POSITION DESCRIPTION

THE UNIVERSITY OF MELBOURNE

School of Mathematics and Statistics
Faculty of Science

Lecturer/Senior Lecturer/Associate Professor in Pure Mathematics; Applied Mathematics; Statistics (3 positions)

POSITION NO	0040669
CLASSIFICATION	Lecturer, Level B / Senior Lecturer Level C / Associate Professor, Level D
SALARY	Level B $92,654 – $110,022 p.a. Level C $113,496 - $130,866 p.a. Level D $136,658 - $150,555 p.a.
SUPERANNUATION	Employer contribution of 17%
EMPLOYMENT TYPE	3 x Full-time (1.0 FTE) continuing positions
OTHER BENEFITS	http://about.unimelb.edu.au/careers/working/benefits
CURRENT OCCUPANT	New
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	Professor Aleks Owczarek Tel +61 3 8344 7887 Email owczarek@unimelb.edu.au *Please do not send your application to this contact*

For information about working for the University of Melbourne, visit our websites:
about.unimelb.edu.au/careers
joining.unimelb.edu.au

Position Summary

The University plan seeks to increase the diversity of the workforce and the representation of women in areas they have been traditionally under-represented. Consistent with this, the School of Mathematics and Statistics is seeking to increase the representation of women in the academic workforce across mathematical disciplines. Pursuant to a Special Measure under Section 12 (1) of the Equal Opportunity Act 2010 (Vic), the School is seeking to lift the representation of women and therefore **will only consider applications from suitably qualified female candidates for these 3 positions.**

The School of Mathematics and Statistics is seeking to further enhance its expertise in applied mathematics, pure mathematics and statistics, and is interested in appointing suitably qualified female candidates in 3 vacant positions (1 position in Applied Mathematics, 1 position in Pure Mathematics and 1 position in Statistics).

The School maintains activity in all areas of the mathematical sciences. It has research foci in many areas of algebra, analysis, geometry and topology, number theory, continuum modelling, mathematical biology, mathematical physics, discrete mathematics, operations research mathematical and applied statistics including statistical genomics, stochastic modelling and probability theory. Applications are invited across these and, moreover, in *any* area of the mathematical sciences.

The successful applicants are expected to lead a vigorous research program in their relevant discipline**,** and 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. They are also required to supervise research students at undergraduate, MSc and PhD levels. The University of Melbourne provides a wide range of opportunities for exciting research collaborations within the School, wider University, as well as externally. The successful applicants will be expected to undertake administrative tasks for the School.

The 3 successful candidates will be appointed at either Academic Level B, C or D, dependent upon the Selection Panel's assessment of the individual's application.

1. Selection Criteria

1.1 ESSENTIAL (ALL LEVELS)

- A PhD or equivalent research higher degree in pure mathematics, applied mathematics or statistics and related disciplines, as appropriate.
- Demonstrated research excellence in relation to career stage including a strong record of publication, the ability to develop research links with other schools nationally and/or internationally, and the ability to attract funding through grant applications.
- The ability to teach large undergraduate classes and the ability to develop and teach relevant discipline subjects at a graduate level.
- 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 communication skills, both written and oral.

1.2 ESSENTIAL (LEVEL C)

In addition to 1.1, the following criteria are essential for Level C:

- A demonstrated 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.
- Evidence of success in graduate student supervision
- Demonstrated ability to work collaboratively and to contribute to the organisational development of the Department, Faculty and the University as a whole.

1.3 ESSENTIAL (LEVEL D)

In addition to 1.1 and 1.2, the following criteria are essential for Level D:

- A track record of independent research with a very strong record of publication, a strong record of gaining external competitive research grants, commensurate with experience and opportunities, and the demonstrated ability to develop research links with other schools/groups nationally and/or internationally.

1.4 DESIRABLE (ALL LEVELS)

- Evidence of success in lecturing large undergraduate classes.
- Evidence of success in attracting external funding through grant applications.
- Evidence of success in graduate student supervision
- A track record of success in community engagement.

2. Special Requirements

- None

3. Key Responsibilities

- A Level B academic will undertake independent teaching and/or research in their discipline or related area. In research and/or teaching and/or scholarship, a Level B academic will make an independent contribution through professional practice and expertise and coordinate and/or lead the activities of other staff, as appropriate to the discipline.
- A Level B academic will contribute to teaching at undergraduate, and postgraduate level, and/or engage in independent scholarship and/or undertake research and/or engage in professional activities appropriate to his or her profession or discipline. They will undertake administration primarily relating to their activities at the institution and may be

required to perform the full academic responsibilities of, and related administration for, the coordination of an award program of the institution.

- At Level B an academic will have experience in research or scholarly activities, which have resulted in publications in refereed journals or other demonstrated scholarly activities. Research may be carried out independently and/or as part of a team. Level B academics may supervise postgraduate research students or projects and be involved in research training.
- Level C academic staff will normally engage in independent scholarship and/or research and/or professional activities appropriate to their profession or discipline, contribute to teaching at undergraduate and postgraduate levels and interact on many levels with the wider society. They will normally undertake administration primarily relating to their activities at the institution, and may be required to undertake the full academic responsibilities of, and related administration for, the coordination of an award program of the institution.
- A Level D academic will make an outstanding contribution to the research and/or scholarship and/or teaching and administration activities of an organisational unit, including a large organisational unit, or interdisciplinary area.
- A Level D academic will make an outstanding contribution to the governance and collegial life inside and outside of the institution and will have attained recognition at a national or international level in their discipline. They will make original and innovative contributions to the advancement of scholarship, research and/or teaching in their discipline, and may undertake research.
- The research work of a Level D academic will make a major original and innovative contribution to their field of study or research, and be recognised as outstanding nationally or internationally. A Level D academic will play an outstanding role within their institution, discipline and/or profession in fostering the research activities of others and in research training.

3.1 RESEARCH

- The conduct of research and contribution to knowledge through scholarship, referred publication and presentation.
- 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.
- To meet or exceed the research active criteria of the Faculty of Science.

3.2 TEACHING

- Effective preparation and delivery of lectures at undergraduate and postgraduate level and the assessment of that material.
- Being proactive in the development of subject materials and delivery, including the use of web resources as appropriate.
- Supervision of the program of study of postgraduate students engaged in coursework.
- Acting as Subject Coordinator.
- Consultation with and academic mentoring of students.
- The conduct of tutorials and practical classes.
- Marking and assessment.

3.3 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.
- Actively contribute to School activities such as Open day to promote student engagement.
- Actively participate in the University Performance Development Framework,
- Ensure an up-to-date record of University compliance courses, such as, but not limited to Promoting Positive Workplace Behaviour, PDF for Staff and Supervisors, OH &S training courses.

3.4 ENGAGEMENT

- Present 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 to ensure school students exposure to broader perspectives, values, and opportunities.
- Exchange of knowledge between partners in a mutually beneficial way that expands the capacities of all concerned.
- Comply with occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 5.

4. Other Information

4.1 ORGANISATION UNIT

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 42 continuing teaching and/or research staff; 26 research only staff and consultants; 6 Mathematics and Statistics Learning Centre teaching specialists; and 20 support staff. The School has over 100 casual and honorary staff. In 2016, there are 88 Research Higher Degree and 78 Coursework Master of Science students. Four 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 school. 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 hosts two ARC Centres of Excellence, has one ARC Laureate Fellow, two ARC Future Fellows and two 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 States of America, most countries in Europe and the Asia-Pacific region.

The www address of the School of Mathematics and Statistics is

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

4.2 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 40,000 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 $280 million of income per annum, with a staff base in the order of 220 professional staff, and more than 540 academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 7,500 undergraduate and graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science) with enrolments of approximately 6,200 students.

The Faculty of Science is a leader in research, contributing approximately $50 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 $50 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.

4.2 THE UNIVERSITY OF MELBOURNE

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. With outstanding performance in international rankings, Melbourne is at the forefront of higher education in the Asia-Pacific region and the world. The University of Melbourne is consistently ranked among the world's top universities. Further information about our reputation and global ranking is available at www.futurestudents.unimelb.edu.au/explore/about/reputation-rankings

Established in 1853, shortly after the founding of Melbourne, the University is located just a few minutes from the centre of this global city. The main Parkville campus 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.

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

4.3 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/index.html#home

  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.

4.4 EQUITY AND DIVERSITY

Another key priority for the University is access and equity. The University of Melbourne is strongly committed to an admissions policy that takes the best students, regardless of financial and other disadvantage. An Access, Equity and Diversity Policy Statement, included in the University Plan, reflects this priority.

The University is committed to equal opportunity in education, employment and welfare for staff and students. Students are selected on merit and staff are selected and promoted on merit.

4.5 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/unisec/governance.html

5. 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.