Position description

Associate Professor of Applied Mathematics

School	Mathematical Sciences
Faculty	Science
Classification	Level D
Work location	Clayton campus
Date document created or updated	21 June 2016

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 is one of ten faculties at Monash University. It offers undergraduate courses and higher degrees by research to nearly 3,500 students at the Clayton campus, and at Monash University Malaysia; some programs are also available in off-campus mode. The faculty consists of five Schools and includes major nodes of five national research centres funded by the Australian Research Council, in addition to six faculty research centres and involvement in six Cooperative Research Centres. Ten departments from other university faculties contribute to science teaching at all levels, allowing students to choose their studies from physical, biological, biomedical, behavioural, environmental, mathematical and computer sciences.

Staff within the Faculty of Science are active in conducting internationally recognised research, which is reflected in our teaching programmes; a prime advantage for students is our capacity to offer an extensive choice of subjects, with well-equipped laboratories and sophisticated, state-of-the-art equipment.

The Faculty mission is: "To be recognised as a leader in the design and delivery of high quality and comprehensive programmes in science education and in the conduct of highly original and significant research at the best international standards".

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, principally algebra and discrete mathematics, analysis and geometry, general relativity and geophysical fluid dynamics, hydrodynamic instability theory and turbulence, numerical analysis and scientific computing, statistics and stochastic processes, operations research and mathematical biology.   There are 30 academic teaching and research staff in the School, 21 research staff and 4 administrative staff. The total undergraduate EFTSU for the School is currently 994 and the total number of postgraduate students is 55.

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 and Astronomy, Earth, Atmosphere and, Environment, Computer Science; as well as 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 research areas that include PDEs, scientific computing, fluid dynamics, mathematical finance, numerical analysis, asymptotic analysis, applied analysis, dynamical systems, and nonlinear dynamics with engineering applications. We are interested in outstanding researchers who apply mathematics to problems in science, engineering, technology, or other related fields.

Position purpose

The Associate Professor of Applied Mathematics will be expected to take a leadership role in the school. Foster and provide outstanding research and teaching. Support and maintain the schools drive for excellence in curriculum design and architecture, professional activities and policy development that underpin the discipline of Applied Mathematics as aligned with the Faculty, University and the community. The Associate Professor of Applied Mathematics will also be active in the profession, have relevant industry engagement and be willing to assume senior administrative functions. As a member of the senior academic staff the Associate Professor will have expertise in the field of Applied Mathematics and the appointee will have supervisory responsibility of staff.

Accountability

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

Duties

Research and education

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

Leadership and management

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

External relationships

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

Performance development

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

Selection criteria

Qualifications

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

Achievements, qualities, capabilities

1. Evidence of outstanding scholarly activity of an international standard in Applied Mathematics and a demonstrated ongoing commitment to one or more programs of research
2. an outstanding record of research publications and a high international research profile
3. Demonstrated ability to generate research income, including from both traditional and more innovative sources of research funding
4. A record of successful supervision of postgraduate research students and the ability to make a significant contribution to postgraduate training programs in Applied Mathematics
5. Demonstrated ability to develop and deliver innovative and exciting teaching in mathematics to students at all levels and backgrounds
6. Highly developed skills of leadership, networking and management, with experience in leading/building a research group
7. Very high-level communication skills and ability to liaise well with other academics with a demonstrated capacity to work constructively and collaboratively with colleagues in furthering the aims of the school

Legal compliance

Ensure you are 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; and Staff/Student Relationships.

Further information

Confidential enquiries regarding the position may be made to Professor Philip Hall, Head, School of Mathematical Sciences, email *sci-maths-jobs*@monash.edu.