POSITION DESCRIPTION

Academic Position *(in addition to the Position Classification Standards)*

Position Title:	Associate Research Fellow
Level:	Level A
Load:	1.O FTE
Type/Duration:	Fixed Term until July 2016
Faculty:	Faculty of Science, Medicine and Health (SMAH)
Division:	Chemistry
Location:	Wollongong Campus

Position Environment:

The Faculty of Science, Medicine and Health (SMAH) is committed to quality outcomes delivered via a sustainable model where development and innovation are key elements of all that we do.

SMAH is one of UOW's five Faculties and incorporates the Schools of Chemistry, Biological Sciences, Earth and Environmental Science, Nursing and Midwifery, and the School of Medicine (SOM).

The School of Chemistry has internationally and nationally competitive research programs in both pure and applied chemistry. Major research areas include targeted drug design and synthesis, development of NMR spectroscopy and mass spectrometry for studying biological processes, atmospheric chemistry, food chemistry, analytical and environmental chemistry, nanomaterials and intelligent polymers.

Primary purpose of the position:

To undertake tailoring and verification of regional metrological and chemical transport models for application within New South Wales.

Major Accountabilities/Responsibilities:

Responsibilities		Outcome
1.	Liaise with NSW Office of Environment and Heritage (OEH) to gather information on OEH meteorological and chemical transport modelling capabilities and business requirements	Documented understanding of OEH business needs and resources and available data sets for regional modelling
2.	Identify data sets available for input into regional meteorological and chemical transport modelling and use in model verification	Documented inventory of the data sets available for input into regional meteorological and chemical transport modelling and for use in model verification
3.	Establish model evaluation frameworks to evaluate the performance of regional meteorological and chemical transport modelling	Documented evaluation framework and required procedures or tools for verifying the performance of regional meteorological and chemical transport modelling outputs
4.	Undertake regional meteorological modelling for the NSW Greater Metropolitan Region (GMR), optimise model configurations and verify model performance	Regional meteorological model (s), optimised and verified for use in the NSW GMR
5.	Targeted review of open source chemical transport models and identification of a model suitable for application within NSW	Open source chemical transport model suitable for application within NSW identified

6.	Undertake regional chemical transport modelling for the NSW GMR (using source and emissions data provided by OEH), optimise model configuration and verify model performance	Regional chemical transport model, populated, optimised and verified for use in the NSW GMR.
7.	Support the deployment of regional meteorological and chemical transport models for OEH staff	Deployment of regional meteorological and chemical transport models for OEH staff
8.	Observe principles and practices of Equal Employment Opportunity and have WH&S responsibilities, accountabilities and authorities as outlined in the WHS Roles and Responsibilities Document	Ongoing
9.	Supervisory roles: Communicate and consult with staff on workplace and staffing matters.	To foster direct relationships with staff and enhance engagement with the organisation.

Inherent Requirements:

This position description outlines the major accountabilities/responsibilities and the selection criteria against which you will be assessed as suitable for the position. As such there will be specific job requirements that we refer to as Inherent Requirements.

Inherent Requirements refer to your ability to:

- Perform the essential duties and functional requirements of the job;
- Meet the productivity and quality requirements of the position;
- Work effectively in the team or other type of work organisation concerned; and
- Do the job without undue risk to your own or others health, safety and welfare at work.

If you have any injuries, illness, disorder, impairment, condition or incapacity that may affect your ability to perform the inherent requirements of the position, we encourage you to discuss this with the University to assist in the process of identifying reasonable adjustments to enable you to perform the duties of the position. The University wants to place you in the best situation to use your skills effectively in the position you are applying for at the University.

Reporting Relationships:

Position Reports to:	Dr Clare Murphy
The position supervises the following positions:	Nil

Key Relationships:

Contact/Organisation:	Purpose & Frequency of contact
Centre for Atmospheric Chemistry	Maintain effective opportunities with those working in similar areas of research. Approximately weekly meetings.
NSW Office of Environment and Heritage (OEH), Climate and Atmospheric Science (CAS) Branch	Regular contact with CAS staff who are conducting parallel areas of research. Monthly meetings.

Key Challenges:

- Understanding OEH's business needs in regard to regional airshed modelling, and delivery of suitable models for application by OEH staff to meet the organisation's requirements.
- Efficient integration of available datasets within selected regional meteorological and chemical transport models, and optimisation and verification fo such models for application within NSW.

SELECTION CRITERIA - Knowledge & Skills:

Essential:

- Knowledge of chemical and physical processes that drive air pollutant formation, transport and removal
- Software programming capabilities (eg FORTRAN, R, C, scripting) in the Linux environment.
- Good technical writing and communication skills as evidenced from recent publications and presentations
- Ability to work effectively as part of a research team and also independently and unsupervised.

SELECTION CRITERIA - Education & Experience:

Essential:

- A PhD in Atmospheric Science, Atmospheric Chemistry or a similar discipline (or experience deemed to be equivalent)

Desirable

- Experience in the application of numerical meteorological models e.g. Weather Research and Forecasting (WRF); Cubic Conformal Atmospheric Model (CCAM), Unified Model (UM)
- Experience in the application of chemical transport models, e.g. WRF coupled with chemistry (WRF-Chem), Chemical Transport Model (CTM), Community Multi-scale Air Quality (CMAQ), Comprehensive Air Quality Model with Extensions (CAMx).

Personal Attributes:

- Ability to meet deadlines
- Good written and oral communication skills
- Ability to work with other researchers

Special Job Requirements:

May be required to work at OEH's offices in Sydney for short periods of time during collaborative components of the research project.

Organisational Chart:

Available upon request

Approval:

Approved by Head of Unit:

Date:

Approved by Human Resources: _____

Date: _____

POSITION CLASSIFICATION STANDARD - Research Only
Level: A
Title: Associate Fellow

Description

A position classification standard describes the broad categories of responsibility attached to research-only academic staff at different levels. The standards are not exhaustive of all tasks in research-only academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. The standards provide an adequate basis to differentiate between the various levels of employment and define the broad relationships between classifications.

Progression through an academic career will normally be based on research, teaching, administrative functions and contribution to the profession. The balance of functions will vary according to level and position over time. It is only in exceptional circumstances that promotion would be solely on the research only position classification standards.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level A research-only academic is expected to contribute towards the research effort of the institution, and to develop her/his research expertise through the pursuit of defined properties relevant to the particular field of research.

Specific Duties

Specific duties required of a Level A research-only academic may include

- The conduct of research under limited supervision either as a member of a team or, where appropriate, independently, and the production or contribution to the production of conference and seminar papers and publications from that research.
- Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise.
- Limited administrative functions primarily connected with the area of research of the academic.
- Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff.
- Occasional contributions to teaching in relation to his/her research project(s).
- Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures.
- Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental and/pr faculty meetings and/or membership of a limited number of committees.
- Advice within the field of the staff member's research to postgraduate students.
- A Level A research-only academic shall work with support, guidance and/or direction from staff classified at Level B and above and with an increasing degree of autonomy as the research academic gains in skill and experience.

Skill Base

A Level A research-only academic will normally have completed four years of tertiary study in the relevant discipline or have equivalent qualifications or research experience. In many cases a position at this level will require an honours degree or higher qualifications or equivalent research experience. Research experience may have contributed to or resulted in publications, conference papers, reports or professional or technical contributions which give evidence of research potential.