



POSITION DESCRIPTION

School of Mathematics and Statistics
Faculty of Science

LECTURER / SENIOR LECTURER IN APPLIED MATHEMATICS

POSITION NO

CLASSIFICATION

Level B / Level C

SALARY

Level B: \$107,547 - \$127,707 p.a.

Level C: \$131,739 - \$151,900 p.a.

Level of appointment is subject to the appointee's research record, qualifications and experience.

SUPERANNUATION

Employer contribution of 17%

WORKING HOURS

Full time (1.0 FTE)

BASIS OF EMPLOYMENT

Continuing

OTHER BENEFITS

<http://about.unimelb.edu.au/careers/working/benefits>

HOW TO APPLY

Online applications are essential.

Go to <https://www.mathjobs.org/jobs>, Login or Create a New Account, then find the position by title.

CONTACT FOR ENQUIRIES ONLY

Professor Howard Bondell

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Email: howard.bondell@unimelb.edu.au

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 country throughout Australia. The University recognises the unique place held by Aboriginal and Torres Strait Islander peoples as the original custodians of country and their continued connection to the land, waterways, songlines and culture. The University respects all Aboriginal and Torres Strait Islander People and warmly embrace those students, staff, Elders and collaborators who identify as First Nations.

Position Summary

The School of Mathematics and Statistics is seeking to expand its expertise in Applied Mathematics. The successful applicant is expected to undertake high-level research in Applied Mathematics, leading to a vigorous research program in the development of applied modelling techniques and their application.

The successful applicant should also have a strong commitment to teaching and the supervision of research students. Teaching will occur within the School of Mathematics and Statistics undergraduate and MSc programs and the applicant will be expected to teach mathematics and its applications to a variety of audiences. They will also supervise research students at undergraduate, MSc and PhD levels.

The School maintains activity in all areas of the mathematical sciences. It has research foci in many areas of algebra, analysis, geometry, topology, number theory, continuum modelling, mathematical biology, mathematical physics, discrete mathematics, operations research, mathematical and applied statistics, data science, statistical genomics, stochastic modelling and probability theory.

The Applied Mathematics research group is currently working on interdisciplinary projects, including, granular materials, mathematical biology, fluid dynamics and nanomechanics, using a range of continuous, discrete, numerical, and stochastic approaches.

The University of Melbourne provides a wide range of opportunities for exciting research collaborations within the School, wider University and externally. There will be the opportunity to undertake external consulting. The successful applicant will be expected to undertake administrative tasks for the School.

1. Key Responsibilities

You are expected to significantly contribute towards research, scholarship and/or teaching and will make independent and original contributions which expand knowledge or practice in your discipline and have a significant impact on your field of expertise.

1.1 RESEARCH AND RESEARCH TRAINING

- ▶ The conduct of research and contribution to knowledge through scholarship, refereed publications and presentations.
- ▶ Active application and success in obtaining external research grant income to support that research.
- ▶ Active participation in research seminars and conferences.
- ▶ Active supervision of postgraduate, both MSc and PhD, students.

1.2 TEACHING AND LEARNING

- ▶ Effective preparation and delivery of lectures at undergraduate and postgraduate level and the marking and assessment of that material, including as Subject Coordinator.
- ▶ Proactive development of subject materials and delivery, including the use of modern technology and online resources as appropriate.
- ▶ Supervision of the program of study of postgraduate students engaged in coursework.
- ▶ Development of curriculum in mathematics in both undergraduate and postgraduate levels
- ▶ Consultation with and academic mentoring of students.
- ▶ The conduct of tutorials and practical classes.

1.3 LEADERSHIP AND SERVICE

- ▶ Effectively undertake a range of administrative functions, including those connected with teaching responsibilities and the conduct of the academic affairs of the School.
- ▶ 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.
- ▶ Contribution to School activities such as Open day to promote student engagement.

1.4 ENGAGEMENT

- ▶ Presentation of research to the public to elevate public awareness of educational and scientific developments and promote critical enquiry and public debate within the community.
- ▶ Participation in outreach activities.

1.5 OTHER DUTIES

- ▶ Performance of other tasks as requested by the supervisor or the Head of School
- ▶ Active participation 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.

2. Selection Criteria

2.1 ESSENTIAL

- ▶ A PhD or equivalent research higher degree in applied mathematics or a related discipline.
- ▶ Demonstrated research excellence in relation to career stage including a strong record of publication in applied mathematics, including mathematical modelling and associated analytical and numerical methods.
- ▶ The ability to develop research links with other schools nationally and/or internationally.
- ▶ The ability to attract funding through grant applications.

- ▶ The ability to teach large undergraduate classes and the ability to develop and teach applied mathematics subjects at a graduate level, including subjects related to computational mathematics and numerical analysis.
- ▶ The ability to interact well with other academic staff and to contribute to the administration of a large school.
- ▶ Clear potential in graduate student supervision.
- ▶ Excellent written and oral communication skills in English.
- ▶ Demonstrated ability to develop, administer and see through to completion appropriately designed research projects with limited supervision.

2.2 DESIRABLE

- ▶ Evidence of success in lecturing large undergraduate classes.
- ▶ Experience in teaching applied mathematics or related areas.
- ▶ Evidence of success in attracting external funding through grant applications.
- ▶ Evidence of expertise in interdisciplinary research.
- ▶ Evidence of success in graduate student supervision.
- ▶ A track record of success in community engagement.

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

5.1 SCHOOL OF MATHEMATICS AND STATISTICS

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

The University of Melbourne's School of Mathematics and Statistics is one of Australia's leading mathematics and statistics schools. It has achieved this status through the high quality of its research and teaching programs. The School offers a wide range of subjects to undergraduate and postgraduate students and is involved in aspects of community life that impact on the interests of the School and the discipline.

The School of Mathematics and Statistics has a total of 70 continuing teaching and/or research staff; 34 research only staff and consultants; 16 academic specialists and 16 support staff. The School has over 240 casual and honorary staff. In 2020, there were 90 Research Higher Degree and 278 Coursework Master of Science students. Five members of the School staff and one Emeritus Professor are members of the Academy of Science.

Infrastructure support for research and basic information technology facilities are provided to all members of the department. Special facilities such as high-end workstations and salaries for research fellows are supported through individual competitive external research grants. Members of the School have had considerable success at attracting support from the Australian Research Council. The school currently hosts two ARC Centres of Excellence, and has hosted four ARC Laureate Fellows, ten ARC Future Fellows and fourteen DECRA Fellows.

It is one of the objectives of the University to develop and maintain a strong international profile. In this context, members of the School have strong collaborative links with colleagues in the United States of America, most countries in Europe and the Asia-Pacific region.

5.2 FACULTY OF SCIENCE

<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 six schools: BioSciences, Chemistry, Ecosystem and Forest Sciences, Mathematics and Statistics, Physics and the School of Geography, Earth and Atmospheric Sciences.

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

Science manages more than \$301 million of income per annum, with a staff base in the order of 250 FTE professional staff, and more than 662 FTE academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 10,800 undergraduate and 2,500 graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science). The Faculty of Science is highly research focused, performing strongly in the Australian Research Council competitive grants schemes. The Faculty of Science is currently growing its competitiveness and standing in the National Health and Medical Research Council and health 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 \$100 million. The annual income from the endowment supports more than 140 prizes, scholarships and research awards, and numerous academic positions.

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>