Research Fellow in Precipitation Dynamics and Processes

POSITION NO
0052157

CLASSIFICATION
Research Fellow Level A

SALARY
$80,258 - $108,906 p.a. (pro rata for part time)
(*PhD entry level $101,460 p.a.)

SUPERANNUATION
Employer contribution of 17%

WORKING HOURS
Full-Time (1.0 FTE)

BASIS OF EMPLOYMENT
Fixed term for 2 years

FLEXIBLE EMPLOYMENT
The Faculty of Science is strongly committed to supporting diversity and flexibility in the workplace. Applications for part-time or other flexible working arrangements will be welcomed and will be fully considered subject to meeting the inherent requirements of the position.

OTHER BENEFITS
https://about.unimelb.edu.au/careers/staff-benefits

HOW TO APPLY
Online applications are preferred. Go to http://about.unimelb.edu.au/careers, select the relevant option (‘Current Staff’ or ‘Prospective Staff’), then find the position by title or number.

CONTACT FOR ENQUIRIES ONLY
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Please do not send your application to this contact

For information about working for the University of Melbourne, visit our website: about.unimelb.edu.au/careers
Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi Wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

Position Summary

We seek a highly qualified and motivated candidate with experience in atmospheric science to undertake a postdoctoral position to study heavy precipitation events in southeastern Australia wintertime storms. The appointee will employ field observations, remote sensing data and high-resolution simulations to investigate the roles of synoptic, mesoscale, and orographic forcings in generating the heavy precipitation during these events. Ability to work collaboratively within a diverse team and strong communication skills are essential. Applicants with prior experience in analysing large and complex datasets, including atmospheric remote sensing (ground-based and/or spaceborne) and high-resolution numerical modelling, will be highly regarded. This position is linked to the ARC Centre of Excellence for Climate Extremes (CLEX) and the appointee will be expected to contribute to one of the Centre’s research programs.

We encourage applicants from under-represented groups, including Aboriginal and Torres Strait Islander people. To allow us to consider performance relative to opportunity, we also invite applicants to provide a brief statement (up to 1 page) that describes circumstances that may have affected their career development or progression, including career interruptions or delays, periods of part time work, or forms of bias they have experienced.

1. Key Responsibilities

The position description should be read alongside Academic Career Benchmarks and Indicators.

A level A academic should display evidence of acquiring skills and building academic achievements (oriented towards the benchmarks). As with all positions, career achievements will be interpreted relative to opportunity, including career disruptions due to caring responsibilities, time in industry, illness etc.

1.1 RESEARCH AND RESEARCH TRAINING

The appointee will be expected to:
Under the guidance and support of Senior Academic staff, conduct internationally competitive research, resulting in publications in high impact journals on topics relevant to the project.

Employ field observations, remote sensing data and high-resolution simulations to investigate the essential meteorological conditions required to produce heavy precipitation events in southeastern Australia wintertime storms.

Using the Australian Community Climate and Earth-System Simulator (ACCESS) high-resolution regional model, design and perform additional numerical experiments as necessary to complement the observational analysis.

Evaluate the skill of the high-resolution simulations in simulating the abovementioned precipitation events and how the simulations can be used to improve water management (e.g. preventing spill events across the hydropower dams).

Contribute to and publish academic papers and other scholarly outputs to a high academic standard in accordance with the research expectations of the University of Melbourne.

Actively engage with CLEX researchers and participate in research seminars/conferences to disseminate research findings as opportunities arise.

Contribute to the preparation of research reports and proposals to internal or external funding bodies as relevant and appropriate.

Assist in the co-supervision of research students under the guidance of Senior Academic.

Engage with relevant professional and industry bodies and stakeholders to foster collaborative partnerships.

1.2 OTHER DUTIES

The appointee will be expected to:

- Actively participate in the University Professional Development Framework.
- Ensure an up-to-date record of University compliance courses, such as, but not limited to, Appropriate Workplace Behaviour, PDF for Staff or 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

2.1 ESSENTIAL

- A PhD in atmospheric science or a related discipline.
- Demonstrated knowledge and experience in atmospheric science including synoptic and mesoscale meteorology, with basic knowledge in cloud microphysics.
- Demonstrated knowledge and experience in using atmospheric models.
- Demonstrated experience in analysing large and complex datasets including remote sensing datasets.
- A demonstrated capacity to publish in high quality peer-reviewed journals, with a strong publication record in relevant areas, commensurate with experience and opportunities.
- Excellent interpersonal skills and both written and oral communication skills in English.
Excellent ability to work co-operatively and positively in a multi-disciplinary research-based team environment and liaise with people from diverse backgrounds.

Demonstrated excellent organisational skills to meet deadlines and bring projects to a timely completion.

Potential or demonstrated capacity to engage with project partners and external stakeholders.

2.2 DESIRABLE

- Prior experience or knowledge in cloud and precipitation dynamics and/or physics.
- Demonstrated experience in analysing radar, lidar, and/or satellite data.
- Experience in performing and analysing numerical simulations using high-resolution atmospheric models.
- Experience in using creative and innovative methods to analyse meteorological data, e.g., cluster analysis, machine learning, etc.

2.3 OTHER JOB RELATED INFORMATION

- Occasional work out of ordinary hours, travel, etc.

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 Advancing Melbourne strategy that addresses 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 strive for excellence and reach the targets of Advancing Melbourne.

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

5. Other Information

5.1 SCHOOL OF GEOGRAPHY, EARTH AND ATMOSPHERIC SCIENCES

https://sgeas.unimelb.edu.au

The School of Geography, Earth and Atmospheric Sciences was formally established in 2021, following the merger of the Schools of Geography and Earth Sciences. The new School synergises discipline strengths in geography, atmospheric science and geoscience. The School offers undergraduate and graduate research programs in these core discipline areas, and in the multi-disciplinary fields of Climate Change, Environmental Science and Archaeological Science. The research within the School is built upon extensive expertise in geography, geoscience and atmospheric science, ranging from the social sciences through to the quantitative physical sciences. In addition to internationally recognised discipline expertise, we have strengths in a number of multi-disciplinary areas including: climate change; resource futures; space, place and social change; environmental hazards; Indigenous knowledge; and Earth system interactions. With strengths in both the spatial (local to global) and temporal (deep time as well as recent) dimensions of environmental change, the School is committed to achieving a better future for our students, society and the environment. We are committed to advancing reconciliation with Indigenous Australians through involvement with the Indigenous Knowledges Institute which is hosted within the Faculty of Science, research and teaching partnerships with Indigenous communities, and archaeological science. The School contributes strongly to the key areas of Place, Community, Education, Discovery, and Global in the University’s Advancing Melbourne Strategy.

5.2 FACULTY OF SCIENCE

https://science.unimelb.edu.au

Science at Melbourne is a global leader across fundamental and impactful scientific research and education. Science begins with curiosity, and we are dedicated to understanding the universe from the level of sub-atomic particles to the solar system. We aim to be leaders who positively impact the community locally and globally, addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

Our strength is our breadth of expertise. We are the second largest faculty in the University comprising seven schools: Agriculture, Food & Ecosystem Sciences, BioSciences, Chemistry, Geography, Earth & Atmospheric Sciences, Mathematics & Statistics, Physics and Veterinary Science.

This depth of knowledge positions the faculty to better understand, explore and impact our world and humanity, within a truly comprehensive Faculty of Science.

We have more than 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. We aim to train students with the knowledge and intellectual flexibility to drive the industries of tomorrow and lead across all levels of society.
We offer a range of undergraduate, honours, graduate and research degrees, enrolling more than 11,500 undergraduate and 3,750 graduate students.

We are dedicated to delivering leading transformative educational outcomes, underpinned by research, and an inclusive and inspiring student experience.

Excellence comes in many forms and diversity of thought, perspective and disciplines is essential to deliver globally leading science. At the core of our success is our focus on an inclusive environment for all in our community. Our Faculty’s focus on equity, inclusion and belonging is grounded in our endeavour to ensure we are best placed to advance research, teaching and serve diverse national and global communities.

As a Science community we sit across five of the University’s campuses – Parkville, Dookie, Burnley, Creswick and Werribee. This reach provides us with a unique perspective that is beneficial to our teaching and research. It also means we can offer our students a greater variety of learning experiences and internships to engage with industry partners to solve real-world issues.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, Melbourne Energy Institute, Melbourne Biodiversity Institute, Office for Environmental Programs, Australian Mathematical Sciences Institute (AMSI) and the Indigenous Knowledge Institute and home to numerous Centres.

5.3 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

5.4 ADVANCING MELBOURNE

The University’s strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University’s commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.

We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.
We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.

We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne’s academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes: place, community, education, discovery and global.

5.5 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 https://about.unimelb.edu.au/strategy/governance