Australian National University

Position Description

College/Division:	ANU College of Science (CoS)
Faculty/School/Centre:	Mathematical Sciences Institute (MSI)
Department/Unit:	Institute for Waters Futures (IWF)
Position Title:	Research Fellow / Lecturer
Classification:	Academic Level B
Position No:	
Responsible to:	Associate Director - Research

PURPOSE STATEMENT:

A Level B Academic (Teaching and Research) will contribute to the strategic goals of the Mathematical Sciences Institute (MSI) through excellence in independent research, undergraduate and graduate teaching, higher degree student supervision and outreach activities.

The Research Fellow/Lecturer's research will support the Institute for Water Futures (IWF). IWF is an interdisciplinary Institute operating across three colleges, three schools and two institutes at the Australian National University (ANU). The IWF brings together experts from sciences, social sciences, humanities and public policy from across the ANU and has established research partnerships with CSIRO, state and federal water agencies, and other research organisations.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

A level B Academic is responsible for contributing to enhancing the academic discipline and the strategic direction of the school, through establishing and maintaining excellence in research, teaching and professional activities within the University, and within the community, at both a scholarly and general level. The Research Fellow/Lecturer will work under the broad direction of the Associate Director (Research) and will work collaboratively with academic, professional staff and students within the MSI and IWF. The Research Fellow/Lecturer is expected to interact with and build research networks with external stakeholders, within the Institute, College and broader University.

Role Statement:

Specific duties required of a Level B Academic may include:

- Undertake independent research in the area of Systems Modelling and Uncertainty Quantification with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national and/or international level. This includes working as part of a team on an externally funded project subject to deadlines and being primarily responsible for project delivery in some areas.
- Actively seek and secure external funding including the preparation and submission of research proposals to external funding bodies.
- Build research networks to interact and actively seek collaborative research opportunities, including (but not limited to) joint student supervision, offering training courses and exploring joint research projects.
- Contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations with students, acting as subject coordinators and the initiation and development of course/subject material.
- Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
- Co- supervise Postdoctoral Fellows and research support staff in your research area.
- Proactively contribute to all aspects of the operation of the School and College. This may include representation through committee memberships.
- Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
- Maintain high academic standards in all education, research and administration endeavours.
- Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity.
- Other duties as required consistent with the classification level of the position.

Skill Base

A Level B Academic shall have qualifications and/or experience recognised by the institution as appropriate for the relevant discipline area.

In many cases a position at this level will require a doctoral or masters qualification or equivalent accreditation and standing.

In determining experience relative to qualifications, regard is had to teaching experience, experience in research, experience outside tertiary education, creative achievement, professional contributions and/or to technical achievement.

SELECTION CRITERIA:

1. A PhD in Mathematics or a related area, with a track record of independent research in the field of Uncertainty Quantification as evidenced by publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, and invitations to present at conferences.

2. Evidence of experience that is relevant to Systems modelling and uncertainty quantification research in some or all of the following areas: Systems Modelling, Uncertainty Quantification, Multi-fidelity Models, Optimization under uncertainty, Sensitivity Analysis and Dimension Reduction with the ability to articulate and prosecute innovative research in this field. Specific research experience in Hydrology or Computational Fluid Dynamics would be an advantage but is not essential.

3. A demonstrated ability and commitment to apply for competitive external funding to support individual and collaborative research activities.

4. Evidence of an ability and willingness to teach at all levels.

5. An ability to supervise and graduate high quality PhD/Masters research students.

6. The demonstrated ability to work as part of a team, contributing to team management and meeting deadlines for project elements.

7. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.

8. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Delegate Name:		Date: Position:	

References:

Academic Minimum Standards

Australian National University

Position Description

College/Division:	ANU College of Science (CoS)
Faculty/School/Centre:	Mathematical Sciences Institute (MSI)
Department/Unit:	Institute for Water Futures (IWF)
Position Title:	Fellow / Senior Lecturer
Classification:	Academic Level C
Position No:	
Responsible to:	Associate Director - Research

PURPOSE STATEMENT:

A Level C Academic (Teaching and Research) will make a significant contribution to the strategic goals of the Mathematical Sciences Institute (MSI) through excellence in independent research, undergraduate and graduate teaching, higher degree student supervision and outreach activities.

The Fellow/Senior Lecturer's research will support the Institute for Water Futures (IWF). IWF is an interdisciplinary Institute operating across three colleges, three schools and two institutes at the Australian National University (ANU). The IWF brings together experts from sciences, social sciences, humanities and public policy from across the ANU and has established research partnerships with CSIRO, state and federal water agencies, and other research organisations.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

A Level C Academic is responsible for enhancing the academic discipline and contributing to the strategic direction of the school, through maintaining excellence in research, teaching and professional activities within the University, and within the community at both a scholarly and general level.

Role Statement:

Specific duties required of a Level C Academic may include:

- Undertake high impact independent research in the area of Systems Modelling and Uncertainty Quantification with a view to publishing original and innovative results in international refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national and/or international level. This includes working as part of a team on an externally funded project subject to deadlines and being primarily responsible for significant project deliveries.
- Actively seek and secure external funding including the preparation and submission of research proposals to external funding bodies.
- Build research networks to interact and actively seek collaborative research opportunities, including (but not limited to) joint student supervision, offering training courses and exploring joint research projects.
- Make a strong contribution to the teaching activities within the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations with students, acting as a subject coordinator, the initiation and development of course/subject material and actively lead overall curriculum development in the discipline.
- Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Supervision of research students.
- Co- lead, mentor and develop early career academic and research support staff in your research area.
- Proactively contribute to all aspects of the operation of the School and College. This may include representation through committee memberships
- Lead outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
- Maintain and actively promote high academic standards in all education, research and administration endeavours.
- Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity.
- Other duties as required consistent with the classification level of the position.

Skill Base

A Level C Academic will normally have advanced qualifications and/or recognised significant experience in a relevant discipline area. A position at this level will require a doctoral qualification or equivalent accreditation and standing.

In determining experience relative to qualifications, regard is had to teaching experience, experience in research, experience outside tertiary education, creative achievement, professional contributions and/or to technical achievement.

In addition a position at this level will normally require a record of demonstrable scholarly and professional achievement in the relevant discipline area.

SELECTION CRITERIA:

1. A PhD in Mathematics or a related area, with a strong track record of independent research in the field of Uncertainty Quantification as evidenced by publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, and invitations to present at conferences.
2. A track record of research in Systems modelling and uncertainty quantification research in some or all of the following areas: Systems Modelling, Uncertainty Quantification, Multi-fidelity Models, Optimization under uncertainty, Sensitivity Analysis and Dimension Reduction, with the demonstrated ability to articulate and prosecute innovative research in this field.
3. A record of winning bids for competitive external funding to support individual and collaborative research activities.
4. Evidence of effective teaching at all levels and of the ability to contribute to setting the education agenda of the School in the area of Computational and Applied Mathematics.
5. A track record of successfully supervising and graduating high quality PhD/Masters research students.
6. Demonstrated ability to lead and work as part of a team, significantly contributing to team management, meeting deadlines and being primarily responsible for significant project deliveries.
7. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
8. A demonstrated high level understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Delegate Name :		Date: Position:	

References:

Academic Minimum Standards

Pre-Employment Work Environment Report

Position Details

College / Div / Centre	College of Science	**Dept / School / Section**	MSI
Position Title	Research Fellow/Fellow	**Classification**	Academic B/C
Position No.		**Reference No.**	

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	☒	☐	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:		**Date:**	