



## POSITION DESCRIPTION

School of Earth Sciences  
Faculty of Science

### Lecturer / Senior Lecturer in Paleoclimate Modelling

POSITION NO	0045562
CLASSIFICATION	Level B / Level C
SALARY	Level B \$98,775 - \$117,290 per annum Level C \$120,993 - \$139,510 per annum Level of appointment is subject to qualification and experience
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full time (1.0 FTE)
BASIS OF EMPLOYMENT	Continuing
OTHER BENEFITS	<a href="http://about.unimelb.edu.au/careers/working/benefits">http://about.unimelb.edu.au/careers/working/benefits</a>
HOW TO APPLY	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Professor David Phillips Tel +61 3 8344 9866 Email: <a href="mailto:head@unimelb.edu.au">head@unimelb.edu.au</a>  <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our website:  
[about.unimelb.edu.au/careers](http://about.unimelb.edu.au/careers)

## ***Position Summary***

As part of the University of Melbourne's 2020 Driving Research Momentum strategy we are seeking early and mid-career Lecturers / Senior Lecturers in the School of Earth Sciences.

You will be highly qualified and motivated with research and teaching expertise in the interdisciplinary area of paleoclimate modelling. We are seeking an individual with research interests primarily in the areas of paleoclimate science and computational modelling of paleoclimates. The ideal candidate will sit at the interface between the School's Climate and Weather and Geology disciplines and use a combination of climate and paleoclimate data to simulate past climate states and/or future climate change parameters. You will be expected to undertake independent research, supervise research students and teach and administer components of the School's Geoscience undergraduate and graduate programs.

We particularly welcome applications from members of under-represented groups and/or individuals seeking flexible work arrangements.

The successful candidate will be appointed at either Academic Level B or Level C dependent upon the Selection Panel's assessment of the individual's application.

## ***1. Key Responsibilities***

### **1.1 RESEARCH AND RESEARCH TRAINING**

The appointee will be expected to:

- ▶ Conduct a program of research that contributes to both the Climate and Weather and Geology disciplines in the School of Earth Sciences, specifically contributing to the area of paleoclimate modelling.
- ▶ Publish research findings in international refereed journals and present results at seminars, conferences, and meetings.
- ▶ Conduct of research that contributes to the School's strategic research priorities in climate science and paleoclimate science.
- ▶ Engage with internal and external collaborators and stakeholders, as appropriate, including those in the Victorian Institute of Earth and Planetary Institute (VIEPS).
- ▶ Actively supervise research students (honours, masters, and/or PhD students).
- ▶ Prepare research proposals for submission to external funding bodies to successfully obtain external funding to support their research.
- ▶ Engage with the larger community via interactions with government, industry, the media, public lectures, and/or outreach activities.

In addition to 1.1 an applicant appointed at Level C will be expected to:

- ▶ Significantly contribute to research projects including leadership of research teams or management of projects where applicable.

## 1.2 TEACHING AND LEARNING

The appointee will be expected to:

- ▶ Actively participate in the School's undergraduate and graduate teaching programs, including the preparation and delivery of lectures, practicals and tutorials.
- ▶ Actively contribute to the development and review of curriculum, along with familiarisation with the role of multimedia in relation to the curriculum, and develop high quality, innovative subject material.
- ▶ Set, participate in, and mark student assessments.
- ▶ Teach subjects to a standard that delivers a high-quality learning experience.
- ▶ Provide academic mentoring and assistance to students.

## 1.3 LEADERSHIP AND SERVICE

The appointee will be expected to:

- ▶ Contribute to a range of administrative functions, including teaching responsibilities and the conduct of the academic affairs of the School.
- ▶ Active participation in School and/or Faculty meetings and/or the committees that have responsibility for the academic affairs of the School.
- ▶ Involvement in professional activity in the discipline.
- ▶ Actively contribute to School activities such as Open day to promote student engagement.

## 1.4 OTHER

The appointee will be expected to:

- ▶ Actively participate in the University Performance Development Framework,
- ▶ Ensure an up-to-date record of University compliance courses, such as, but not limited to, Appropriate Workplace Behaviour, PDF for Staff and Supervisors, OH &S training courses.
- ▶ Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 4.

# 2. Selection Criteria

## ESSENTIAL

- ▶ A PhD in atmospheric science, computational science, geology or a related discipline.
- ▶ An established track record of high quality publications in leading international journals, relative to opportunity, in the general areas of paleoclimate modelling.
- ▶ A demonstrated capacity to use climate/paleoclimate proxy data and general circulation models and to simulate climate and its variability, in support of the School's research priorities.
- ▶ A demonstrated capacity to establish collaborations and engage with a broad range of researchers nationally and internationally.
- ▶ Evidence of the ability to attract external research funding from national competitive research bodies and other sources, including industry.

- ▶ Evidence of the ability to teach undergraduate and/or graduate courses on discipline topics, including paleoclimate and other multi-disciplinary aspects of climate science.
- ▶ A demonstrated capacity to supervise undergraduate and graduate research students.
- ▶ Excellent oral and written communication skills in English
- ▶ A potential or demonstrated capacity to initiate or contribute to service activities within the School and the broader professional community.
- ▶ Excellent interpersonal and organisational skills including the ability to project manage and meet deadlines.

**IN ADDITION TO 2.1, TO BE APPOINTED AT LEVEL C, APPLICANTS MUST BE ABLE TO DEMONSTRATE:**

- ▶ An aptitude for independent research with a strong record of publication, a record of gaining external competitive research grants, commensurate with experience and opportunities, and the ability to develop research links with other departments/groups nationally and/or internationally.
- ▶ A track record of success in teaching at university level, the ability to teach large undergraduate classes, and the ability to develop and teach relevant discipline subjects at a graduate level.
- ▶ A demonstrated ability to provide national leadership in one or more of the School's strategic research goals.
- ▶ Demonstrated ability to work collaboratively and to contribute to the organisational development of the School, Faculty and the University.

**2.1 DESIRABLE**

- ▶ A potential or demonstrated capacity to conduct research activities in collaboration with industry and/or government.
- ▶ Experience engaging with the larger community via interactions with government, industry, the media, public lectures, and/or outreach activities.
- ▶ Experience using high performance computing and the analysis of large datasets.

### ***3. Equal Opportunity, Diversity and Inclusion***

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the University's People Strategy 2015-2020 and policies that address diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to service for excellence and reach the targets of Growing Esteem.

## **4. Occupational Health and Safety (OHS)**

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

<http://safety.unimelb.edu.au/topics/responsibilities/>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

## **5. Other Information**

### **ORGANISATION UNIT**

The School of Earth Sciences has 49 Academic and Research staff and 9 Professional staff, involved in teaching and research in various branches of the solid and atmospheric Earth Sciences. The School operates a comprehensive programme of Tertiary Education at both undergraduate and postgraduate levels and undertakes extensive research programs of fundamental and applied significance.

This position will be embedded across the School's Geology and Climate and Weather disciplines.

The School is also a partner in the Australian Research Council's Centre of Excellence for Climate Extremes (CLEX). CLEX is a major 7-year initiative supported by the Australian Research Council. It is a consortium of five Australian universities with a suite of outstanding national and international Partner Organisations as collaborators. The Centre of Excellence research agenda encompasses interconnected research programs focused on Heatwaves, Rainfall, Drought and Climate Variability.

Information on the School of Earth Sciences can be found at:

<http://www.earthsci.unimelb.edu.au/>

### **5.1 BUDGET DIVISION**

<http://www.science.unimelb.edu.au>

Science at the University of Melbourne is the most highly ranked Faculty of Science in Australia.\* Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly

relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 50,000 alumni and is one of the largest faculties in the University comprising seven schools: BioSciences, Chemistry, Earth Sciences, Ecosystem and Forest Sciences, Geography, Mathematics and Statistics, and Physics.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, Office for Environmental Programs and home to numerous Centres.

Science manages more than \$290 million of income per annum, with a staff base in the order of 270 professional staff, and more than 580 academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 8,600 undergraduate and 2,440 graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science). The Faculty of Science is a leader in research, contributing approximately \$70 million in HERDC income per annum. The Faculty of Science is highly research focused, performing strongly in the ARC competitive grants schemes, often out-performing the national average. The Faculty of Science is currently growing its competitiveness and standing in the NHMRC space.

The Faculty of Science provides community services and industry partnerships based on a solid foundation of research in the pure and applied sciences. The Faculty has an endowment of approximately \$56 million. The annual income from the endowment supports more than 120 prizes, scholarships and research awards.

\*Figures from the latest available data for 2015, including published international rankings data.

## 5.2 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at <http://about.unimelb.edu.au/careers>

## 5.3 GROWING ESTEEM, THE MELBOURNE CURRICULUM AND RESEARCH AT MELBOURNE: ENSURING EXCELLENCE AND IMPACT TO 2025

Growing Esteem describes Melbourne's strategy to achieve its aspiration to be a public-spirited and internationally-engaged institution, highly regarded for making distinctive

contributions to society in research and research training, learning and teaching, and engagement. <http://about.unimelb.edu.au/strategy-and-leadership>

The University is at the forefront of Australia's changing higher education system and offers a distinctive model of education known collectively as the Melbourne Curriculum. The new educational model, designed for an outstanding experience for all students, is based on six broad undergraduate programs followed by a graduate professional degree, research higher degree or entry directly into employment. The emphasis on academic breadth as well as disciplinary depth in the new degrees ensures that graduates will have the capacity to succeed in a world where knowledge boundaries are shifting and reforming to create new frontiers and challenges. In moving to the new model, the University is also aligning itself with the best of emerging European and Asian practice and well-established North American traditions.

The University's global aspirations seek to make significant contributions to major social, economic and environmental challenges. Accordingly, the University's research strategy *Research at Melbourne: Ensuring Excellence and Impact to 2025* aspires to a significant advancement in the excellence and impact of its research outputs.

<http://research.unimelb.edu.au/our-research/research-at-melbourne>

The strategy recognises that as a public-spirited, research-intensive institution of the future, the University must strive to make a tangible impact in Australia and the world, working across disciplinary and sectoral boundaries and building deeper and more substantive engagement with industry, collaborators and partners. While cultivating the fundamental enabling disciplines through investigator-driven research, the University has adopted three grand challenges aspiring to solve some of the most difficult problems facing our world in the next century. These Grand Challenges include:

- ▶ Understanding our place and purpose – The place and purpose grand challenge centres on understanding all aspects of our national identity, with a focus on Australia's 'place' in the Asia-Pacific region and the world, and on our 'purpose' or mission to improve all dimensions of the human condition through our research.
- ▶ Fostering health and wellbeing – The health and wellbeing grand challenge focuses on building the scale and breadth of our capabilities in population and global health; on harnessing our contribution to the 'convergence revolution' of biomedical and health research, bringing together the life sciences, engineering and the physical sciences; and on addressing the physical, mental and social aspects of wellbeing by looking beyond the traditional boundaries of biomedicine.
- ▶ Supporting sustainability and resilience – The sustainability and resilience grand challenge addresses the critical issues of climate change, water and food security, sustainable energy and designing resilient cities and regions. In addition to the technical aspects, this grand challenge considers the physical and social functioning of cities, connecting physical phenomena with lessons from our past, and the implications of the technical solutions for economies, living patterns and behaviours.

Essential to tackling these challenges, an outstanding faculty, high performing students, wide collaboration including internationally and deep partnerships with external parties form central components of Research at Melbourne: Ensuring Excellence and Impact to 2025.

## 5.4 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at <http://www.unimelb.edu.au/governance>