

Position description

Professor (or Associate Professor) of Applied Mathematics

Position number	50035295
Department/Unit	School of Mathematical Sciences
Faculty	Science
Classification (salary rates)	Level D/E
Employment type	Full time
Work location	Clayton campus
Date document created or updated	4 May 2015

Organisational context

Monash University is Australia's largest university, with five local campuses throughout Victoria, as well as two international campuses – Malaysia and South Africa - and international centres in the People's Republic of China, Italy and India. A unique alliance with the University of Warwick (UK) sits alongside an array of international collaborations with leading universities and corporations around the world, expanding the University's global network.

Faculty of Science

The Monash University **Faculty of Science** is home to researchers at the forefront of their field. Their work, which spans the theoretical to the applied, changes our lives, shapes our conversation and provides new ways to view and understand the world.

One of ten faculties at Monash University, Science is home to five schools - Biological Sciences, Chemistry, Earth, Atmosphere and Environment, Mathematical Sciences and Physics and Astronomy. Our schools offer a large and diverse range of disciplines in undergraduate and postgraduate courses and are delivering these in innovative, student-focused ways.

The faculty has been transforming its physical spaces, many of which will be complete by 2015, to provide an environment worthy of the excellent research, teaching and learning underway. To learn more about the Faculty of Science, please visit our website monash.edu/science

School of Mathematical Sciences

The School of Mathematical Sciences is located in the Faculty of Science and provides undergraduate teaching for students in the Faculties of Science, Engineering, Information Technology and Pharmacy and Pharmaceutical Sciences, as well as postgraduate training in its key areas of research. There are 40 academic teaching and research staff in the school, 33 research staff and 2 administrative staff. The total undergraduate EFTSU for the school is currently 922 and the total number of postgraduate students is 40.

At present the key areas of research include partial differential equations, algebra, discrete mathematics, analysis, topology and geometry, fluid dynamics, numerical analysis and scientific computing, statistics, stochastic processes, operations research, and mathematical biology. Outstanding candidates in Applied and Computational Mathematics are invited to apply for the posts. The appointees will either reinforce the existing Applied Mathematics portfolio of research or introduce new areas.

The School of Mathematical Sciences is one of the largest of the five schools in the faculty, and has close working collaborations with other schools/departments such as Physics, Earth, Atmosphere, Environment, Geography, Computer Science; and other faculties such as Business and Economics, Arts, Medicine, IT and Engineering.

The school has strong links with outside institutions such as CSIRO, the Defence Science and Technology Organisation, and the National Australia Bank and a large number of research institutes and universities around the world.

The school is multidisciplinary with very active groups in algebra and discrete mathematics, analysis and geometry, applied mathematics, fluid dynamics, statistics and stochastic processes, computational mathematics, operations research, mathematical biology. Much of the research in the school is conducted through the research centres, namely the Centre for Modelling of Stochastic Systems (CMSS) and the newly launched MAXIMA institute concentrating on interdisciplinary research involving mathematics.

Successful candidates at level D and E will be expected to take a leadership role and be involved with recruitment at lower levels. All candidates will be expected to have outstanding research records and help our drive for excellence to have outstanding research records and help our drive for excellence across the school. The school recognises the need for a strong mathematical underpinning of research in many schools across the campus and its commitment to delivering outstanding mathematics teaching across the campus.

Position Purpose

The appointee will be accountable to the Head, Department/School of Mathematical Sciences.

Key responsibilities

The appointee will be expected to:

- provide leadership and foster excellence in research, teaching, professional activities and policy development in the school, the University and the community, both scholarly and general; and
- make an outstanding contribution to all activities of the school and within the relevant profession or discipline.

Duties

Research and education

- engage actively in high-quality, internationally recognised research;
- foster the research of colleagues and the obtaining of external research funding;
- supervise the program of study of honours students and of postgraduate students engaged in course work;
- supervise honours research projects and postgraduate research theses;
- provide strong and committed leadership in teaching and curriculum development;
- make a distinguished personal contribution to the teaching program in a relevant discipline.

Leadership, management and administration

- contribute to academic and administrative leadership within the school and participate in the development of policy in the school, faculty and University;
- act as unit coordinator;
- perform administrative and coordination duties that are necessary for the effective operation of relevant departmental programs.

External relationships

- develop collaborative linkages and provide advice to government, industry and other relevant community organisations on relevant matters;
- strengthen links with relevant faculties and schools within the University;
- promote mathematical sciences as a discipline to potential students and the wider community.

Appointment period

The appointment will be continuing.

Appointment will be made at the level of professor or associate professor depending on the qualifications and experience of the successful candidate. Candidates must indicate in the cover letter to their application whether they are applying for appointment at Level E (professor), or Level D (associate professor).

Performance development

The performance of the appointee will be assessed annually and in accordance with the Monash Performance Development Process: Academic Staff.

Key Selection criteria

Qualifications

- Research doctorate in pure or applied mathematics or cognate discipline.

Achievements, qualities, capabilities

- established record of outstanding research consistent with the strengths and strategic directions of the school;
- an outstanding record of research publications and a high international research profile;
- experience of leading/building a research group;

- a record of successful supervision of postgraduate research students;
- demonstrated ability to earn income through external research granting bodies;
- demonstrated ability to develop and deliver innovative and exciting teaching in mathematics to students at all levels and backgrounds;
- demonstrated capacity to work constructively and collaboratively with colleagues in furthering the aims of the school;
- high-level communication skills and ability to liaise well with other academics;
- demonstrated capacity to represent the school and the discipline in dealings with internal or external groups;
- highly developed skills of leadership, networking and management.

Legal compliance

The appointee must be aware of and adhere to legislation and University policy relevant to the duties undertaken, including:

- Equal Employment Opportunity, supporting equity and fairness
- Occupational Health and Safety, supporting a safe workplace
- Conflict of Interest (including Conflict of Interest in Research)
- Paid Outside Work
- Privacy
- Research Conduct
- Staff/Student Relationships

Further information

Confidential enquiries regarding the position may be made to Professor Philip Hall, Head, School of Mathematical Sciences, telephone +61 3 9905 4448, email sci-maths-jobs@monash.edu.