



INTERNATIONAL CENTRE  
OF EXCELLENCE FOR  
EDUCATION IN  
MATHEMATICS

# Maths ad(d)s

**A guide for students to the job market 2005/06**

*See where mathematics can take you*



An Australian Government Initiative





INTERNATIONAL CENTRE  
OF EXCELLENCE FOR  
EDUCATION IN  
MATHEMATICS



An Australian Government Initiative

The International Centre of Excellence for Education in Mathematics (ICE-EM) has a national campaign to promote careers in the mathematical and statistical sciences. ICE-EM also conducts a wide range of other activities, which include the following:

- Annual Summer School for honours students, July Graduate School for postgraduate students and specialist workshops. ICE-EM provides travel and accommodation subsidies to attend.
- Production of printed and electronic resources for teachers, students and parents. This is carried out in collaboration with the Australian Mathematics Trust.
- Technology transfer courses. These provide industry, business and commerce with the latest mathematical developments.

ICE-EM is managed by AMSI and funded by the Australian Government through the Department of Education, Science and Training.

[www.ice-em.org.au](http://www.ice-em.org.au)



AMSI stands for the Australian Mathematical Sciences Institute. Most Australian universities are members of AMSI, which was founded in 2002 with member funds and a grant from the Victorian State Government.

AMSI provides the Australian mathematical and statistical sciences community with many services, including workshops, visiting lecturers, short courses and industry liaison.

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

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# *Maths ad(d)s*

## *2005/06*

Find out where mathematics can take you.

In this booklet we have gathered together some job advertisements that have recently appeared on the internet and in the daily press. The common theme of the ads is mathematics and statistics, but the actual jobs vary across a very broad spectrum. They should give an inkling of the myriad of possible careers available to prospective university students after graduation – if they include mathematics or statistics in their degrees.

Whether it be finance or tourism, just about every area of employment depends at some point on handling and interpreting data, and on predicting and modelling outcomes – in other words, on the kind of expertise offered by people with training in mathematics and statistics. In addition, many employers seek mathematics and statistics graduates simply because of their advanced problem solving and analytical skills.

In this booklet you will find careers

combining maths with health, computing, information security, biology, agriculture and meteorology, just to name a few. You could end up investigating the geometry of liquid crystals, or consulting for a sports company!

While many of the jobs listed here are based in big cities, others offer an opportunity to work in regional centres or a chance to live overseas.

The ads in this eighth edition are completely new, but even with an increased range of job groupings, they represent only a fraction of the advertised positions we found in the early months of 2005.

Whether you are a pragmatist or idealist, or if you just can't decide what you want to do or be, you can be sure that **maths adds** to your possibilities!

**Disclaimer:** The views expressed in this booklet are the views of the authors. They are not necessarily the views of ICE-EM, nor of the employers, consultants and newspapers involved in these advertisements.

## FINANCE

### **Not just for commerce graduates.**

*It isn't just commerce graduates who are employed in the finance industry!*

*The finance sector is a big employer of mathematics graduates because of the advanced quantitative and analytical skills that come from studying maths.*

*"Finance" is an umbrella term covering banking, the stock market and other forms of investment, insurance, and the regulation of these areas.*

## Senior Financial Analyst

**\$85k Package**  
Alexandria - near Airport

Our client is a globally recognised Financial Services business headquartered in Europe. They require a senior financial analyst / commercial analyst to Partner with the CFO. You will provide detailed and useful analysis and modelling to the business. Budgetary reporting for management. Accurate forecasts and models.

You will have a minimum of 2-3 years financial analysis and modelling experience. This role will suit an individual who is very mathematical, but can also interact well in a dynamic environment and communicate with senior management.

You will have a natural flair for complex modelling and **mathematics** but be able to translate this into insightful reports for the business.

Michael Page  
INTERNATIONAL

### **Manager Finance Operations** Melbourne

Contract

You will manage all financial and cost analysis and accounting activities for the Corporate Real Estate group throughout Australia. Additionally, you will provide Senior Management with financial reports, statistics, interpretation and assessments as required.

#### **What we're looking for**

You will possess experience within the CRE environment or property/facilities management area. Strong Excel and SAP skills are essential. Your communication skills will be excellent, as you will be leading a large team and liaising with key people across the organisation.

#### **About our client**

Our client is one of Australia's largest and most successful companies. Operating within the CBD.

#### **What's on offer**

3 -5 month role. \$50 per hour.

Barber & Bunton   
Financial recruitment - It's much more than just a numbers game.

## Quantitative Analyst

- Excellent Salary Plus Strong Bonus Potential
- Prestigious Financial Markets Group
- Broad Financial Product Focus

This is an excellent long term career opportunity with one of the top quantitative teams in Australian financial markets. Through continued growth two new career opportunities has been created to join this specialist team providing high level quantitative support in dealing, capital management and risk management activities within this leading financial markets group.

Your challenge will be to carry out innovative research and analysis of pricing and risk management strategies for a broad range of global investment trading products. Critical to your success will be your ability to provide expert quantitative advice to the front office dealing room. The role is wide-ranging, touching on areas including credit and market risk, as well as the calibration, review and approval of pricing and hedging models with the aim of achieving global best practice.

Ideally, you must be able to demonstrate a previous experience in pricing/hedging models using a variety of different methods and techniques within the financial markets across sectors. It is important you have superior quantitative skills (likely to be at Doctorate or Masters level) in a discipline such as **mathematics**, physics, finance, engineering or actuarial studies. You will have excellent communication and influencing skills, with the ability to think laterally and develop innovative investment solutions. You will be personally stretched and will grow in this dynamic and challenging environment.

## Statistical Information Coordinator - Financial and Business Services

### Townsville

Offering excellence in teaching and research in a unique tropical setting, James Cook University (JCU) is one of Queensland's premier universities, and ranks among the top research universities in Australia. The University is situated in the vibrant regional community of northern Queensland, which has an expanding economy, and a rapidly growing population.

The University is seeking an experienced Statistical Information Coordinator to join the Statistics area within the Financial and Business Services office. With the growth of the University in both size and complexity, this position offers a challenging role in a dynamic environment.

The Statistics area within Financial and Business Services is responsible for all statistical information and reporting within the University. This position is one of two which are responsible for providing professional strategic, statistical and business management advice to the University, assisting in the discharge of the University's statistical reporting responsibilities and obligations; and providing support to the Management Team in the provision of statistical and business management services to the University.

The major focus of this position will be the development and maintenance of the University's statistical information system.

There is a high expectation that the appointee will have an extensive statistical background and have the ability to transform raw data into meaningful and useful information in various styles of presentation.

#### Enquiries to:

**Employment Type:** Appointment will be full-time on an on-going basis subject to a probationary period.

**Salary:** Higher Education Worker Level 8 - \$57,464 - \$66,045 per annum. Benefits include generous employer superannuation contribution and attractive options for salary packaging.

**Information packages including selection criteria and application procedures may be obtained from <http://jobs.jcu.edu.au/> or by contacting the Recruitment Officer, Human Resources, James Cook University, Townsville Qld 4811.**

Applications close on 25 February 2005. Please quote reference number  
Equal Opportunity in Employment is University Policy  
The University reserves the right to invite applications or not to make an appointment.

Michael Page  
INTERNATIONAL

### analyst/financial modeller Melbourne

#### Permanent

- Client Portfolio - Investment/Commercial Banks, Listed Corporates

As an Analyst in this dynamic environment, you will be guided by impressive mentors and be 'hands on' in building spreadsheet models, providing strategic analysis for clients and assisting in systems training.

#### What we're looking for

You will be degree qualified in Commerce/Finance, Statistics or Economics and have proven experience in an analytical position. Furthermore, you will possess strong modelling skills and enjoy being in a client facing position.

#### About our client

Due to rapid growth and expansion our client, a key player in the consulting industry is currently looking to build their team of analysts.

#### What's on offer

This position offers the opportunity to work with impressive mentors and to be a part of a boutique and professional organisation.

>Always thinking ahead>

JAMES COOK UNIVERSITY



Australian Government  
The Treasury



[www.graduate.treasury.gov.au](http://www.graduate.treasury.gov.au)

## GRADUATE CAREERS AT TREASURY

The Treasury is one of Australia's key economic and policy organisations. Providing advice to the Treasurer and Government, we operate at the forefront of economic analysis and policy development. We provide a dynamic and stimulating work environment and our employees have excellent career opportunities.

With a focus on improving the wellbeing of Australians, Treasury advises the Government on an incredibly diverse range of issues: from the Commonwealth budget to competition policy, macro-policy settings to microeconomic reform, tax policy to trade agreements, we play a key role.

Treasury provides generous employment conditions. Our Graduate Policy Analysts start at the APS 3 level (\$46,254 salary plus superannuation) and, depending on performance, may move to the APS 5 level (\$54,877 salary + superannuation) in their second year.

Treasury is seeking Graduate Policy Analysts with a strong interest in public policy who have gained (or will complete in the year they apply) a high quality pass, honours or higher degree in one or more of:

- Economics and Econometrics
- Law
- Mathematics
- Public Policy
- Commerce
- Taxation, and related disciplines.

A successful graduate will also be keen to foster Treasury values, which include striving for excellence, valuing diversity, teamwork, consultation and ideas sharing, treating people with respect, and honesty and fairness.

If you believe you can meet the challenges that Treasury offers and are interested in a career in policy advisory we would like to hear from you.

For further information please  
see our website or email the  
Graduate Coordinator at  
[graduate.recruitment@treasury.gov.au](mailto:graduate.recruitment@treasury.gov.au)

## Read between the lines...

*The increasing availability, awareness and dependence on commercial data have made the business sector a growth area for mathematics and statistics employment possibilities. The jobs are rarely titled "mathematician" or "statistician", but the fine print makes it clear that's who they want.*

**Michael Page**  
INTERNATIONAL

### **Business Analyst - Leading 3PL business** Melbourne

Permanent

- \*Attractive salary package
- \*Inner city suburbs

Reporting to a Senior Consultant within this logistics consulting business, you will possess excellent analytical skills, developed in a transport/distribution environment and proven operational research, statistics and mathematical modelling experience. You will play a key role in defining, developing and testing a number of transport network models and perform details on forecasting and supply chain/ price optimisation models. There will be a high degree of direct client contact and the role operates on a project basis with the support of a broad, highly technically skilled team of analysts and system experts.

#### **What we're looking for**

The successful candidate will have a strong aptitude for analytical work and the commercial initiative to transform complex models into deliverable business solutions. You will have excellent communication and report writing skills and work closely with consulting teams.

#### **About our client**

Our client is a leading global 3PL business

#### **What's on offer**

An excellent opportunity to utilise your analytical skills in this global business. Excellent career progression and working environment offered.



## **Tourism Australia, play a role in growing Australia's tourism industry**

Tourism Australia (TA) is a Statutory Authority responsible for international and domestic marketing of Australia as a tourism destination and is acknowledged as one of the most innovative and successful tourism marketing organisations in the world.

### **Delivering Tourism Research and Information to Industry**

Tourism Research Australia (TRA) is a business unit within Tourism Australia that provides independent, accurate, timely and strategically relevant statistics and analyses to the tourism industry, government and the community at large in order to enhance the contribution of tourism to the well-being of the Australian community.

We are now seeking highly talented, motivated and innovative individuals to join our Canberra team in the following roles:

#### **Forecasting Manager**

The Forecasting Manager is responsible for the management of the Forecasting unit and ensuring accurate and reliable forecasts are provided through the Tourism Forecasting Committee. The successful applicant will have excellent project management and team leadership skills, excellent communication and analytical skills, with tertiary qualifications in statistics, economics, mathematics or quantitative sciences. Experience in forecasting is essential.

#### **Forecasting Analyst**

The Forecasting Analyst will provide technical and secretariat support to the Forecasting unit and the national Tourism Forecasting Committee. The successful applicant will have very good communication and analytical skills with tertiary qualifications in statistics, economics, mathematics or quantitative sciences. Experience in econometric time series forecasting, economic or demographic analysis would be highly regarded.

#### **Senior Research Officer (Several positions)**

These positions assist in the management of the day to day running of the National Visitor Survey (NVS) and International Visitor Survey (IVS). The successful applicants will be required to liaise with external stakeholders and data providers to ensure delivery of timely and quality information and insights to the tourism industry. Experience with surveys and statistical reporting and analysis is essential.

#### **Technical Survey Specialist**

The major role of this position is to manage the unit record files provided by field work consultants and manage the quality assurance processes for both the IVS and NVS. The successful applicant will be required to provide technical advice on the processing and analysis of IVS and NVS data to staff at TRA, Tourism Australia and other stakeholders and commercial clients. Well developed skills in the use of SAS software and the technical aspects of survey design are essential.

#### **Tourism Research Information Officer**

The Tourism Research Information Officer plays a key role in the dissemination of tourism research data. As the central point of contact for media, stakeholders and the general public, the position involves answering statistical and tourism related enquiries. The successful applicant will have excellent communication and organisational skills, the ability to understand statistical information and to use computer packages to analyse data.

#### **Contact details**

For further information on any of these positions, contact Tourism Research Australia on

Applications should be emailed to [tra@tourism.australia.com](mailto:tra@tourism.australia.com) by COB 31 May 2005.

*Tourism Australia is an Equal Opportunity Employer*





THE AUSTRALIAN NATIONAL UNIVERSITY

info.anu.edu.au/hr/jobs  
CRICOS# 00120C

## WORK, LIFESTYLE, SUCCESS

### The Australian National University

#### POSTDOCTORAL FELLOW

National Centre for Epidemiology Et Population Health

##### Academic Level A

Fixed Term – 3 years

Salary Range: \$46,878 - \$56,569 pa plus 17% super

Reference: NCEPH 2750

Applications are invited for the position of postdoctoral fellow at the National Centre for Epidemiology and Population Health (NCEPH) to work on an ARC project studying the transmission and control of emerging infectious diseases. NCEPH is a multidisciplinary research centre encompassing epidemiology, biostatistics, health economics, sociology and demography. A solid background in mathematics and/or statistics is required. Computing skills are also essential, including the ability to create software to provide numerical solutions to equations for the transmission of infection.

**Selection Criteria:** <http://info.anu.edu.au/hr/jobs/> or from NCEPH Reception  
T: 02 6125 2378 E: NCEPH.Reception@anu.edu.au

### ***Of critical importance.***

*Current and future healthcare relies crucially on analysis of numerical data. From cancer research to infectious disease, the work is important and varied, and statistics plays a central role.*

#### CSIRO Mathematical & Information Sciences, North Ryde NSW

## ***Statistician - Health Informatics***

**\$56K - \$72K + Superannuation**

**Ref: 2005/3**

The Health Informatics Stream within the CSIRO Division of Mathematical and Information Sciences seeks to recruit a highly competent, motivated and energetic statistician to its Sydney office.

In this position, you will be a valuable member of a high-performing team of experienced statisticians focussing on applications in the health domain. You will work closely with the team in contributing to statistical consulting and product development activities for government and industry, and possibly also to strategic research under the Preventative Health National Research Flagship Programme.

Your initial effort is likely to be in designing and conducting statistical analyses of administrative data and/or longitudinal study data to gain information and knowledge contributing to the ultimate aim of reducing the risks of contracting colorectal cancer, cardiovascular disease and/or dementia.

To be a part of this team you will have experience in designing and conducting statistical analyses. You may already have a postgraduate qualification in statistics, epidemiology or biostatistics, or equivalent experience.

You will be competent and experienced in using programming and statistical computing to support your research and will be proficient in at least one standard statistical package.

You will be honest, ethical and a valued team player, meticulous in your science and creative in your ideas. This position is for one year.

**For selection documentation and details on how to apply visit**

**[www.csiro.au/careers](http://www.csiro.au/careers)**

Alternatively contact 1300 301 509

**Australian Science, Australia's Future**

## BIOLOGY

### **Genetics, sustainable farming practices...**

*These ads show just some of the many opportunities to mix mathematics and statistics with the biological sciences and agriculture.*



New Zealand Institute for Crop & Food Research Ltd  
A Crown Research Institute

## **Farm Systems Modeller**

Crop & Food Research is a vibrant, forward looking research institute that provides science leadership in sustainable crop production, high performance plants, high value marine products, and food and biomaterials innovation.

We are seeking a scientist for our Sustainable Productive Environments team at Lincoln, near Christchurch, New Zealand. You will join our farm systems modelling group and will develop computer models and decision support systems to aid sustainable production of high quality, high yielding arable, vegetable and forage crops. You will develop software delivery systems, as stand-alone or web applications, and computer simulation models that describe farm systems, crop, disease, insect growth and development and soil processes as influenced by environment and management. You will work alongside crop physiologists and environmental scientists involved in experimental research projects on a range of crops.

You will have at least a BSc (Hons) or equivalent in a relevant discipline such as a biological science with a strong quantitative emphasis, mathematics, engineering, or computer science. You will be highly motivated, self-reliant but able to work well in a team, and have interests in the modelling of biological systems. Previous experience with simulation modelling and strong computer programming skills would be an advantage.

**For a job description and Crop & Food Research application form see our website at [www.crop.cri.nz](http://www.crop.cri.nz) or contact**

**Applications without an application form will not be accepted. For enquiries regarding the job contact**

**Send your application, quoting vacancy number 04/88, to  
or Human Resources, Crop & Food Research,  
Private Bag 4704, Christchurch, New Zealand,  
by Wednesday 15 December 2004.**

[www.crop.cri.nz](http://www.crop.cri.nz)

Our information benefits . . .

## AUSTRALIAN AGRICULTURE

### **Statisticians (4 positions)**

The work we do benefits Australian agriculture; we are the people behind the information that can impact positively on the Grains Industry. If you're a statistician, biometrician or a recent graduate in statistics who wants a stimulating and satisfying career, then we can offer the opportunity to join an exciting new project team.

As a result of an exciting initiative undertaken by the Grains Research and Development Corporation\*, we have created four positions for Biometricians with enthusiasm and drive.

These positions form part of the National Statistics Project for Crop Improvement in Australia. You will join a national and international network of 15 statisticians providing statistical support and research capacity for Crop Improvement programs and the National Variety Testing Scheme.

In addition to job satisfaction and inspiring challenges, you can look forward to working with organisations that offer flexible working hours, generous annual leave and realistic opportunities for further career development. Being part of a network of internationally acclaimed statisticians also provides a unique opportunity for mentoring and professional development.

Salary packages range from \$41,178 to \$79,085. Funding is available for 3.5 years from 1 January, 2005 to 30 June, 2008. The new positions are located at Perth, Horsham, Wagga Wagga, and Toowoomba.

To apply, download or print an application pack:

- For NSW DPI/Wagga - [www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)
- For DPVIC/Horsham - [www.jobs.vic.gov.au](http://www.jobs.vic.gov.au)
- For DAWA/Perth - [www.agwa.wa.gov.au](http://www.agwa.wa.gov.au)
- For QDPI/Toowoomba - [www.jobs.qld.gov.au](http://www.jobs.qld.gov.au)

\*In conjunction with NSW Department of Primary Industries, Department of Primary Industries Victoria, Queensland Department of Primary Industries & Fisheries, Department of Agriculture Western Australia, University of Queensland and Rothamsted International.





**CSIRO Mathematical & Information Science,  
Brisbane, QLD.**

## *Statistician/Geneticist*

**\$76K - \$90K + Superannuation**

**Ref: 2005/237**

We are seeking to recruit an independent statistician/quantitative geneticist to work on the complex genetics of sugarcane.

Co-funded by the CRC for Sugar Industry Innovation through Biotechnology, this project is to develop new approaches and methodology to undertake genetic analysis and QTL detection. The project outcomes will be the identification of DNA markers and methodologies to improve performance of sugarcane breeding programs. You will provide specialised statistical and quantitative analysis in the areas of experimental design and data analysis and interpretation. You will be part of a cross-disciplinary team, including plant breeders and molecular geneticists co-located at CSIRO Plant Industry.

You must have a strong statistical background with significant experience solving complex biological problems. Previous experience working with QTL analysis would be an advantage. Genetic analysis of complex polyploids such as sugarcane is a challenging problem and you will benefit from an extensive existing data collection and knowledgeable biological collaborators. You must be outgoing and able to interact effectively with statistical colleagues in other states.

You will be an honest and ethical researcher, meticulous in your science, and creative in your ideas. You will have a solid track record and a history of publication in quality journals. This position is suitable for a highly motivated individual looking to make an impact in this fast moving and exciting area.

Applications close 1st April 2005.

**CSIRO Mathematical & Information Sciences**

## *Senior Science Leader, Large Datasets, Bioinformatics for Agribusiness*



**Adelaide Location**

**CSOF 7-8 (\$92K - \$128K plus Superannuation)**

**Ref. No: 2005/425**

CSIRO Mathematical & Information Sciences has identified the Waite Campus in Adelaide as a unique opportunity to make a significant impact in research into large agricultural datasets, particularly QTL analysis. We require a senior scientist to lead research in this area who will report to the Leader, Bioinformatics for Agribusiness.

You will have a history of success in research and leading research teams. You will have a background in statistics or a related discipline and experience in the agricultural area. You will be expected to lead a number of junior staff including postdoctoral and PhD students.

It is anticipated that you will work extensively with a number of CSIRO Divisions as well as external clients and collaborators. While you will interact with business development and research management staff, your primary focus is on delivering quality scientific outcomes.

You will be an honest and ethical researcher, meticulous in your science, and creative in your ideas. You will have a solid academic track record and a history of publication in quality peer reviewed journals.

This position is suitable for a senior scientist with an established track record who would like to join an established team of researchers in agricultural bioinformatics/statistics.

Closing Date: 27 May 2005.

For selection documentation and details on how to apply visit

**[www.csiro.au/careers](http://www.csiro.au/careers)**

Alternatively contact 1300 301 509

**Australian Science, Australia's Future**

## COMPUTING

***Distinguish yourself from the rest.***

***Combining mathematics and computing is a great way to get a clear edge over a straight computing graduate. As you can see from other ads in this booklet, many jobs require both maths and computing skills.***

# Experimental and Computational Scientist

## Fluid Dynamics

Our nuclear analysis group provides high level analysis, research and development, and expert advice in the areas of neutron transport, thermal-hydraulics, criticality safety and shielding. We work in a collaborative manner with a high degree of knowledge sharing and contribution to problem solving within the group. Your role will be to perform CFD analyses and carry out fluid dynamics experiments to validate the results.

You will have:

- a relevant science or engineering degree with Honours or higher (such as physics, mathematics or mechanical engineering)
- specialist experience in numerical and physical modelling in the areas of fluid dynamics, and heat and mass transfer.
- experience in data collection and interpretation for model validation and practical problem solving skills in mechanics and electronics.

Specialist nuclear training and experience in nuclear reactor fluid dynamics will be an advantage.

Starting salary will be negotiated between \$47K - \$53K depending upon qualifications and experience.

Selection criteria, application details and further information is available online at <http://www.ansto.gov.au> or by contacting

Applications must address the selection criteria and close on **4 March 2005**.

## NATIONAL ICT AUSTRALIA LIMITED

Australia's New Centre of ICT Excellence

National ICT Australia (NICTA) is Australia's national research centre in Information and Communications Technology (ICT), with a focus on fundamental and use-inspired research.

### RESEARCHER B CANBERRA RESEARCH LABORATORY ADVANCED NONLINEAR GRADIENT METHODS

Our Statistical Machine Learning program is seeking a researcher to anchor their new Advanced Nonlinear Gradient Methods (ANGie) project. ANGie will explore the potential of newly developed, highly scalable techniques for rapid online optimization with stochastic approximation of gradients, with a research agenda that includes:

- Machine learning algorithm development and implementation;
- Mathematical and empirical analysis of convergence and stability;
- Applications in adaptive signal processing (robotics, computer vision); and
- Development of software tools (dataflow programming, algorithmic differentiation).

The successful candidate should combine excellent programming skills (C++, Python, etc.) with a solid background in machine learning, linear algebra, and optimization, experience with scientific and numerical libraries (e.g., ATLAS), a track record in relevant research, and the ability to work independently and to lead and supervise a team of Ph.D. students. The initial appointment is for two years, with possibility of renewal. Remuneration is internationally competitive.

**Applications:** Please visit NICTA Careers to view the criteria essential to this role and apply online (<http://nicta.com.au/director/careers.cmf>)

**Closing date: 31 January 2005.**



# Ansto

Nuclear-based science benefiting all Australians

Science and Technology Organisation



**ARC SENIOR RESEARCH ASSOCIATE**

**Applied Mathematics, School of Mathematical Sciences (Ref: 3805)**

Salary: \$57,552 - \$68,344 per annum plus an attractive superannuation benefits.

**Closing date 10/06/05**

- Fixed-term position available from 1 July 2005 until 31 December 2007.
- You will work with Professor Nigel Bean and Dr Matthew Roughan to develop mathematical models of internet routing, to improve the robustness and reliability of the Internet.

Contact  
or visit [www.adelaide.edu.au/jobs](http://www.adelaide.edu.au/jobs)

Applicants must address the selection criteria for the position. They are available, with the duty statement from

[www.adelaide.edu.au/jobs](http://www.adelaide.edu.au/jobs)

**Life Impact**



*Do you have some of these skills?*

- C++, Python
- Data collection
- Research
- Ability to work independently
- Team player



**Work at the cutting edge of science and technology**

Join DSTO. We are an organisation at the forefront of international defence research. You will work with over 2000 people including Australia's brightest and most innovative scientists, engineers and IT specialists. Enjoy challenging work, excellent career development, a good super scheme, and family friendly work conditions in a high tech, civilian research environment.

**Heat/Radiative Transfer Specialist**  
**Executive Level 1 (S&T Level 5) \$70,308 - \$76,467**  
**Reference No. 00106762**

Located in Adelaide. You will perform research into thermal transfer and the identification and characterization of thermal sources from distributed and remote measurements as part of the Intelligence, Surveillance and Reconnaissance Division's Imagery Systems program. You will interact with a wide range of technical experts within the Division, elsewhere in DSTO and international collaborative partners.

The position requires:

- In-depth understanding of thermal transfer mechanisms, material characteristics, inverse problems and remote heat measurement systems as well as an ability to expand it in areas relevant to the Australian Defence Organisation;
- Participation in field trials occasionally at remote locations.

Postgraduate qualifications from an Australian tertiary institution, or equivalent, in an area such as Engineering, Physics or Mathematics are highly desirable.

**Research Scientist in Communications Analysis**  
**APS Level 6 (S&T Level 4) \$54,844 - \$63,547**  
**Reference No. 00506788**

Located in Adelaide. You will join a team contributing to leading-edge research and development of algorithms and tools for analysis of telecommunication network dynamics and protocols, and their implementation in various defence areas.

The position requires:

- Demonstrated expertise in research methods and scientific engineering principles coupled with applied graph theory and analysis of dynamic networks;
- PhD in applied mathematics or engineering from an Australian tertiary institution, or other comparable qualifications, with some knowledge of statistical inferencing, social networks, and telecommunications networks;
- Well developed interpersonal skills and the capacity to interact effectively with clients and other research organisations.

For an information pack and application details: Please refer to our website at [www.dsto.defence.gov.au](http://www.dsto.defence.gov.au). Alternatively, contact the Defence Service Centre on 1800 000 677 or email [dsc.recruitment@defence.gov.au](mailto:dsc.recruitment@defence.gov.au). Applicants must address the selection criteria contained in the information pack.

The employment package includes Australian Public Service conditions of service. Applicants must be able to satisfy the requirements of an appropriate security clearance and are required to meet conditions in relation to citizenship, character and medical fitness.

**Applications close: Thursday 19 May 2005**

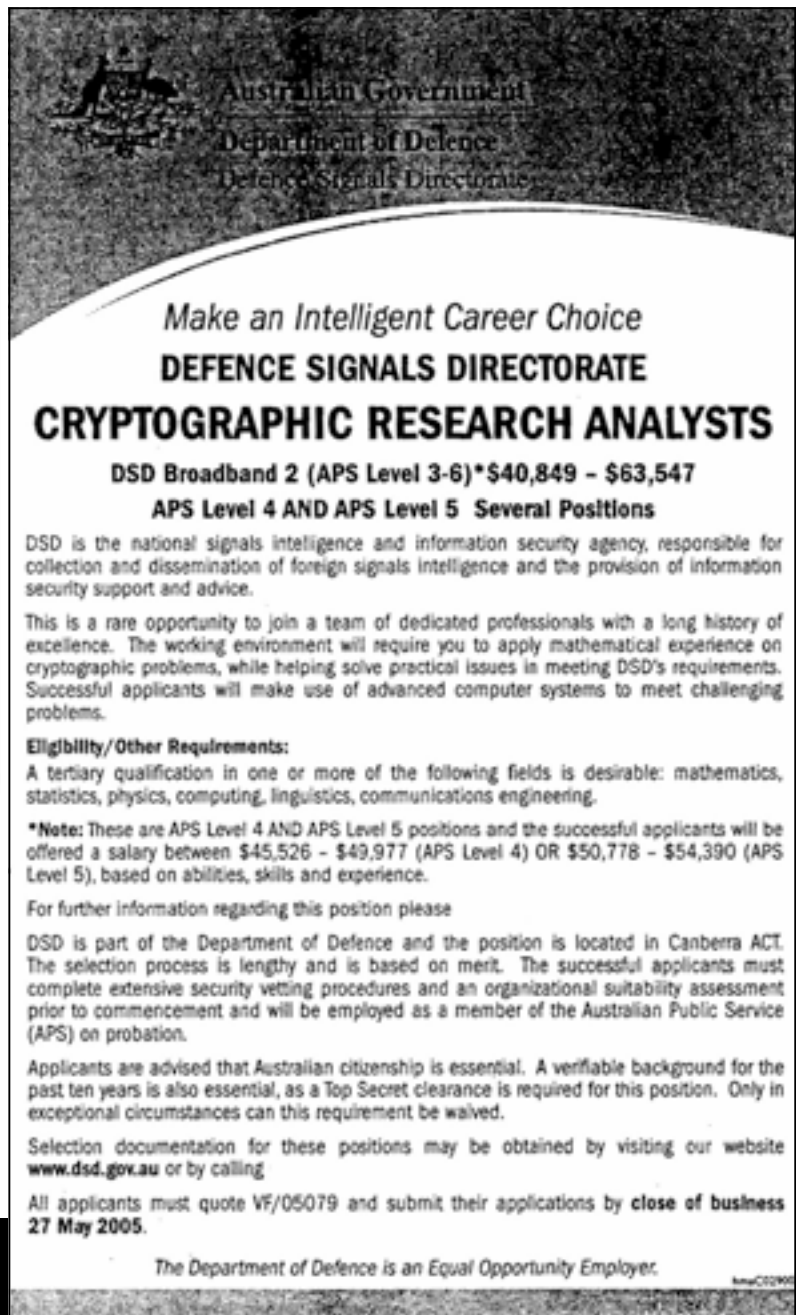
*Defence embraces workplace equity and diversity principles and provides a smoke free working environment.*

# CRYPTOGRAPHY

## What's involved?

*You guessed it! Cryptography is the mathematics of encrypting information and electronic security. Every teller machine and secure website depend on underlying mathematical techniques.*

*Financial institutions, the computing and telecommunications industries and the Department of Defence are always trying to gain an edge by developing faster and more secure encryption methods. It is a big industry and it is all about mathematics.*



Australian Government  
Department of Defence  
Defence Signals Directorate

*Make an Intelligent Career Choice*  
**DEFENCE SIGNALS DIRECTORATE**  
**CRYPTOGRAPHIC RESEARCH ANALYSTS**

**DSD Broadband 2 (APS Level 3-6)\* \$40,849 – \$63,547**  
**APS Level 4 AND APS Level 5 Several Positions**

DSD is the national signals intelligence and information security agency, responsible for collection and dissemination of foreign signals intelligence and the provision of information security support and advice.

This is a rare opportunity to join a team of dedicated professionals with a long history of excellence. The working environment will require you to apply mathematical experience on cryptographic problems, while helping solve practical issues in meeting DSD's requirements. Successful applicants will make use of advanced computer systems to meet challenging problems.

**Eligibility/Other Requirements:**  
A tertiary qualification in one or more of the following fields is desirable: mathematics, statistics, physics, computing, linguistics, communications engineering.

**\*Note:** These are APS Level 4 AND APS Level 5 positions and the successful applicants will be offered a salary between \$45,526 – \$49,977 (APS Level 4) OR \$50,778 – \$54,390 (APS Level 5), based on abilities, skills and experience.

For further information regarding this position please  
DSD is part of the Department of Defence and the position is located in Canberra ACT. The selection process is lengthy and is based on merit. The successful applicants must complete extensive security vetting procedures and an organizational suitability assessment prior to commencement and will be employed as a member of the Australian Public Service (APS) on probation.

Applicants are advised that Australian citizenship is essential. A verifiable background for the past ten years is also essential, as a Top Secret clearance is required for this position. Only in exceptional circumstances can this requirement be waived.

Selection documentation for these positions may be obtained by visiting our website [www.dsd.gov.au](http://www.dsd.gov.au) or by calling

All applicants must quote VF/05079 and submit their applications by **close of business 27 May 2005**.

The Department of Defence is an Equal Opportunity Employer.

Annex C10900



## Develop your mathematical skills into an intelligent career

Ever had an interest in **cryptography**? Ever wanted to work with **supercomputers**?

As a graduate with mathematical skills in DSD, you will have a unique opportunity to make a valuable contribution to Australian security and government decision making.

If you have strong mathematical skills and are interested in helping solve real problems in a range of technical and analytical areas, you should consider a position at DSD.

DSD is now recruiting Graduates with mathematics qualifications for the 2006 DSD Graduate program.

See [www.dsd.gov.au](http://www.dsd.gov.au) for further information.

The Defence Signals Directorate is part of the Australian Public service. Successful applicants are required to undergo and maintain a security assessment to the highest level and will be engaged on probation. To be eligible for engagement, applicants must be Australian citizens with at least 10 years checkable background.

## CRYPTOGRAPHIC RESEARCH ANALYSTS

**DSD Broadband 2 (APS Level 3-6) \*\*\$40,849 – \$63,547**

**APS Level 4 AND APS Level 5 Several Positions**

This is a rare opportunity to join a team of dedicated professionals with a long history of excellence. The working environment will require you to apply mathematical experience on cryptographic problems, while helping solve practical issues in meeting DSD's requirements. Successful applicants will make use of advanced computer systems to meet challenging problems.

### Eligibility/Other Requirements:

A tertiary qualification in one or more of the following fields is desirable: mathematics, statistics, physics, computing, linguistics, communications engineering.

**\*\*Note:** These are APS Level 4 AND APS Level 5 positions and the successful applicants will be offered a salary between \$45,526 - \$49,977 (APS Level 4) OR \$50,778 - \$54,390 (APS Level 5), based on abilities, skills and experience.

For further information regarding this position please contact

DSD is part of the Department of Defence and the position is located in Canberra ACT. The selection process is lengthy and is based on merit. The successful applicants must complete extensive security vetting procedures and an organizational suitability assessment prior to commencement and will be employed as a member of the Australian Public Service (APS) on probation.

Applicants are advised that Australian citizenship is essential. A verifiable background for the past ten years is also essential, as a Top Secret clearance is required for this position. Only in exceptional circumstances can this requirement be waived.

Selection documentation for these positions may be obtained by visiting our website [www.dsd.gov.au](http://www.dsd.gov.au) or by calling

All applicants must quote VF/05080 (Change Manager) OR VF/05079 (Cryptographic Research Analysts) and submit their applications by close of business Friday 27 May 2005.

*The Department of Defence is an Equal Opportunity Employer.*

www.dsd.gov.au



**MACQUARIE**  
UNIVERSITY ~ SYDNEY

**DIVISION OF INFORMATION AND COMMUNICATION SCIENCES**

**Department of Computing**

**RESEARCH FELLOW (LEVEL A OR B)**  
**(Cryptography and Information Security)**  
**(Full-time (fixed-term))**  
**Ref. 20148**

The appointee will work on an ARC supported project on Private Information Retrieval (PIR) within the Centre for Advanced Computing - Algorithms and Cryptography at Macquarie University and will contribute to the development of the general framework and integration of various parts of the project, such as developing mathematical models and designing practical systems of PIR. Applicants should indicate the level at which they are applying or whether they wish to be considered at both levels.

**Essential Selection Criteria at Level A:** PhD (or submitted) in Computer Science or Mathematics or a related area or equivalent; strong background in an area related to cryptography and information security; good programming skills; ability to present research results at scientific meetings and to publish in the scientific literature; good written and oral communication skills.

**Additional Essential Selection Criteria for Level B:** PhD in a relevant area; at least three years postdoctoral research experience or equivalent in the area of cryptography and security; established publication record.

**Application package and enquiries:**

The position is available on a full-time (fixed-term) basis for a period of 30 months. Probationary conditions may apply. Selection criteria must be addressed in the application.

**Salary Range:** Level A - Package up to \$68,339 pa, including base salary \$42,665 to \$57,747 pa, up to 17% employer's superannuation and annual leave loading. An appointee with a PhD will be appointed to a minimum of Point 6 on the salary scale, currently \$53,834 pa. Level B - \$71,903 to \$85,263 pa, including base salary \$60,759 to \$72,048 pa, 17% employer's superannuation and annual leave loading.

**Closing Date:** 8 April 2005



## DEFENCE

### Can you keep a secret?

Defence and intelligence are big employers of mathematics graduates with a wide range of expertise. The work is varied and exciting, and offers great opportunity for career development.



The Australian Security Intelligence Organisation (ASIO) protect Australia and its people from threats to national security.

### Intelligence Analysts Scientific (several positions)

ASIO Central Office, Canberra

ASIO Officer Grade 5

Salary Range \$60,215 - \$68,684  
(plus superannuation)

**ALL APPLICATIONS FOR EMPLOYMENT WITH ASIO ARE HANDLED IN THE STRICTEST CONFIDENCE. IT IS ESSENTIAL THAT YOU MAINTAIN A SIMILAR LEVEL OF CONFIDENTIALITY, AND THAT YOU NOT DISCUSS YOUR APPLICATION WITH OTHERS.**

**These are Canberra-based positions. They will be offered as either permanent or contract for up to 5 years.**

**The opportunities we offer:** This is an interesting and exciting opportunity for persons capable of working with diverse and complex data to add value to ASIO's counter-terrorism work. It is suitable for persons from a range of disciplines including, but not limited to, the sciences or other analytical and mathematical backgrounds. ASIO offers diversity of experience, challenging projects, and modern analysis tools. We recognize the importance of continuing education for professionals and provide excellent opportunities for training and development.

**The people we need:** ASIO is looking for innovative analysts to support and assist in advancing our data exploitation capabilities. You will have a strong interest in applying your skills to contemporary intelligence issues. You will be able to apply your skills in the following areas to assist intelligence investigations:

- applying analytical, statistical and graphical techniques to complex data sets;
- exploiting and deriving intelligence value from large volumes of complex data and a wide variety of information sources; and,
- contributing to the development of information systems and analytical capabilities.

**Qualifications:** You will be a graduate, and honors or other higher degrees would be looked upon favorably. Applicants without formal qualifications but with high-grade skills and equivalent experience in relevant disciplines will be considered.

**How to apply:** Selection criteria and details on how to apply can be found on the ASIO website [www.asio.gov.au](http://www.asio.gov.au).

**Closing date:** Monday 20 June 2005 (applications must be received by this date).

**Eligibility:** Applicants must be Australian citizens.

**Working conditions:** Employment is under the ASIO Act 1979. Conditions of service are similar to those applying in the Australian Public Service. Salary packaging arrangements are available.

ASIO thanks all applicants for their interest. Only those selected for interview will be contacted further.

The duties of the appointment require a national security clearance. Preferred applicants will be subject to psychological assessment and to intrusive security and personal checking/assessment.



Australian Government

Department of Defence  
Defence Science and  
Technology Organisation

### Work at the cutting edge of science and technology

Join DSTO. We are an organisation at the forefront of international defence research. You will work with over 2000 people including Australia's brightest and most innovative scientists, engineers and IT specialists. Enjoy challenging work, excellent career development and travel opportunities, a fantastic super scheme, and family friendly work conditions in a high tech, civilian research environment.

#### Maritime Experimentation Scientist

Executive Level 1 (S&T Level 5) \$70,308 - \$76,467 Reference No. 00109431

Located in Adelaide. You will contribute to the design, execution, and analysis of human-in-the-loop experiments. As part of a small team you will define experimental aims, postulate experimental hypotheses, identify variables and measures, design and conduct valid experiments, and analyse and report on results. Interaction with military staff, academia, industry and international research and development organisations will be required.

The position requires:

- Knowledge and experience in one or more of the following:
  - Designing and conducting human-in-the-loop experiments,
  - Statistical analysis of experiments involving humans,
  - Physiological and cognitive aspects of human performance and behaviour,
  - The use of virtual environments in human experimentation.
- Initiative, judgement and originality in approach;
- Good communication skills.



Australian Government

Department of Defence  
Defence Science and  
Technology Organisation

### Work at the cutting edge of science and technology

#### SYSTEMS SCIENTIST AND ANALYST

APS Level 6 (S&T Level 4) \$54,844 - \$63,547

Reference No. 00505131

**Located in Canberra.** As a member of team, you will conduct systems analysis and construct architecture views for a study of the Joint Strike Fighter (JSF) that focuses on JSF integration into Pacific Rim Coalition CAISR (Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance) systems.

The position requires a demonstrated ability and interest in one or more of the following areas:

- Analysis and design of complex systems and information architectures.
- Network Modelling in advanced computer based collaborative environments.
- Data model development for complex systems.
- High Level Operations Modelling.
- Mathematics and Computing.

The position also requires:

- The ability to work in a team environment and to provide technical input to and influence the direction of that team;
- Good oral & written communication skills;
- A high level of initiative and self-motivation.

**NOTE:** This is a non-ongoing/temporary position for an initial term of 18 months but subject to requirements the term of engagement may be extended by 18 months.

#### APPLICATIONS

To obtain an information pack and application details, please refer to our web site at [www.dsto.defence.gov.au](http://www.dsto.defence.gov.au) Alternatively, contact the Defence Service Centre - email [dsc.recruitment@defence.gov.au](mailto:dsc.recruitment@defence.gov.au) or phone 1800 000 677.

**Applications close:** Thursday 3 February 2005 unless otherwise indicated

DSTO is a civilian part of the Department of Defence. Australian Public Service conditions apply. Applicants should be Australian citizens or eligible and willing to apply for citizenship. Defence embraces workplace equity and diversity principles.

SAC0172





Australian Government  
Department of Defence  
Defence Science and  
Technology Organisation

## Work at the cutting edge of science and technology

Join DSTO. We are an organisation at the forefront of international defence research. You will work with over 2000 people including Australia's brightest and most innovative scientists, engineers and IT specialists. Enjoy challenging work, excellent career development, a good super scheme, and family friendly work conditions in a high tech, civilian research environment.

### Operations Research Scientists

Executive Level 1 (S&T Level 5) \$71,714 - \$77,996 or

APS Level 6 (S&T Level 4) \$55,941 - \$64,818

Reference No. 00128045/00125627

Located in Adelaide. The primary purpose of these positions is to provide analytical expertise for the evaluation of Australian Defence Force concepts to define the need and requirements for major capability acquisitions. You will participate in research into campaign effectiveness, joint concepts and capabilities and supporting analytical methods.

The positions require:

- Experience in the analysis of complex defence problems and the ability to apply these skills to the evaluation of defence concepts and capability requirements;
- An understanding of the roles and applications of quantitative and qualitative analytical techniques, experimental design and statistics;
- High level of personal motivation, persistence and teamwork;
- Excellent oral and written communication skills, including the ability to convey and interpret complex information.

NOTE: Two positions will be filled and the level will depend on the applicant's experience, skills and work related qualities

For an information pack and application details: Please refer to our website at [www.dsto.defence.gov.au](http://www.dsto.defence.gov.au). Alternatively, contact the Defence Service Centre on 1800 000 677 or email [dsc.recruitment@defence.gov.au](mailto:dsc.recruitment@defence.gov.au). Applicants must address the selection criteria contained in the information pack.

The employment package includes Australian Public Service conditions of service. Applicants must be able to satisfy the requirements of an appropriate security clearance and are required to meet conditions in relation to citizenship, character and medical fitness.

Applications close: Thursday, 21 July 2005

Defence embraces workplace equity and diversity principles and provides a smoke free working environment.

## OPERATIONS RESEARCH

### What is it?

*Operations research is all about the optimisation of scheduling, manufacturing, pricing and so on. It is a critical part of business and government planning.*



Australian Government  
Department of Defence  
Defence Science and  
Technology Organisation

## Work at the cutting edge of science and technology

Join DSTO. We are an organisation at the forefront of international defence research. You will work with over 2000 people including Australia's brightest and most innovative scientists, engineers and IT specialists. Enjoy challenging work, excellent career development, a good super scheme, and family friendly work conditions in a high tech, civilian research environment.

### Operations Research Analyst

\$54,844 - \$63,547

Reference Number: 00102802

Located at HMAS Stirling near Perth. As a member of a small team, you will undertake operations research and analysis in support of submarine and anti-submarine warfare.

The position requires knowledge and experience in one or more of the following areas:

- A variety of mathematical problem solving techniques, such as operations research, statistical analysis, and simulation;
- Computer programming and/or software engineering, especially scientific programming.

The position also requires:

- Demonstrated ability to undertake rigorous analysis based on scientific and/or engineering principles of the behaviour of systems;
- Proven ability to apply research skills to complex problems;
- Ability to contribute to the development of objectives and the implementation of appropriate strategies within a project;
- The ability to write precise reports and make clear oral presentations.

For an information pack and application details: Please refer to our website at [www.dsto.defence.gov.au](http://www.dsto.defence.gov.au). Alternatively, contact the Defence Service Centre on 1800 000 677 or email [dsc.recruitment@defence.gov.au](mailto:dsc.recruitment@defence.gov.au). Applicants must address the selection criteria contained in the information pack.

The employment package includes Australian Public Service conditions of service. Applicants must be able to satisfy the requirements of an appropriate security clearance and are required to meet conditions in relation to citizenship, character and medical fitness.

Applications close: Thursday, 7 April 2005

Defence embraces workplace equity and diversity principles and provides a smoke free working environment.

## Work at the cutting edge of science and technology

Join DSTO. We are an organisation at the forefront of international defence research. You will work with over 2000 people including Australia's brightest and most innovative scientists, engineers and IT specialists. Enjoy challenging work, excellent career development, a good super scheme, and family friendly work conditions in a high tech, civilian research environment.

### Command and Control Systems Analyst

APS Level 4-5 (S&T Level 3) \$45,526 - \$54,390

Reference No. 00110627

Located in Sydney. You will work in a small team analysing and enhancing the performance of Naval Command and Control Systems, assessing the operational performance of the operators and their interaction with other headquarter systems.

The position requires:

- Demonstrated ability to apply scientific and engineering principles and concepts, including investigation and analysis to solving technical problems;
- Initiative, judgment, excellent teamwork and communication skills;
- Probable participation in sea trials.

A degree or equivalent experience, in Communications Engineering, Operations Research, Mathematics or Physics, is highly desirable.

For an information pack and application details: Please refer to our website at [www.dsto.defence.gov.au](http://www.dsto.defence.gov.au). Alternatively, contact the Defence Service Centre on 1800 000 677 or email [dsc.recruitment@defence.gov.au](mailto:dsc.recruitment@defence.gov.au). Applicants must address the selection criteria contained in the information pack.

The employment package includes Australian Public Service conditions of service. Applicants must be able to satisfy the requirements of an appropriate security clearance and are required to meet conditions in relation to citizenship, character and medical fitness.

Applications close: Thursday, 26 May 2005

Defence embraces workplace equity and diversity principles and provides a smoke free working environment.

## MATHS

### What's involved?

*You may not know it, but mathematics research offers a rare opportunity to explore and redefine the frontiers of modern knowledge. As these ads indicate, the possibilities are diverse and challenging.*



THE UNIVERSITY OF  
WESTERN AUSTRALIA

### Research Associate

GROUP THEORY: PERMUTATION AND MATRIX GROUPS

SCHOOL OF MATHEMATICS AND STATISTICS

- Two year appointment
- Salary Range: Level A \$40,803 - \$55,372 p.a. (Minimum starting salary for appointee with PhD will be \$51,584 p.a.)

The research project on "Computing with large groups: probability distributions and fast randomised algorithms", funded by the Australian Research Council and directed by Professor Cheryl E. Praeger and Dr Alice C. Niemeyer, concerns development, analysis and implementation of algorithms for permutation and matrix groups over finite fields. Excellent computing and library facilities are available. Applicants must have a postgraduate qualification in pure mathematics or equivalent and a PhD is desirable. Some assistance towards relocation expenses (if applicable) may be negotiated with the Head of School. Commencement date is preferably early 2006.

THE UNIVERSITY  
OF NEWCASTLE  
AUSTRALIA



[www.newcastle.edu.au/services/employment](http://www.newcastle.edu.au/services/employment)

The University of Newcastle is an exceptional achiever in research with an international reputation for expertise in innovative approaches to teaching and learning. Situated in the Hunter and Central Coast Regions of NSW, it is one of Australia's leading universities.

### Faculty of Science and Information Technology

School of Mathematical and Physical Sciences  
ARC Centre for Complex Dynamic Systems and Control

### Research Academic - 3 Year Fixed Term

Position No. 105

The appointee will be a mathematician with research experience in functional analysis and operator-algebraic representation theory. You will carry out research in the ARC Centre for Complex Dynamic Systems and Control under the supervision of Professor Iain Raeburn, and will also have some teaching duties in the mathematics discipline.

**Applications Close: Friday 13 May 2005.**

**Women are particularly encouraged to apply as they are under-represented in the School's academic profile.**

**Before submitting an application**, please obtain additional information about the position including the selection criteria and application procedure in **one** of the following ways:

website [www.newcastle.edu.au/services/employment](http://www.newcastle.edu.au/services/employment)  
email [employment@newcastle.edu.au](mailto:employment@newcastle.edu.au) or  
phone



The UNIVERSITY  
of NEWCASTLE  
AUSTRALIA

The University of Newcastle values equity and diversity



THE UNIVERSITY OF  
WESTERN AUSTRALIA

### Lecturer (FEF: 800)

SCHOOL OF MATHEMATICS AND STATISTICS

- 3 year appointment
- Salary Range: Lecturer Level B \$61,201 - \$72,678 p.a.

We seek an applied mathematician to teach at undergraduate level and to conduct research in an appropriate field of interest. The School is one of the leading schools of mathematical sciences in Australia. Applicants must have a PhD or equivalent qualification in applied mathematics. Applicants with teaching experience are requested to submit a teaching portfolio as part of their application.

**For further information regarding the position please contact**

**Closing Date: Friday, 13 May 2005**

Located adjacent to the picturesque banks of the Swan River, the University offers an attractive benefits package including generous superannuation and leave provisions, fares to Perth (if applicable) for appointee and dependants along with a removals allowance and an enviable working environment. These and other benefits will be specified in the offer of employment.

**Application Details:** For copies of the selection criteria please access the website <http://jobs.uwa.edu.au/>. Applicants must address the **selection criteria**. Written applications quoting the reference number, personal contact details, qualifications and experience, along with contact details of three referees should be sent to Director, Human Resources, The University of Western Australia, M350, 35 Stirling Highway, Crawley WA 6009 or emailed to [jobs@uwa.edu.au](mailto:jobs@uwa.edu.au) by the closing date.

**Committed to recruiting, developing and retaining the highest quality staff**

**SCHOOL OF MATHEMATICS**

**Research Associates (5 positions)**

**FIXED TERM.** - Salary: \$55,763 - \$59,637 per year (plus up to 17% employer superannuation plus leave loading.) This salary includes a superable UNSW academic loading of \$3,000 per annum payable to all academic staff (pro rata for fractional academic staff).

Applications are invited for five Research Associate positions in the School of Mathematics. The successful applicants will work on one of the following projects funded by the Australian Research Council (ARC). Applicants with proven teaching abilities may seek a variant of the position in which 25% of the appointment is considered as a regular academic appointment funded by the School.

1. "Symmetries in analysis", Professor Terry Dooley.
2. "Australian climate extremes and predictability in a changing CO<sub>2</sub> world: the unique role of the Southern Hemisphere extratropical ocean-atmosphere", Associate Professor Matthew England, Dr Scott Power and Professor D Karoly
3. "Market model of implied volatility", Dr Ben Goldys and Associate Professor Robert Womersley.
4. "Statistical methods for flow cytometric data", Professor Matt Ward and Dr Inge Koch.
5. "On the geometry of liquid crystals and biological membranes", Associate Professor Wolfgang Schiel and Professor Colin Rogers.

**Essential criteria for all positions:** a PhD or equivalent qualification in a relevant discipline; good oral and written communication skills; knowledge of equity and diversity policies and programs; knowledge of OHS responsibilities and commitment to attend relevant OHS training.

Applicants seeking a 25% regular academic appointment must also have documented teaching experience.

**Project 1: Symmetries in analysis - REF. 3397AHE**

**Additional essential criteria:** sound knowledge of techniques of mathematical analysis.

**Additional desirable criteria:** demonstrated expertise in one or more of the following areas: harmonic analysis, Lie groups, ergodic theory, dynamical systems.

**Further information:**

**Project 2: Southern Ocean variability & climate change - REF. 3388AHE**

**Additional essential criteria:** knowledge of large-scale ocean and climate dynamics; expertise in the analysis and interpretation of ocean and climate data sets and/or model output.

**Additional desirable criteria:** familiarity with general circulation models of the ocean, atmosphere and coupled climate system; experience in the configuration and running of GCMs for large-scale ocean and climate research.

**Further information:**

**Project 3: Market model of implied volatility - REF. 3399AHE**

**Additional essential criteria:** sound knowledge of advanced techniques of mathematical finance.

**Additional desirable criteria:** knowledge of theoretical and computational aspects of linear and nonlinear parabolic partial differential equations and stochastic analysis; experience with computational methods for derivative pricing; ability to work independently and cooperatively with others.

**Further information:**

**Project 4: Statistical methods for flow cytometric data - REF. 3400AHE**

**Additional essential criteria:** sound knowledge of statistical methodology and computational statistics.

**Additional desirable criteria:** knowledge of one or more of the following areas: functional data analysis, statistical learning, semiparametric function estimation, feature significance, and statistical graphics. Experience with R and Matlab; demonstrated interest in applying statistical methodology to biotechnology; and an ability to work independently and co-operatively with others.

**Further information:**

**Project 5: The geometry of liquid crystals & biological membranes - REF. 3401AHE**

**Additional essential criteria:** sound knowledge of and research interest in (mathematical) continuum mechanics and differential geometry together with a knowledge of or preparedness to learn computer algebra.

**Additional desirable criteria:** knowledge of soliton theory (integrable systems) and symmetry analysis of differential equations.

**Further information:**

**FOR ALL POSITIONS:**

These are fixed term positions available initially for 2 years with a possible extension to a 3rd year. Applicants need to explicitly address the selection criteria and state specifically which Project they are applying for by quoting the relevant reference numbers).

Membership of a University approved superannuation scheme is a condition of employment. See [www.maths.unsw.edu.au](http://www.maths.unsw.edu.au) for additional information on the School.

Applications close 15 March 2005.

**Opportunities at Monash**

**Lecturer/Senior Lecturer – Mathematics**

**School of Mathematical Sciences  
Faculty of Science**

Applications are invited for a continuing full-time Lecturer/Senior Lecturer in Mathematics at Level B or C. The appointee will contribute to the school's undergraduate and postgraduate teaching programs in mathematics, and will conduct research in the area of geometry and analysis. Applicants must have a PhD in mathematics, with a strong record of high quality teaching and research. Appointment will be made at a level appropriate to the successful candidate's qualifications, experience and in accordance with classification standards for each level. Applicants must specifically address the selection criteria.

**Salary range:** \$57,936 – \$68,801/\$70,973 – \$81,836 pa Level B/Level C plus generous superannuation



**RESEARCH ASSOCIATES IN FLUID MECHANICS (TWO POSITIONS)**

**School of Mathematical Sciences**

Salary: \$44,889 - \$54,672 per annum, plus attractive superannuation benefits

A minimum of \$50,931 per annum is payable to the holder of a PhD.

**Closing date for both positions is 15/2/05**

Reference No. 12594

- Fixed-term position available immediately for two years.
- This post is funded under the Australian Research Council Grant "Robust fluid mixing through topological chaos". A strong mathematical background, in particular in fluid mechanics and/or dynamical systems, and confidence in the use of numerical methods is required.

Reference No. 12503

- Fixed-term position available immediately for two and a half years.
- This post is funded under the Australian Research Council Grant "Understanding the fluid mechanics of unsteady friction". You should have a strong mathematical background, in particular in fluid mechanics, and have experience in applying numerical and asymptotic techniques to the study of fluid flows.

**Applicants must address the selection criteria for the position.**

**They are available, with the duty statement from**

**[www.adelaide.edu.au/jobs](http://www.adelaide.edu.au/jobs)**

**Life Impact The University of Adelaide**

## METEOROLOGY

### ***Does it look like rain?***

*As everyone knows, the weather is hard to predict! The modelling of ocean currents, weather patterns and climate change is all about mathematics; it is important to a range of industries - from fishing, shipping and farming to air traffic control. And it even affects the everyday person deciding on what to wear!*

CSIRO Land and Water, Perth WA

### ***Climate Impacts Modeller/Statistician***

### ***Research Scientist/ Senior Research Scientist***

**\$66K - \$90K + Superannuation**

**Ref: 2005/357**

We are seeking a dynamic individual with a growing record of research achievement to join our multi-disciplinary research team working on hydroclimatic processes and impacts. The appointee will work within a small team of climate and hydrological modellers that is closely integrated into a larger program investigating the effects of climate on surface water systems. This position is for a term of three years.



CSIRO

CSIRO Marine Research, Floreat WA

### ***Atmospheric Correction Postdoc***

**\$58K - \$64K + Superannuation**

**Ref: 2005/228 (CMR05/04)**

CSIRO is seeking a Postdoctoral Fellow in Atmospheric Correction. The appointee will be responsible for the development and implementation of advanced algorithms for the atmospheric correction of hyperspectral data collected over targets such as coastal waters and dark vegetated areas. This will be achieved through the development and analysis of forward and inverse radiative transfer models, and the analysis and assimilation of field data. The appointee will have opportunities to participate in sampling design, collection and analysis of field data.

The appointee will be based in Floreat, but will have opportunities to collaborate with researchers at CSIRO's Earth Observing Centre in Canberra, and at other Australian research institutions.

Closing date: 8 April 2005.

**For selection documentation and details on how to apply visit**

**[www.csiro.au/careers](http://www.csiro.au/careers)**

**Alternatively contact 1300 301 509**

**Australian Science, Australia's Future**



Australian Government

Bureau of Meteorology

## **SCIENTIST**

Salary Range:

**\$55,060 - \$61,713 + super**

**3 years non-ongoing engagement**

**Flexible Working Hours**

The Bureau of Meteorology Research Centre (BMRC) is seeking a scientist to contribute to the diagnosis and representation of moist processes and their interaction with large-scale tropical circulation in the Bureau's coupled global climate model. This position will focus on identification of the key components of the parameterized moist processes that are relevant to tropical intraseasonal variability. Duties will include design and execution of numerical experiments with existing models and preparation of scientific papers.

Knowledge in tropical atmospheric convection, its interaction with large-scale dynamics and its representation in numerical models is required.

Selection documentation for this role and Essential information for Applicants may be obtained from <http://www.bom.gov.au/careers> and selecting position 1748, or by emailing [Jobs@bom.gov.au](mailto:Jobs@bom.gov.au) quoting "1748" in the subject line. Please read the selection documentation and if you have any queries specific to this position please contact

Applications addressing the selection criteria should be forwarded to the Recruitment Manager, Bureau of Meteorology, GPO Box 1289K, Melbourne Vic 3001 by close of business 14th April 2005.

Information about the Bureau of Meteorology can be obtained by accessing <http://www.bom.gov.au>

*Australian's National Meteorological Service*

# GRADUATE CAREERS

**Starting your career.**

*Some businesses and government agencies have a range of general positions they want filled by graduates from mathematics, statistics and similar disciplines.*



**Australian Government**  
Department of Employment and Workplace Relations

help us support  
**strong employment growth  
and a productive Australia**

**GRADUATE CAREERS**  
The Department of Employment and Workplace Relations (DEWR) is a professional, creative and enthusiastic organisation providing excellent service to Ministers and clients. We are seeking to recruit 100 graduates for our 2006 Graduate Programme.

**Are you the right graduate for DEWR?**  
We have careers for graduates who are interested in working to implement workplace relations, employment and workforce participation policies that affect the lives of all Australians.

DEWR will be recruiting graduates from all disciplines for our general stream. We are specifically interested in graduates with qualifications in **accounting, economics/statistics, information technology and law** for our specialist streams.

Graduates need to have well developed written communication and problem solving abilities, a flexible approach to work, display high levels of motivation and an interest in working in high performing teams.


**What the DEWR Graduate Programme offers**

- Skills enhancement and career development through learning opportunities and work placements
- An Australian Workplace Agreement with starting salaries from \$42,000 to \$47,000 p.a. depending on qualifications and experience
- Opportunity to undertake placements in both National Office (Canberra) and State Offices in all State capitals
- Flexible employment arrangements

**How to apply**  
Applications should be lodged online at [www.dewr.gov.au/graduate](http://www.dewr.gov.au/graduate). Applications are now open and will close at midnight (EST) on 16 May 2005. For more information about these graduate opportunities please visit [www.dewr.gov.au/graduate](http://www.dewr.gov.au/graduate). Australian citizenship is required for employment in DEWR.

The department encourages workplace diversity and welcomes applications from graduates with a disability, Indigenous Australian graduates and graduates from non-English speaking backgrounds. If you have individual requirements that need to be accommodated in order to apply online, please email [graduate@dewr.gov.au](mailto:graduate@dewr.gov.au)

[www.dewr.gov.au/graduate](http://www.dewr.gov.au/graduate)



**Australian Government**  
Australian Bureau of Agricultural and Resource Economics

Graduates...  
a career with  
**ABARE**  
...taking you places

ABARE is seeking highly motivated graduates to join our multidisciplinary pool of talented and innovative economists, mathematicians, and statisticians who are at the leading edge of international economic research. A degree, at honors level, in economics, statistics, mathematics or related discipline is essential or a good double degree with strong economic content.

Graduates joining ABARE carry out applied economic research and analysis on a diverse range of issues relating to agriculture, minerals, energy, forestry, fisheries, trade, and the environment.

Applications close **Thursday 28 April 2005**.

Full details of the positions and application procedures are available at [www.abareconomics.com](http://www.abareconomics.com)

DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY

A career with abare  
...taking you places!

**GRADUATE RECRUITMENT**  
APPLY NOW FOR CAREERS AT THE CUTTING EDGE OF SCIENCE AND TECHNOLOGY

**Do you have a degree or post-graduate degree in science, engineering, IT or human sciences?**

**Are you motivated to succeed in your field?**

**Do you want to work at the forefront of international defence research?**

**Yes? Then the Defence Science & Technology Organisation (DSTO) is the place for you!**

DSTO is one of the world's leading defence science organisations. We are looking for creative, flexible people who can demonstrate an ability and willingness to contribute to the development of leading technologies and capabilities that will provide the Australian Defence Force (ADF) with operational advantages.

At DSTO, you'll enjoy challenging work, excellent career development, links with other research organisations both nationally and internationally, a generous super scheme and family-friendly work conditions with flexible working hours.

We need motivated graduates and post-graduates with strong academic achievement, proven research skills or relevant experience and well-developed communication skills in disciplines related to:

Engineering  
Mathematics  
Science  
Information Technology  
Human Sciences

Positions are available in South Australia, Victoria, ACT and New South Wales and are offered as APS4-5 (S&T Level 3) \$48,437-\$55,478 and APS 6 (S&T Level 4) \$55,941-\$64,818. The classification level may be dependent on the level of knowledge, skills and experience of the successful applicant.

See our website for further information on this exciting opportunity. Applications should be lodged online using the application form on our website under Careers: (<http://www.dsto.defence.gov.au/careers/page/341/>)

**Applications close at 8.30am on Monday 25 July 2005**

DSTO is a part of the Department of Defence. Australian Public Service conditions apply. Applicants should be Australian citizens or eligible and willing to apply for citizenship.

*Defence embraces workplace equity and diversity principles.*

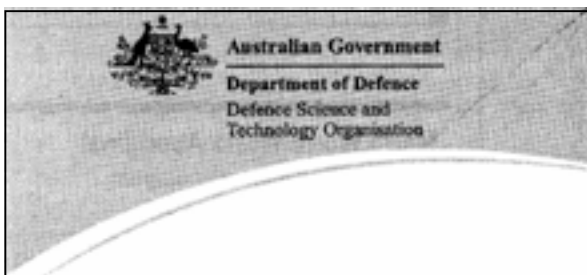
[www.dsto.defence.gov.au](http://www.dsto.defence.gov.au)



## MODELLING

### **Engineering? Mining? Meteorology? Finance? Communications networks?**

*The common thread here is the use of mathematical models to predict and forecast. Modelling is a fundamental tool used in industry and a skill in demand. The employment opportunities range across the spectrum.*



### **Work at the cutting edge of science and technology**

Join DSTO. We are an organisation at the forefront of international defence research. You will work with over 2000 people including Australia's brightest and most innovative scientists, engineers and IT specialists. Enjoy challenging work, excellent career development, a good super scheme, and family friendly work conditions in a high tech, civilian research environment.

#### **Mathematical/Computational Modeller in Surface Platforms**

**APS Level 6 (S&T Level 4) \$55,941 - \$64,818**

**Reference No. 00110529**

Located in Melbourne. You will assist in research activities associated with workforce planning and crew modelling relevant to the Royal Australian Navy and the Australian Defence Force.

The position requires:

- Knowledge and demonstrated achievement in the areas of either workforce planning, Systems Dynamics modelling, Defence Operations Research or human performance modelling;
- An associate diploma (or comparable qualification) in mathematics, computer science or systems engineering is highly desirable with an ability and aptitude in computational modelling, together with a demonstrated ability to apply one or more of the following: Software design and development using modern programming languages; Workforce Planning; Systems Dynamics; Defence Operations Research or Human Factors.

#### **Defence Scientist in Signature Modelling Technologies**

**APS Level 6 (S&T Level 4) \$55,941 - \$64,818**

**Reference No. 00509675**

Located in Melbourne. You will undertake research and development in low-signature platform designs and signature-control technologies and contribute to work in support of Navy and Defence acquisition projects using computer modelling.

The position requires:

- Demonstrated achievements in running complex computer modelling codes; analysis of the output data and comparison of modelling data with theoretical and field trial data;
- A degree in Computer Science, Engineering or Physics from an Australian tertiary institution or a comparable qualification that is appropriate to the duties of this position is highly desirable.

#### **Defence Scientist in Nonlinear Materials Modelling**

**APS Level 4-5 (S&T Level 3) & APS Level 6 (S&T Level 4) \$46,437 - \$64,818**

**Reference Nos. 00509673 & 00509674**

**Note.** Only one position is available. The salary level is dependent on the level of knowledge, skills and experience of the successful applicant.

Located in Melbourne. You will perform professional engineering and scientific work in modelling the nonlinear behaviour of both conventional and emerging hybrid materials for Defence capabilities in the maritime and land domains as well as applications in counter terrorism.

The position at S&T Level 3 requires:

- Demonstrated ability, understanding and sound theoretical, modelling and experimental knowledge in some or all of the following: Mechanics; Mathematical modelling; Mechanics of materials of metals and polymers; and Materials.

The position at S&T Level 4 requires:

- Demonstrated ability to undertake innovative and high quality research to understand and model the performance of conventional and emerging materials when they are applied in protection and other platform systems. Knowledge of the mechanics of nonlinear material behaviour, and the influence of nanoparticles, particularly for polymers and metals under blast and impact loads as well as other complex stress states would be an advantage.

Bachelor or higher degree(s) in engineering, physical sciences, mathematics or a related discipline from an Australian tertiary institution or a comparable overseas qualification or demonstrated research achievements appropriate to the duties of the position is highly desirable.



Australian Government  
Australian Bureau of Agricultural  
and Resource Economics



ABARE is Australia's largest applied economic research organisation, providing economic information on the agriculture, fisheries, forestry, minerals and energy sectors to government, industry and the public.

The following positions are located in Canberra:

#### **Modeler/Mathematician**

**DPIE Band 3 Work Level 7**

**\$68,341 - \$73,687 - SEV1270**

**DPIE Band 3 Level 8**

**\$79,537 - \$92,565 - SEV1271**

Several exciting opportunities have become available in ABARE's International Branch for experienced economic modelers/mathematicians with extensive modeling expertise. We are seeking people to develop innovative solutions to policy relevant and complex technical issues. The successful applicants will be required to contribute to the development of ABARE's CGE trade and environment model and to research and write policy relevant technical papers and reports.

Prior experience in trade and/or environment modeling is preferable, however applicants with a strong mathematical modeling background and qualifications in applied economic research and economic forecasting will also be considered. Remuneration will be dependent on skills and experience of the successful applicant.



Australian Government  
Australian Bureau of Agricultural  
and Resource Economics



ABARE is Australia's largest applied economic research organisation, providing economic information on the agriculture, fisheries, forestry, minerals and energy sectors to government, industry and the public.

#### **Research Economists, Commodity Analysts, Statisticians & Economic Modelers**

**DPIE Band 2 Work Level 5**

**\$49,367 - \$52,004 - SEV1268**

**DPIE Band 2 Work Level 6**

**\$52,969 - \$68,340 - SEV1269**

ABARE is also seeking motivated and talented research economists, commodity analysts, statisticians & economic modelers to join the research team. Successful applicants will have an opportunity to contribute to ABARE's exciting research program covering a broad range of economic, natural resource management and environmental issues in the agricultural, minerals, energy and resource sectors.

Detailed knowledge of, and relevant experience in, applied economic analysis, commodity forecasting, economic modeling and/or statistical analysis would be an advantage. A keen appreciation for and understanding of Australian agricultural, minerals, energy and natural resource industries would also be valuable.

The successful applicant will have strong applied economic skills. A degree, preferably at honours level, in economics, statistics, mathematics or a related discipline from an Australian university or equivalent qualification is essential for all positions.

**Applications close on 10 June 2005.**

**Conditions:** Applicants should be Australian Citizens. The Department's Certified Agreement covers conditions of service. These positions may be subject to a security assessment.

**General:** Full details of the positions and application procedures are available at [www.abareconomics.com](http://www.abareconomics.com). Hearing or speech impaired applicants may obtain the selection documentation via the department's TTY number. Applicants will be assessed against specific selection criteria. Applicants should address these criteria in their application and include their qualifications, experience, and names and telephone numbers of two referees.

*The Department is committed to Workplace Diversity.*

**DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY**



CSIRO Entomology, Canberra ACT

## Research Scientist Spatial Analysis

\$76K to \$90K + Superannuation  
Ref 2005/452



Understanding and protecting Australia's unique biodiversity is a national research priority which requires the capacity to analyse, model and interpret patterns of species abundance and biodiversity at appropriate spatial scales. Invertebrates in both natural and managed environments provide a significant functional component of biodiversity. We seek a highly skilled spatial analyst who can apply advanced statistical and modelling approaches to questions of invertebrate biodiversity pattern and process. If you are attracted to this exciting area of quantitative ecology and you are a PhD graduate with extensive experience in spatial analysis and modelling, then you should apply for this position.

This position will be part of our Ecological Outcomes team, which interacts broadly with biodiversity researchers in the Water for a Healthy Country Flagship. The appointee will also develop research opportunities with other Teams in Ecosystem Management where spatial analysis and database modelling skills are required.

Work in team environments that foster creative and analytical cultures.



### STATISTICIANS, ANALYSTS AND MODELLERS

Various Sections

Several positions in the range from: APS 3 – EL 1

\$39,525 - \$75,343

The Australian Bureau of Statistics is Australia's official statistical agency and is recognised internationally as one of the world's leading statistical agencies. The statistics we produce inform discussion, debate and decision-making within government and the wider community. Information published by the ABS describes the state of the nation and is fundamental to the democratic process.

The ABS seeks enthusiastic, highly motivated people with well developed interpersonal and communication skills, who would like to pursue a career in mathematical statistics or socio-economic analysis. We are looking for people with appropriate tertiary qualifications and/or experience in applying statistical techniques in areas such as survey design, model building and prediction, social or economic research and investigation etc.

Qualifications sought include mathematics, statistics, econometrics, and related quantitative disciplines. Positions are available in Canberra at various levels. Some positions may be available in State capital cities.

The ABS places a strong emphasis on team work and on the development of skills. Working in the ABS, you will have exposure to a variety of work and will be given support to build your skills and further your career. Your work could range from designing surveys of businesses or people, investigating and resolving methodological problems, or exploring economic and social phenomena.

The ABS has excellent conditions of service, including superannuation, long service leave, flexible working hours and many other entitlements to maintain a healthy work life balance.

The successful applicants will be offered a choice of coverage under an Australian Workplace Agreement or the ABS Certified Agreement.

Australian Citizenship is a requirement for employment in the Australian Bureau of Statistics.

For further information on these positions, please contact

Selection documentation may be obtained from the ABS Website [www.abs.gov.au](http://www.abs.gov.au), or by contacting

Applications addressing the selection criteria and nominating two referees should be forwarded to: The National Recruitment Unit, Australian Bureau of Statistics, Locked Bag 10, Belconnen ACT 2616 or emailed to [recruitment@abs.gov.au](mailto:recruitment@abs.gov.au) by close of business Thursday 3 February 2005.

The ABS encourages and values a diverse workforce.

The ABS is one of the world leaders in its field, equally serving Australian Governments, business and community and is offering with great opportunities for highly professional individuals who love working in a team environment.



STILL hiring PEOPLE (1)st

I.T. Recruitment Solutions

**Paxus**

### Mathematical Modelling Guru - ADELAIDE BASED

The Role:

Our client requires someone to start to develop and establish a modeling team within one of it's divisions.

The aim is to have an initial team who can develop computer-based mathematical models of systems of interest. The senior modeller will be required to develop this capability, and to manage these staff in providing a modelling service to projects and bids within our organisation. It is expected that the applicant will train and develop modeling staff drawn from our current engineering pool, and also hire specifically to fill roles in the modelling team. Models are required for applications such as:

- Computer networks
- Communications networks
- Electronic warfare systems,
- Sensors (eg radars, EO imaging systems)
- Weapons
- Operations research

It is expected that the senior modeller will develop within our organisation a set of tools and framework for developing these models, and work with specialists drawn from the general engineering staff to implement detailed models.

Models could be coded in languages such as C++ or Java, or developed in a modelling tool such as Matlab, as appropriate to the task at hand.

To be successful in this role, applicants must have:

- 5 years hands on experience in developing computer-based models;
- Broad knowledge of computer-based modelling tools and techniques
- Experience in running a team of modelling staff, or other teams;
- Experience in Defence, or systems used by Defence;
- Appropriate University degree
- Strong skills in Physics or Applied Mathematics;
- An understanding of project management,
- The ability to work within mixed discipline project teams and operate at a range of technical levels from detailed mathematical development to high level conceptual understanding of a system or problem.

## TEACHING

### Port Moresby International School

(A member of the International Education Agency)

The following exciting teaching opportunity exists:

- Head of Mathematics
- Advanced Math Teacher

Positions involve teaching the IB and will commence January 23, 2006. Previous IB experience desirable but not essential.

Port Moresby International School is a well equipped and resourced school with a history of excellence. It has over 800 students in grades 7 – 12 from 17 countries.

**Benefits:** Salary – Approx. Aus\$60000 – Aus\$77000, depending on experience and position sought. Free furnished housing, domestic staff, utilities, medical insurance, annual return airfares, personal laptop computer, a 15% annual bonus and the ability to package additional superannuation.

#### Opportunities:

- Gain International experience teaching the IB
- Teach within a vibrant well resourced school
- Extremely well behaved students.
- Have an adventure living in an exciting country
- The best diving in the world
- Walk the Kokoda Track
- Get to know the wonderful Papua New Guinea people.

Interested applicants should contact

on the position and forward a copy by email of their CV, with three referees.

### Get back to school!

*Maths teachers are in demand both here in Australia and overseas. Teaching can be a flexible and secure career with opportunities to influence students positively, to work in city or rural areas, and to achieve seniority. Many teaching advertisements are now only shown online, so you should check your state government website for further notices.*

Maths/  
Numeracy  
Consultant



...including numeracy for at-risk learners

A significant aspect of this role will be to provide consultancy services to schools funded under the Australian Government Targeted Programmes to provide numeracy support to students at risk of not succeeding in numeracy. Consultancy support is tailored to individual school needs and could include visits to schools, presenting professional development sessions or staff meetings, in-class support, advice regarding resources or email and telephone support.

In addition, the role will include the provision of professional development activities within the Board of Studies K-10 framework. These activities will focus on implementing the syllabus documents with a particular emphasis on K-6 numeracy in the middle years and differentiated curriculum.

The office is based in Sydney CBD however consultants are in schools for most of the time. Travel within the state is required. Four weeks annual leave and administrative hours apply. A salary package will be negotiated with the successful candidate. The package may include use of a car and mobile phone.

#### Enquiries and Selection Criteria:

Information and selection criteria are available at [www.studentnet.edu.au/aispd](http://www.studentnet.edu.au/aispd).

Applications should be forwarded by 8th December to:

View on-line: [ozeducationjobs.com](http://ozeducationjobs.com)

The Association of Independent Schools  
of New South Wales Limited

### TOOWOOMBA GRAMMAR SCHOOL

A G.P.S. SCHOOL OF QUEENSLAND - ESTABLISHED 1875



*Toowoomba Grammar School is a non-denominational school for boys from Reception to Year 12, with an enrolment of 900.*

*Boarders from throughout Australia constitute approximately one-third of the Senior School enrolment. It is one of the nine Great Public Schools (GPS) of Queensland.*

Applications are invited from experienced Teachers, who must be registered, or eligible for registration as teachers in Queensland, for the following positions:

### Teacher of Mathematics

This is a contract position for Terms 3 and 4 of 2005 but has the possibility of becoming a permanent appointment for the successful applicant.

Toowoomba, with a population of approximately 100,000, is situated one hour and twenty minutes west of Brisbane and an easy drive to both Gold and Sunshine Coasts. Toowoomba is often claimed as Australia's most beautiful provincial city. Lifestyle and cheaper accommodation together with the infrastructure of a large city are attractions of residing in Toowoomba.

Applications including a full Curriculum Vitae and the names of at least three referees with whom the Headmaster may consult, should reach his office by Monday, 14 March 2005.



## THE ROCKHAMPTON GRAMMAR SCHOOL

Applications are invited for the following full-time permanent teaching position to commence in Term 2, 2005.

### MATHS/PHYSICS

We seek an excellent teacher of Senior and Junior Mathematics, but an applicant with an ability to also teach Senior Physics could be advantaged.

The School is implementing 'Dimensions of Learning' across each school year and applicants should gain information about 'Dimensions of Learning' at [www.mcrel.org/programs/dimensions/whathow.asp](http://www.mcrel.org/programs/dimensions/whathow.asp)

A comprehensive curriculum vitae including the names of three referees should be forwarded to:

**The Headmaster**  
The Rockhampton Grammar School  
Archer Street  
ROCKHAMPTON Q 4700

Email: [positions@rgs.qld.edu.au](mailto:positions@rgs.qld.edu.au)  
Web Site: [www.rgs.qld.edu.au](http://www.rgs.qld.edu.au)

Applications close Wednesday, 13 April 2005.

TMP 03/03/07

Co-educational \* Non-denominational  
Day and Boarding School \* Prep-Year 12



## CANBERRA GRAMMAR

Applications are invited for the following positions:

### Head of Mathematics

*This full-time position will commence Term 1, 2006.*

The Mathematics staff is a dynamic group of highly qualified and committed professionals. We are seeking an inspirational and collaborative leader, conversant with a wide range of educational technologies, to help the department continue its quest for excellence in Mathematics teaching and support, including the integration of ICT into the Mathematics curriculum. An ability to teach to the highest level of Secondary School Mathematics is essential.



## BRISBANE GRAMMAR SCHOOL

Brisbane Grammar School is a non-denominational boys school of 1400 students (Years 6-12) located close to the Brisbane CBD. The School maintains a strong tradition of academic excellence and operates an extensive extracurricular programme.

The following full-time positions (contract or continuing) will be available from the beginning of Semester 2, 2005.

### TEACHER OF MATHEMATICS MIDDLE SCHOOL CORE TEACHER OF MATHS & SCIENCE

For details of application and further information see the School's Website at:

[www.bgs.qld.edu.au](http://www.bgs.qld.edu.au)

## STATISTICS

### **What's involved?**

*Statisticians are very much in demand. There are jobs already listed in just about every category of this booklet, and the ads on this page show many other opportunities.*

*Statistics even has its own government agency: the Australian Bureau of Statistics. The ABS provides statistics on economic and social matters for use by state and federal governments and by the general community. It employs over 3000 staff in the state capitals and Canberra.*

### **PhD scholarship, applied statistics**

We seek a candidate for a PhD project in statistical analysis of Diversity Arrays Technology (DArT) microarray data. From >1 terabyte accumulated data from thousands of microarray images, we have created a smaller, dedicated database with data extracted from selected groups of DArT images from barley and wheat. The successful candidate would process this data using appropriate statistical tools to refine DArT marker classification algorithms, and implement these in DArTsoft, our dedicated software for image extraction and marker classification. For further information on DArT, see [www.diversityarrays.com](http://www.diversityarrays.com) and [www.triticarte.com.au](http://www.triticarte.com.au).

The candidate should have a good statistical background and experience in handling large datasets. Information technology experience would be a strong asset, but is not critical. An interest in biology/genetics would be useful. The successful candidate will be based at Diversity Arrays Technology Pty Ltd in Canberra and would most likely be registered at the Australian National University.

The scholarship is \$28,500 (tax-free) plus annual \$10,000 operating and \$1,500 training allowances. There will be additional professional development training; high employment prospects, and access to expertise in leading research institutes with a strong industry focus.

## Multi-Disciplinary Research & Evaluation

- > Contract and Ongoing Opportunities
- > Flexible Employment Arrangements

Are you looking for diverse and challenging work plus the opportunity to make a real difference to the services Victorians receive from government?

The Victorian Auditor-General's Office is looking to fill several positions in the Performance Audit Group with energetic and flexible professionals from diverse backgrounds.

The Office conducts independent reviews of Victorian public sector programs and agencies for Parliament, focusing on encouraging effective, efficient and economic use of public resources and improving accountability in Victoria.

Working in multi-disciplinary teams, the Performance Audit Group offers successful applicants scope to refine existing skills and knowledge, and opportunities to develop new capabilities.

You will possess an enquiring mind, high-level conceptual and analytical abilities, and well-developed interpersonal, negotiation and written and verbal skills. Experience and/or qualifications in policy analysis, social or natural sciences, business, law, statistics, economics, management consulting or performance auditing are appropriate.

For further information regarding these roles and to apply on-line please visit <http://www.audit.vic.gov.au>



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[www.linkhrconsulting.com.au](http://www.linkhrconsulting.com.au)

Public Sector Specialists



AUDITOR GENERAL  
VICTORIA

### **Lecturer - Biostatistics**

The School of Engineering and Mathematics, Joondalup Campus, provides a major and several minor streams in mathematics/statistics within the Bachelor of Science degree. In addition, the School offers degrees in aviation, engineering and security science and a major/minor in physics. The mathematics/statistics units offered by the School are also available to students from other areas of the University.

The successful Level A or Level B applicant will be expected to teach statistics at both the undergraduate and postgraduate levels to a range of students, including many from the biological and health sciences. In addition, they will be required to carry out research and to undertake some consultancy work in biostatistics for other Schools in the University.

A postgraduate qualification in statistics or biostatistics is essential, together with the demonstrated ability to teach biostatistics at the undergraduate level. This three year, fixed-term position commencing in July 2005 attracts remuneration of \$42,788 to \$58,046 pa (Level A) or \$61,046 to \$72,434 pa (Level B), together with an attractive University superannuation contribution.

For job specific information, contact the Head of School,

Further information: Obtain Selection

Criteria and other details from [www.ecu.edu.au/jobs](http://www.ecu.edu.au/jobs)

Applications Close: 31 March 2005. Forward your application addressing the selection criteria and quoting Reference Number 4098 to: Staff Recruitment, Edith Cowan University, 100 Joondalup Drive, Joondalup WA 6027 or e-mail to: [c.cameron@ecu.edu.au](mailto:c.cameron@ecu.edu.au)

Great careers start @



# Outstanding Careers

**Statistician (Ref: 11575)**

**Data Management & Analysis Centre**

Salary: \$51,823 - \$58,141 per annum, plus an employer superannuation contribution of 17% applies.

**Closing date 22/07/05**

- Fixed-term position available from September 2005 for two years.
- The Data Management & Analysis Centre is a joint facility of the Departments of Public Health and General Practice. The Centre provides integrated support for health research and is the largest and longest established facility of its type in South Australia. We seek an experienced statistician to join our team of six others in the Centre's statistical division.

or visit [www.adelaide.edu.au/jobs](http://www.adelaide.edu.au/jobs)

Applicants must address the selection criteria for the position. They are available, with the duty statement from

[www.adelaide.edu.au/jobs](http://www.adelaide.edu.au/jobs)



Life Impact The University of Adelaide

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

## Evaluations Officer (Academic Level B Equivalent) - Teaching and Learning Development

**Townsville**

The Evaluations Officer will lead the Evaluation of Teaching team which administers the University's student feedback for teaching and subjects systems; manages the annual survey of graduate outcomes; and develops, conducts and reports on other surveys the University uses to investigate teaching and learning. A key challenge of the Evaluations Officer is to investigate, analyse, evaluate, interpret and prepare detailed reports on data the University collects.

Tasks and responsibilities include: applying statistical skills and expertise to investigate, analyse, evaluate and report on quantitative and qualitative data; designing, managing and analysing surveys; and providing expertise about the evaluation of teaching and learning to teaching and management staff of the University.

Applicants must have a postgraduate qualification in a related field or equivalent qualifications or experience; experience in evaluation with a working knowledge of contemporary issues arising out of the monitoring of teaching and learning in higher education; a demonstrated ability to work with academic staff across a range of disciplines; and experience developing and using online survey techniques.

**Enquiries to:**

**Employment Type:** Appointment will be full-time for a fixed term (specific task - strategic initiative) of three years subject to a probationary period.

**Salary:** Academic Level B - \$57,225 - \$67,712 per annum. Benefits include generous employer superannuation contribution and attractive options for salary packaging.

Information packages including selection criteria and application procedures may be obtained from <http://jobs.jcu.edu.au/> or by contacting the Recruitment Officer, Human Resources, James Cook University, Townsville Qld 4811. Telephone: (07) 4781 5012; Facsimile: (07) 4781 5644; e-mail [jcu.recruitment@jcu.edu.au](mailto:jcu.recruitment@jcu.edu.au)

>Always thinking ahead>>

JAMES COOK UNIVERSITY



**Australian Government**  
Department of Immigration and  
Multicultural and Indigenous Affairs  
Office of Indigenous Policy Coordination

PERFORMANCE, SINGLE BUDGET AND STREAMLINING GROUP  
**EXECUTIVE LEVEL 1**

**\$69,853 - \$76,165**

ONGOING  
CANNBERRA

## Performance Evaluation Managers and Statistics Advisers

PN 40061589

The Office of Indigenous Policy Coordination is seeking Performance and Evaluation Managers, and Statistics Advisers to lead its independent performance and evaluation functions under the Government's new arrangements in Indigenous affairs. This is an exciting opportunity at the EL1 level to take a leadership role in the new organisation.

The Office is committed to making a difference in the lives of Indigenous Australians through ensuring better coordination and collaboration across government, more innovative and flexible approaches to policy development and service delivery, greater accountability and real partnerships with local Indigenous communities.

The Office is seeking applications from suitably skilled and experienced people who are able to work collaboratively, encourage opportunities, create creativity, are flexible and innovative and meet the highest ethical standards.

We are seeking people who are able to make a contribution to the management of cross-sectional and place-based evaluations, the analysis of performance, and the provision of advice on data and statistics. These positions require people with knowledge of and/or skills in one or more of policy analysis, evaluation practices, performance monitoring, quantitative analysis, contract management, and statistical techniques.

**NOTE:** There are several positions available.



**Australian Government**

**Department of Transport and Regional Services**

**EL1 - Statistician (\$69,267-\$74,798)**

**Ref: V05/079**

The position is located within the Strategic Policy and Analysis Section. The successful applicant will be required to analyse statistics from a variety of sources using a range of computer applications in order to develop regional policy. The successful applicant will have or show the potential to develop a detailed understanding of collections of statistics of relevance to the development of regional policy, have experience in designing, programming or reporting using database systems, be able to provide high-level policy advice, undertake complex work, represent the Department, and liaise with stakeholders.

**Michael Page**  
INTERNATIONAL

**Statistical Analyst/Programmer**  
Sydney

Permanent

This position will require the successful candidate to join an existing group of programmers and analysts to work on improving probability models for a range of sporting industries.

**What we're looking for**

The successful candidate will have qualifications in statistics, computer science, or mathematical science. You will be well organised with excellent Statistical Analysis and Programming skills and possess well developed problem solving skills. A strong work ethic and desire to succeed will be key to securing this rare opportunity. Ideally, the successful candidate will have approximately 2 years commercial experience.

**About our client**

Our client is a developing sports data technology group with an international presence. Due to increasing dominance in the international market they are looking for an intelligent, switched on individual to join their team. Their Sydney office comprises a small team of highly skilled programmers and analysts who enjoy a healthy work life balance whilst working with like minded individuals.

**What's on offer**

Awesome package on offer!!

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## FURTHER INFORMATION

### About the advertisements

- These advertisements are a sample. By no means should you think that they set the boundaries for what is possible now or in the future.
- We hope this helps you see that if you like maths or have some ability for it, or you are prepared to work for the goal of an interesting career, then... **maths ad(d)s**.

### Where to get a mathematical or statistical sciences degree

The ICE-EM website has links to many Australian mathematics and statistics web pages where you can discover the best course for you.

**[www.ice-em.org.au/careers](http://www.ice-em.org.au/careers)**

### Some websites that contain more job advertisements

- Mathematics: [www.austms.org.au/Jobs/](http://www.austms.org.au/Jobs/) (Australian Mathematical Society)
- Statistics: [www.statsci.org/jobs/](http://www.statsci.org/jobs/) (Australian Statistical Society)
- [www.careerone.com.au/](http://www.careerone.com.au/) (CareerOne)
- [www.graduatecareers.com.au/](http://www.graduatecareers.com.au/) (Graduate Careers Australia)
- [www.mycareer.com.au/](http://www.mycareer.com.au/) (My Career)
- [www.careerthatgo.com.au/](http://www.careerthatgo.com.au/) (Careerthatgo)

ICE-EM would like to thank all the employers who kindly gave permission to reproduce their employment advertisements for this publication

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[www.latrobe.edu.au/mathstats/math](http://www.latrobe.edu.au/mathstats/math)





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[www.ice-em.org.au](http://www.ice-em.org.au)

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