies and procedures.

At Level C:

1. PhD in the Humanities/Social Sciences/Socio-technical field, or an equivalent combination of qualifications and experience appropriate to level of appointment, in an area relevant to the ethics and law of military robots/AI/autonomous systems.

2. Demonstrated experience undertaking an internationally recognised analytical research program on the ethics/law autonomous systems or closely related area, demonstrated by achievement across (one or both of) the following: Practical understanding of, or training in, a relevant technical field (AI, machine learning, etc) and/or practical experience in a relevant military field.

3. A well-developed track record of relevant publication in high quality refereed journal articles and/or military outlets and a track record of successfully attracting external research funding.

4. Research supervision, including the ability to attract higher degree research students and the ability to complete or be on track to complete approximately 2 higher degree research students in a 3-year window.

5. Strong interpersonal skills with excellent oral communication, demonstrated by effectively influencing others and building relations with internal and external stakeholders, preferably in a military-academic context.

6. Ability to produce co-authored deliverables to fixed deadlines and co-publish in an interdisciplinary research group environment, demonstrated by experience working on externally funded projects and co-publication with research partners.

7. Demonstrated ability in research supervision, including the ability to attract higher degree research students

8. Demonstrated ability to deliver high quality teaching.

9. 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.*