POSITION DESCRIPTION



Department of Biomedical Engineering

Melbourne School of Engineering, The University of Melbourne

Research Fellow in Musculoskeletal Imaging

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| Position No | 0048007 |
| Classification | Level A |
| Salary | $72,083.00 - $97,812 p.a |
| Superannuation | Employer contribution of 9.5% |
| Employment Type | Full-time position available for 12 months *The Melbourne School of Engineering 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> |
| How to Apply | Online applications are preferred. Go to <http://hr.unimelb.edu.au/careers>, under ‘Job Search and Job Alerts’, select the relevant option (‘Current Staff’ or ‘Prospective Staff’), then find the position by title or number. |
| contactFor enquiries only | Dr Kathryn StokTel: +61 8344 9761Email: kstok@unimelb.edu.auPlease do not send your application to this contact |

For information about working for the University of Melbourne, visit our websites:

[hr.unimelb.edu.au/careers](http://hr.unimelb.edu.au/careers)
[joining.unimelb.edu.au](http://joining.unimelb.edu.au)

The University of Melbourne

Established in 1853, the University of Melbourne is a public-spirited institution that makes distinctive contributions to society in [research](https://research.unimelb.edu.au/), [learning and teaching](https://about.unimelb.edu.au/teaching-and-learning) and [engagement](https://engagement.unimelb.edu.au/). It’s consistently ranked among the leading universities in the world, with international rankings of world universities placing it as number 1 in Australia and number 32 in the world (Times Higher Education World University Rankings 2017-2018). <https://about.unimelb.edu.au/strategy/growing-esteem>

Melbourne School of Engineering

Melbourne School of Engineering (MSE) has been the leading Australian provider of engineering and IT education and research for over 150 years. We are a multidisciplinary School organised into three key areas; Computing and Information Systems (CIS), Chemical and Biomedical Engineering (CBE) and Electrical, Mechanical and Infrastructure Engineering (EMI). MSE continues to attract top staff and students with a global reputation and has a commitment to knowledge for the betterment of society.

Our ten-year strategy, MSE 2025, is our School’s commitment to bring to life the University-wide strategy *Growing Esteem* and reinforce the University of Melbourne’s position as one of the best in the world. Investment in new infrastructure, strengthening industry engagement and growing the size and diversity of our staff and student base to drive innovation and develop the transformative technologies of the future are all fundamental principles underpinning MSE 2025.

<http://www.eng.unimelb.edu.au/about/join-mse/why-join-mse>

School of Chemical and Biomedical Engineering (CBE)

The CBE School integrates the expertise and capabilities of the Chemical and the Biomedical Engineering Departments. The resulting mix of skills creates new horizons for engineering and enables the realisation of transformative new ideas into practical innovations. This ranges from the development of bionic prosthetic implants to remediation of Antarctic landscapes. The sweep of technological applications is vast, and we are focused on end-use inspired research.

We encompass mining, energy, material science, the environment, medical devices, medical imaging, drug delivery and food production. Our goal is to facilitate knowledge acquisition, research excellence, and its translation into technological, societal, industrial and medical innovation.

Position Summary

In this position you will play a key role in the delivery of our ARC Discovery grant research project. The project will bring together multiple imaging technologies in aim to to build a robust in vivo imaging framework for time-lapsed tracking of musculoskeletal tissues. This framework will detect structural and functional changes in osteoarthritis-related joint disorders.

You will work in this position to develop methods for performing small animal in vivo animal experiments with micro-computed tomography and molecular imaging, as well as improve image analysis techniques for extracting meaningful quantitative metrics to be used in computational models.

In this role you will conduct independent research, lead the preparation and publication of research outcomes in conferences and journals. You will also liaise with collaborating partners and be involved in supervision of students working on related projects.

In this position you will be an active member of CBE collaborating with other researchers and key partners critical for the success of this project. As a Research Fellow you may also undertake teaching and research supervision directly related to your area of research, when it is required.

# Selection Criteria

## Essential

* PhD in a discipline relevant to biomedical science or engineering.
* A demonstrated track record of both independent and team-based research.
* Experience in the use of micro-computed tomography for musculoskeletal imaging.
* Willingness and demonstrated ability to conduct *in vivo* animal experiments.
* An aptitude for laboratory-based experimental work.
* Excellent written and verbal communication skills, demonstrated by presentation of research results at conferences, internal forums and through manuscript submissions.
* Experience in working with minimal supervision, and ability to prioritise tasks to achieve project objectives within timelines.

## Desirable

* Experience in biological assays.
* Experience in the preparing ethics grant applications.
* Experience in the supervision or co-supervision and mentoring of honours, Masters or and PhD students.

# Key Responsibilities

The position description should be read alongside [Academic Career Benchmarks and Indicators](https://au.promapp.com/unimelb/Documents/View/Open?displayType=document&documentId=fab38534-cac5-4912-8a18-4b0df453a24f)

## research and research training

* Participate in research independently and as a member of a research team.
* Develop experimental methods and standard operating procedures.
* Conduct experiments in a safe and careful manner, paying attention to experimental error.
* Produce publications arising from research in peer reviewed journals.
* Supervision or co-supervision of Masters and PhD student research projects within the research area.

## leadership and service

* Active participation in the communication and dissemination of research.
* Identification of sources of funding to support individual or collaborative projects.
* Active participation within the research group and Departmental committees as required.

## engagement

* Active participation in outreach activities relating to the research, including promotion of the research through media channels and advocacy groups.
* Effective liaison with external networks to foster collaborative partnerships.
* Involvement in professional activities, including consultations and referrals .
* Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 3.

# 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.