



## POSITION DESCRIPTION

Australian Mathematical Sciences Institute  
Faculty of Science

### Executive Director, Australian Mathematical Sciences Institute (AMSI)

<b>POSITION NO</b>	0038970
<b>CLASSIFICATION</b>	Associate Professor (Level D) or Professor (Level E)
<b>SALARY</b>	\$132,677 - \$146,169 p.a. (Level D) or \$170,900 p.a. (Level E) Level of appointment is subject to qualifications and experience
<b>SUPERANNUATION</b>	Employer contribution of 17%
<b>EMPLOYMENT TYPE</b>	Full time (fixed-term) position available until 31 December 2019 Fixed term contract type: Externally funded contract employment Work Focus Category: Academic Specialist
<b>OTHER BENEFITS</b>	<a href="http://hr.unimelb.edu.au/careers/working/benefits">http://hr.unimelb.edu.au/careers/working/benefits</a>
<b>CURRENT OCCUPANT</b>	New
<b>HOW TO APPLY</b>	Online applications are preferred. Go to <a href="http://hr.unimelb.edu.au/careers">http://hr.unimelb.edu.au/careers</a> , under 'Job Search and Job Alerts', select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
<b>CONTACT FOR ENQUIRIES ONLY</b>	Janine McIntosh Tel +61 3 8344 1790 Email <a href="mailto:mcintosh@unimelb.edu.au">mcintosh@unimelb.edu.au</a>  <i>Please do not send your application to this contact</i>

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)

## ***Position Summary***

AMSI has secured funding for a large-scale outreach and awareness project, known as **Choose Maths**. As part of the AMSI Schools team, the Executive Director will work with AMSI Members, stakeholders, university students, parents and teachers through a program of professional development, awareness and reward to turn around community attitude to participation in mathematics, especially for girls and young women.

The goal of **Choose Maths** is to build self-sustaining education communities where girls and young women share equally in the rewarding careers and rich life experiences that mathematics offers. The program will be founded in a strong evidence base and will have direct and specific influence within a defined number of schools as well as a broader scope across the wider community through public awareness raising activities.

Reporting to the AMSI Director, the Executive Director is responsible for managing and facilitating external partnerships, promoting **Choose Maths** in the mathematics, university and stakeholder communities including engaging business, industry and government in the project outcomes.

The Executive Director will be expected to undertake research based on the education outcomes in the project and/or maintain their research profile as a mathematician or mathematics educator. The role involves high-level contact with the funding partner, stakeholders, universities, government and business. This role provides access at senior levels to AMSI Member Universities. The Executive Director will take charge of the gender research agenda with respect to STEM and provide direction to the Project Director as well as maintaining a responsibility for program reporting and targets.

## ***1. Selection Criteria***

### **1.1 ESSENTIAL**

- 1.1.1 A Degree and Diploma combination in mathematics and education or equivalent and/or experience in a similar role, such as university teaching;
- 1.1.2 A PhD in mathematics or mathematics education;
- 1.1.3 A significant international research track record, in a relevant field as evidenced by research publications in high-quality journals;
- 1.1.4 Drive, energy, and a vision for leading and developing high quality research projects in mathematics or mathematics education;
- 1.1.5 Demonstrated capacity to provide high quality leadership, including leadership of committees/administrative roles, and significant management expertise in a university, school or government setting;
- 1.1.6 Excellent written and oral communication skills in English, including a proven capacity to develop pedagogic materials in mathematics;
- 1.1.7 High level interpersonal skills, including the demonstrated ability to regularly communicate and maintain relationships with stakeholders, including academic colleagues, primary and secondary school teachers, students, the public and project team members;
- 1.1.8 Proven ability to manage the and monitor project progress, ensuring budget, timelines and required standards are met;

- 1.1.9 Demonstrated track record of successful supervision of Research Higher Degree students and staff.

### ADDITIONAL ESSENTIAL CRITERIA AT LEVEL E

At Professor Level E, the successful applicant must demonstrate all of the above, and additionally must demonstrate:

- 1.2.1 An eminent track record as a scholar of international standing;
- 1.2.2 Proven ability to provide inspirational leadership and to nurture a high-achieving team;
- 1.2.3 Leadership experience in community engagement;
- 1.2.4 The capacity to enhance the international activities and links.

### 1.2 DESIRABLE

- 1.2.1 Knowledge of the Australian Curriculum: Mathematics;
- 1.2.2 Establish track record in matters relating to the engagement of girls and young women with mathematics and cognate disciplines.

## 2. Special Requirements

- 2.1 Willingness to travel interstate and overseas

## 3. Key Responsibilities

### LEADERSHIP

- 3.1 To undertake original research in a field complementary to the research strengths of AMSI in mathematics or mathematics education;
- 3.2 Authorship of **Choose Maths** scholarly and educational publications and input into program collateral;
- 3.3 Lead the gender-focussed research profile of **Choose Maths** and oversee the data collection, analysis, reporting and presentation;
- 3.4 Obtain significant research funding from sources outside the University;
- 3.5 Encourage and mentor staff and research students to publish in top tiered refereed journals;
- 3.6 Provide leadership through a strategic and innovative approach to develop collaborative research;
- 3.7 Oversight and management of the gender research aspects;
- 3.8 Foster the development of staff including setting goals and directions for Research Fellow (Level B) and an Executive Assistant;
- 3.9 Promote collaboration with other Universities Mathematics Departments and Schools.

## STRATEGIC MANAGEMENT

- 3.10 Strategic Management of each of the four project components:
- Oversee the Awards component; partnerships with peak bodies
  - Mathematical expertise for the Teacher Professional Development component
  - High level involvement in the Careers Awareness component; stakeholder management and business development
  - Leadership of the Women in Maths Network, including building partnerships and maintaining networks
- 3.11 Ensure compliance with project milestones and reporting as required by funding partners.

## ENGAGEMENT

- 3.12 Engage in activities promoting the discipline, AMSI and the Choose Maths Project, through membership of professional societies, participation in activities of the discipline and by creating networks with AMSI member universities, business and the wider community including schools;
- 3.13 High-level point of contact for the funding partner, Office of the Chief Scientist, State and Federal Governments, Ministerial Advisers, Government departments and stakeholder groups;
- 3.14 Develop collaborative opportunities with education, government and private sectors;
- 3.15 Driving and leading Committees and/or projects as required.

## OTHER

- 3.16 Create a harmonious workplace environment that is conducive to productivity that promotes creativity; and rewards and recognises individual and group achievement;
- 3.17 Administrative duties as required;
- 3.18 Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 5.

## KEY RESPONSIBILITIES AT LEVEL E

- Lead a research program with a national and international profile that develops and disseminates research-based knowledge;
- Continue publication of the results of original research and other scholarly endeavours as refereed publications in journals of high international standing;
- Develop research programs funded by competitive research grants;
- Present research to the public to elevate community awareness of educational and scientific developments, and promote critical enquiry and public debate within the community;
- Establish and maintain networks with industry partners in the field.

Key responsibilities in addition to the above are outlined in the document “University Expectations of a Professor” which follows as an appendix to this position description.

## **4. Other Information**

### **AUSTRALIAN MATHEMATICAL SCIENCES INSTITUTE**

[www.amsi.org.au](http://www.amsi.org.au)

The Australian Mathematical Sciences Institute (AMSI) is located at the University of Melbourne and is part of the Department of Mathematics and Statistics. It is situated at Building 161 on the university's main campus in Parkville.

AMSI was established in November 2002 with initial funding of \$1M from the Victorian Government's Science, Technology and Innovation Infrastructure grants program and matching funds from a member consortium of Australian universities and other mathematical organisations. The major supporting institutions are La Trobe University, Monash University, Queensland University of Technology, RMIT University, The Australian National University, The University of Melbourne, The University of New South Wales, The University of Queensland, The University of Sydney, The University of Adelaide, The University of Newcastle and The University of Western Australia. Other partners include CSIRO, The Australian Mathematics Trust, the Bureau of Meteorology, Australian Bureau of Statistics and the Defence Sciences Technology Organisation.

Since its inception AMSI has developed as a nationally and internationally recognised centre for the mathematical sciences with achievements ranging across:

- ▶ Representation of its members and the wider mathematical community in communicating the strengths, importance and vital benefits of mathematics and statistics to journalists, university administrators, politicians, public servants and industrialists;
- ▶ Significant participation in and support of high-level submissions to governments;
- ▶ Successful organisation of wide-ranging industry-linked activities;
- ▶ Enhancement of the national level of competency in school mathematics through provision of well researched, well written mathematics textbooks and teacher resource materials, teacher professional development and electronic teaching aids;
- ▶ On-going provision of activities at higher education level including postgraduate and specialist courses and workshops.

The University of Melbourne's Department of Mathematics and Statistics is one of Australia's leading mathematics and statistics departments. It has achieved this status through the high quality of its research and teaching programs. The Department 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 Department and the discipline.

### **FACULTY OF SCIENCE**

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

Science has made important contributions to teaching and research at the University ever since it was founded in 1854. The research degree of DSc was available from the very beginning. The first BSc was conferred in 1889 and the first MSc in 1893. In 1903 the various science departments and schools were formally constituted as a Faculty. The Faculty of Science now 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.

The Faculty manages more than \$240 million of income per annum, with a staff base in the order of 220 professional staff, and more than 500 academic staff.

The Faculty of Science offers 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 \$45 million. The annual income from the endowment supports more than 120 prizes, scholarships and research awards.

## THE UNIVERSITY OF MELBOURNE

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The University offers staff many benefits and prospective staff are encouraged to view the following web links:

[www.unimelb.edu.au](http://www.unimelb.edu.au)

[www.growingesteem.unimelb.edu.au](http://www.growingesteem.unimelb.edu.au)

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

## EQUITY AND DIVERSITY

<http://www.hr.unimelb.edu.au/advice/equity-diversity>

## 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 [www.unimelb.edu.au](http://www.unimelb.edu.au).

## ***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.



THE UNIVERSITY OF  
MELBOURNE

## UNIVERSITY EXPECTATIONS OF A PROFESSOR

The roles of professors have undergone considerable change in recent decades. External demands on universities today, as well as imperatives within institutions, have created some confusion and division of opinion about what now constitute appropriate roles.

The University of Melbourne has its own special features and mission, and hence the role of a professor in this University can be expected to differ from that in many other institutions. It is thus appropriate to clarify what the University expects of its professors.

The expectations of a professor in the University rest primarily on the nature of academic and professional leadership appropriate for a major international research university. Professors must always be distinguished academically in an international environment and are expected to maintain that distinction. While some may confine their leadership largely within their strict academic discipline (as shown, for example, by providing a focus and inspiration for research and teaching in their area of expertise), it is unlikely to be fulfilled simply by continuing to pursue their own work in isolation from others, as this does not denote leadership.

Professors in the University of Melbourne distinguish themselves by demonstrating leadership that can take several forms:

- Leading a group of individuals in research centred around the Professor and broader research leadership developing the research talents of other academics;
- Leading staff members involved in developing undergraduate or graduate teaching;
- Leading the overall management of particular functions in a department, such as teaching activities; coordination of a department's research or undergraduate teaching activities;
- Leading in an academic field as evidenced by publications in outstanding journals, or as the editor of journals, authorship of books, monographs and artistic works, invited papers and presentations at international conferences and by the organization of such conferences;
- Leading in management particularly in assisting individuals and/or groups to channel and focus their efforts;
- Leading in the community beyond the University, particularly in professional organizations and institutions and in industrial and/or government and business activities.

In more specific terms, the expectations of a professor may be clarified as follows:

1. In all cases, the professor is expected to foster the research of other groups and individuals within the Department, within the discipline and within related disciplines. In particular, guidance and assistance to more junior staff in developing their capacity for teaching and research is of great importance. In many disciplines, provision of an environment for honours and graduate students is dependent upon the ability to attract external funds. Many professors will secure substantial grants which cover



teams including junior staff while others will carry on research at a more individual level. Professors should introduce research students and colleagues to useful networks inside and outside the University. Normally, professors will also be required to carry a teaching load and be involved in some of the large classes and in teaching of both undergraduate and graduate students.

2. It is expected that a professor will seek continuing improvement in academic standards rather than merely maintaining them, and make a distinguished contribution to teaching in the faculty and University. A professor should be expected to provide leadership in curriculum development, design of courses, and innovations in the delivery of teaching in the discipline. Professors should be role models in their relationships with students and with professional staff at all levels. They should be accessible in the Department/Faculty and should take part in the community life of the University, including ceremonies where degrees are awarded to students of the department and to persons honoured by the University.
3. Professors are expected to participate in the appropriate national and International organizations of their discipline or profession. In most fields, such international involvement and standing should be clearly evident. It is expected that a professor will serve on expert committees, be willing to participate in reviews and to work at a national and international level.
4. Professors have a responsibility to advance the image of the University in the community locally, nationally and internationally. That image will be enhanced by excellent research and good teaching, the receipt of awards and participation in major conferences. Community involvement might also be demonstrated in adopting the role of a public intellectual who contributes to the nation's culture and institutions. This might take many forms, including media commentary and the preparation of opinion articles, speaking at public events, and visits to schools and other community organisations.
5. Professors should be willing to contribute in policy formation and management of their department, their faculty and the University (through the Academic Board) where from time to time they have a contribution to make. They should play a constructive role in appointment, confirmation and promotion processes for academic and professional staff.
6. It is expected that professors from time to time carry out senior executive roles in the University, Faculty, and/or Department.

Endorsed by Academic Board

Approved by Council August 2009