POSTDOCTORAL RESEARCH ASSOCIATE POSITION IN MULTI-PERSON STOCHASTIC GAMES
SCHOOL OF MATHEMATICS AND STATISTICS
REFERENCE NO. 1337/0812

The University of Sydney is Australia's first university with an outstanding global reputation for academic and research excellence. It employs over 7500 permanent staff supporting over 49,000 students.

The School of Mathematics and Statistics is one of the largest in Australia with research strengths in many areas of mathematics and statistics. The school attracts a strong body of excellent students as well as Australian Research Council (ARC) grants, fellowships, and other competitive external funding.

Applications are sought for a Postdoctoral Research Associate position in Multi-Person Stochastic Games. This position is funded by an Australian Research Council (ARC) Discovery Project Grant
"Multi-Person Stochastic Games with Idiosyncratic Information Flows" held by Marek Rutkowski

The project addresses the following vital question: how to quantify the impact of different information flows on simultaneous decisions of players in competitive games within a stochastic environment? To examine this issue, the project aims to develop mathematical techniques for solving multi-person stochastic optimisation problems with idiosyncratic information flows and a related problem of enlargements of filtrations. Specifically, the project focusses on the following pertinent areas:

- Enlargements of filtrations through random times and stochastic processes.
- Multi-person competitive stochastic Dynkin games.
- Multi-dimensional reflected backward stochastic differential equations.

This is an opportunity to conduct research in a well-established research team based at the School of Mathematics and Statistics at the University of Sydney. Teaching is not a requirement, however, opportunities to teach may be available if desired.

You will have:

- PhD degree in mathematics (or be close to completing one)
- sound knowledge of advanced techniques and demonstrated capability of research in at least one of the following areas: stochastic methods in financial mathematics: backward stochastic differential equations and their applications; enlargements of filtrations and insider trading; and multi-person stochastic games
- demonstrated ability to conduct high-quality research either independently or as part of a research team, published research as sole author or in collaboration, excellent written and verbal communication skills.

Strong interest in mathematical problems arising in financial economics will be highly regarded.

The position is full-time fixed-term for two years subject to completion of a satisfactory probation and confirmation period for new appointees. Membership of a University approved superannuation scheme is a condition of appointment.

Remuneration package: $92K p.a. including $78K p.a. base salary, leave loading and up to 17% superannuation. Some support towards relocation and visa sponsorship will be available for the successful appointees if required.

All applications must be submitted via the University of Sydney careers website. Visit sydney.edu.au/positions and search by the reference number for more information and to apply.

CLOSING DATE: 16 October 2012 (11:30PM Sydney time)

The University is an equal opportunity employer committed to equity, diversity and social inclusion. Applications from equity target groups and women are encouraged. The University reserves the right not to proceed with any appointment.