

College/Division:	ANU College of Engineering and Computer Science
Faculty/School/Centre:	Research School of Computer Science
Position Title:	Research Fellow
Classification:	Academic Level B
Position No:	526443
Responsible to:	Professor, Marcus Hutter
Number of positions that report to this role:	N/A
Delegation(s) Assigned:	N/A

PURPOSE STATEMENT:

The ANU College of Engineering and Computer Science (CECS) is one of the premier engineering and computer science research institutions in the world. Comprising the Research School of Computer Science and the Research School of Engineering, both are recognised as research leaders in their respective areas continuing the tradition of excellence in research and research-led education.

The purpose of this appointment is to:

1. Strengthen the Research School of Computer Science as an international centre of excellence in the area of Artificial Intelligence and Machine Learning.
2. Conduct research on the foundations of universal induction and intelligent agents.
3. Contribute to the objectives of various externally funded research projects related to Universal AI.

KEY ACCOUNTABILITY AREAS

Position Dimension & Relationships:

The position is associated with the Artificial Intelligence Research group within the Research School of Computer Science. The position holder will be member of the Intelligent Agents team lead by Professor Marcus Hutter. There is funding from multiple sources, all more or less related to the theory of Universal AI. The research agenda is rather flexible but should be relevant to one of the following areas:

- Unifying foundations for intelligent agents
- Safety of super-intelligent agents
- Optimal ethical decision making

Technically the research will be in some of the following areas: artificial intelligence, Bayesian statistics, machine learning, universal forecasting, information theory, agent/control theory, complexity theory, decision theory, philosophy of science. It is expected that the applicant has and/or quickly acquires expertise in some of these areas.

There is the option to (co)teach (under)graduate classes.

Role Statement:

In their role as ANU academic level B in the Research School of Computer Science the appointee will be expected to:

1. Conduct research in the area of the project both as a member of a team and independently.
2. Produce publications in refereed journals and/or conferences of international standard.
3. Be involved in professional activities including attendance at international conferences in the research area of the project.
4. Collaborate with other researchers at an institutional, national and international level.
5. Supervise research students at postgraduate, honours, and undergraduate level in the research area of the

project as appropriate.

6. Occasionally contribute to the teaching program within the field of the staff member's research.
7. Actively contribute to all aspects of the operation of the School.
8. Maintain high academic standards in all education, research and administration endeavours.
9. Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
10. Undertake other duties as required consistent with the classification of this position.

SELECTION CRITERIA:

1. A PhD, or near completion of a PhD, in mathematics, physics, computer science, engineering, or related or a related area.
2. Research achievements demonstrated by published works in refereed journals and/or conferences of international standing.
3. Evidence of excellent mathematical research skills in some of the following research areas: machine learning, (algorithmic) information theory, (Bayesian) statistics, Artificial Intelligence.
4. The ability to supervise and graduate high quality PhD/Masters research students.
5. Evidence of creativity in identifying and solving research problems.
6. Ability to communicate freely, and to carry out independent research with minimal supervision on a fundamental research project.
7. Sound written and oral communication skills in English.
8. Commitment to ethical and professional standards and their application in a university context.

Supervisor Signature:		Date:	1 September 2018
Printed Name:	Marcus Hutter	Uni ID:	U4350841

References:

[General Staff Classification Descriptors](#)

[Academic Minimum Standards](#)

Pre-Employment Work Environment Report

Position Details

College/Div/Centre	CECS	Dept/School/Section	RSCS
Position Title	Research Fellow	Classification	Academic Level B
Position No.	TBC	Reference No.	N/A

In accordance with the Occupational Health and Safety Act 1991 the University has a duty of care to provide a safe workplace for all staff.

- This form must be completed by the supervisor of the advertised position and forwarded with the job requisition to Appointments and Promotions Branch, Human Resources Division. Without this form jobs cannot be advertised.
- This form is used to advise potential applicants of work environment issues prior to application.
- Once an applicant has been selected for the position consideration should be given to their inclusion on the University's Health Surveillance Program where appropriate – see . http://info.anu.edu.au/hr/OHS/_Health_Surveillance_Program/index.asp
Enrolment on relevant OHS training courses should also be arranged – see http://info.anu.edu.au/hr/Training_and_Development/OHS_Training/index.asp
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see ' Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	x		laboratory work		
lifting, manual handling			work at heights		
repetitive manual tasks			work in confined spaces		
catering / food preparation			noise / vibration		
fieldwork & travel			electricity		
driving a vehicle					
NON-IONIZING RADIATION			IONIZING RADIATION		
solar			gamma, x-rays		
ultraviolet			beta particles		
infra red			nuclear particles		
laser					
radio frequency					
CHEMICALS			BIOLOGICAL MATERIALS		
hazardous substances			microbiological materials		
allergens			potential biological allergens		
cytotoxics			laboratory animals or insects		
mutagens/teratogens/ carcinogens			clinical specimens, including blood		
pesticides / herbicides			genetically-manipulated specimens		
			immunisations		

OTHER POTENTIAL HAZARDS (please specify):

Supervisor's Signature:		Print Name:	Marcus Hutter	Date:	
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