



Position description

Research Fellow

Position number	50079818
Department/Unit	School of Mathematical Sciences
Faculty/Division	Faculty of Science
Classification (Salary rates)	Level B
Employment type	Fixed-term Full-time, 2 years
Work location	Clayton campus
Date document created or updated	3 November 2015

Position purpose

The appointee will conduct independent and joint research in the following areas: Stochastic Control, Financial Mathematics, Non-Linear Parabolic Evolution Equations, and Computational Methods in Finance. The position will also involve teaching financial mathematics at Master's degree level.

- **Reporting line:** The position reports to Associate Professor Gregoire Loeper
- **Supervisory responsibilities:** Nil
- **Financial delegation and/or budget responsibilities:** Nil

Organisational context

Monash University is an energetic and dynamic university committed to quality education, outstanding research and international engagement. A member of Australia's Group of Eight research intensive universities, it seeks to improve the human condition and is committed to a sustainable future. Monash has six campuses in Victoria, a campus in Malaysia, a campus in South Africa, a centre in Prato, Italy, and numerous international partnerships and cooperative ventures.

Monash has approximately 56,000 equivalent full-time students spread across its Australian and off-shore campuses, and approximately 7000 full time equivalent staff. Approximately 3500 of these staff members are academic staff.

The Faculty of Science contributes to the university's goals via research, teaching and partnerships with industry, government and individual supporters. Our five Schools cover a large and diverse range of disciplines in undergraduate and postgraduate courses. Ten Schools 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. The research in the Faculty of Science is carried out by world-class researchers. Their work spans the theoretical to the applied, contributes to new knowledge and technologies, and challenges how we interact with the world. To learn more about the Faculty of Science, please visit our website: www.monash.edu/science/

Key result areas and responsibility

- the conduct of research either as a member of a team or independently and the production of conference and seminar papers and publications from that research;
- contributions to the teaching program within the field of the staff member's research, in particular teaching financial mathematics at a Master's degree level.
- supervision of research-support staff involved in the staff member's research;
- guidance in the research effort of junior members of research-only Academic staff in her/his research area;
- contribution to the preparation or, where appropriate, individual preparation of research proposal submissions to external funding bodies;
- involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise;
- administrative functions primarily connected with her/his area of research;
- co-supervision or, where appropriate, supervision of major honours or postgraduate research projects within the field of the staff member's area of research; and
- attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees.

Key selection criteria

Essential

1. A research doctorate in pure or applied Mathematics
2. A strong knowledge in the area of financial mathematics, and the ability to teach it at a Master's degree level;
3. Ability to solve problems by using discretion, innovation and the exercise of high level diagnostic skills within areas of functional responsibility or professional expertise;
4. Excellent written communication and verbal communication skills with proven ability to effectively analyse information and produce clear, succinct reports and documents which requires interaction with others;
5. Planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines;
6. Demonstrated well developed computer literacy and proficiency in the production of high level work using advanced specialized and specified University software programs, with the capability and

willingness to learn new packages as appropriate. Some experience of scientific computing in an object-oriented language is highly desirable, in particular in relation to the teaching activity in the Masters of Financial Mathematics.

7. A record of outstanding research publishing in journals, conference papers, reports or professional or technical papers;
8. The ability to successfully supervise postgraduate research students;
9. Demonstrated ability to effectively work in multidisciplinary teams but also independently across multiple projects and to make a contribution to research and scholarship.

Other job-related information

- Travel (e.g to other campuses of the University)
- Shift work, overtime and out of hours work (including evenings, weekends and public holidays)
- Peak period of work during which the taking of leave may be restricted

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
- Staff/Student Relationships