Research Fellow in Earthquake Science

**POSITION NO** 0060801

**CLASSIFICATION** 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 (3 years)

**FLEXIBLE EMPLOYMENT**
The University of Melbourne 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** [http://about.unimelb.edu.au/careers/working/benefits](http://about.unimelb.edu.au/careers/working/benefits)

**HOW TO APPLY** Online applications are preferred. Go to [http://about.unimelb.edu.au/careers](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](http://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

The School of Geography, Earth and Atmospheric Sciences at the University of Melbourne is searching for an outstanding post-doctoral researcher in Earthquake Science.

Applications are encouraged from those with expertise in physics-based earthquake modelling, seismology, seismic hazard analysis, crustal geophysics, ground motion modelling, earthquake geology, paleoseismology, engineering geology, luminescence dating, and/or remote sensing.

The Earthquake Science group at the University of Melbourne and research partners from academia, government and industry have recently won several large grants to support the development of earthquake forecasting in complex intraplate tectonic settings using integrated observations and physics. The successful candidate for this role will be provided with co-leadership of research strategy and funding, will be involved in postgraduate supervision and peer mentorship, will be provided with field work and conference opportunities, and may be provided with teaching opportunities. Included in this role is access to research funding, computing infrastructure, and seismological instruments (seismometers, accelerometers, tiltmeters). Research partners include AuScope, Geoscience Australia, and other industry and university-based collaborators.

The School of Geography, Earth and Atmospheric Sciences combines discipline strength and expertise spanning the social sciences through to the quantitative physical sciences. In addition to our internationally recognised discipline expertise, we have strength in a number of multidisciplinary thematic areas including: climate change; resource futures; space, place and social change; environmental hazards; Indigenous knowledge; and Earth system interactions. The University is committed to environment research and environmental sustainability.

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**

As with all positions, career achievements will be interpreted relative to opportunity, including career disruptions due to caring responsibilities, time in industry, illness etc.

The position description should be read alongside Academic Career Benchmarks and Indicators. A level A academic is acquiring skills and building academic achievements (oriented towards the benchmarks).

1.1 **RESEARCH AND RESEARCH TRAINING**

The appointee will be expected to:

- Assist / lead the development of a 3-dimensional active fault model for Australia.
- Assist / lead field, remote sensing, crustal geophysical, paleoseismic, statistical, and physics-based modelling of active faults.
- Assist with research planning and logistics, funding allocations, and budget management.
- Publish research findings in international refereed journals and present results at seminars, conferences, and meetings. The term publish should be interpreted broadly and may include the submission of government policies, industry recommendations, or other outputs recognised by the discipline.
- Engage with internal and external collaborators.
- Engage with the larger community via interactions with government, industry, the media, public lectures, and/or outreach activities.
- Actively supervise research students (may include undergraduate, graduate coursework and PhD students). Prepare research proposals for submission to external funding bodies to successfully obtain external funding to support their research.

1.2 **TEACHING AND LEARNING**

The appointee may be provided an opportunity to:

- Actively participate in the School’s undergraduate and graduate teaching programs in geoscience.
- 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 those connected with their research activities, teaching responsibilities and the administration and governance of the School and / or Faculty of Science.
- Active participation in School and/or Faculty meetings and/or the committees that have responsibility for the administration and governance of the School.
- Involvement in professional activity in the discipline and/or multiple disciplines.
- Actively contribute to School activities such as Open day to promote student engagement.
- Promote a diverse and inclusive workplace where all staff and students feel welcome and safe and conduct themselves in a way that is aligned with the University’s values and expectations.

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

2.1 ESSENTIAL

- A PhD in geoscience or a related discipline.
- An emerging track record of earthquake science publications in leading international journals or other high-quality publications, relative to career opportunity.
- Demonstrated knowledge of relevant programming skills, preferably in languages such as R or Python.
- Proficiency in data analysis, statistical modelling, and data visualisation techniques.
- Familiarity with data management, data integration, and data privacy and security principles.
- Demonstrated ability to write, present and conduct research.
- Willingness to learn and adapt to new methodologies, tools, and research techniques.
- An emerging capacity to establish collaborations and engage with a broad range of researchers nationally and internationally.
- Evidence of the ability to participate in applications for external research funding from national competitive research bodies or other sources, which may include industry, government, community groups, etc.
- A demonstrated capacity to supervise undergraduate and graduate research students.
- A potential or demonstrated capacity to initiate or contribute to service activities within the School, the Faculty of Science, and the broader professional community.
- Excellent oral and written communication skills in English.
- A demonstrated ability in interpersonal and organisational skills including the ability to project manage, meet deadlines, and interact with colleagues from a broad range of disciplines in a collegial, respectful and effective manner.

2.2 DESIRABLE

- A potential or demonstrated capacity to conduct research activities in collaboration with industry and/or government.
- Experience in interrogating core logs and building 3-d fault and geologic models.
- Experience in event-based rupture dynamics and wave propagation analyses.
- Experience in physics-based earthquake models over million year time-scales.

2.3 OTHER JOB RELATED INFORMATION
This position requires the incumbent to hold a current and valid Working with Children Check. This clearance can be arranged by the University of Melbourne prior to the successful applicant starting.

Occasional work out of ordinary hours, travel, fieldwork 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:

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**

5.1 **SCHOOL OF GEOGRAPHY, EARTH AND ATMOSPHERIC SCIENCES**

http://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 Knowledge 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

http://www.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, & Ecosystems 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 http://www.unimelb.edu.au/governance