



**The University of Sydney**

**Professor of Pure Mathematics**

**School of Mathematics and  
Statistics, Faculty of Science**

**Reference: 092/0609**



*Closing date: 18 September 2009*

## TABLE OF CONTENTS

The Advertisement .....	3
The University of Sydney .....	4
The School of Mathematics and Statistics .....	6
Selection Criteria .....	8
Conditions of Employment .....	9
How to Apply .....	11

**Professor of Pure Mathematics**  
**School of Mathematics and Statistics**  
**Reference No. 092/0609**

The University of Sydney is one of the largest, most prestigious universities in the southern hemisphere, with an outstanding record of research and scholarly achievement.

Applications are invited for the position of Professor of Pure Mathematics in the School of Mathematics and Statistics from candidates with research expertise in any area of pure mathematics.

Candidates will be considered for the post on the basis of their achievements and potential in the following areas:

- Outstanding scholarship and research in Pure Mathematics;
- The capacity to provide dynamic academic leadership and vision in research, teaching and the development of the School;
- Research interests which complement and enhance the department's existing portfolio of strengths;
- A strong commitment to teaching at all levels and to innovation in curriculum design and teaching;
- Good management and interpersonal skills and the willingness and ability to perform high level administrative tasks, including being Head of School from time to time;
- The ability to provide leadership in policy development in the discipline and to represent effectively the School's interests within the University and the wider community;
- The potential to enhance links with other research groups both in Australia and overseas.

It is anticipated that at least two subsequent appointments will be advertised in Pure Mathematics. Through these competitive appointments the successful applicant will be given the opportunity to establish a research group within the School.

Further information concerning the School's research activities and teaching program can be found at:

<a href="http://www.maths.usyd.edu.au/res/Research.html">www.maths.usyd.edu.au/res/Research.html</a>	Research information
<a href="http://www.maths.usyd.edu.au/u/UG">www.maths.usyd.edu.au/u/UG</a>	Undergraduate program
<a href="http://www.maths.usyd.edu.au/u/PG">www.maths.usyd.edu.au/u/PG</a>	Postgraduate program

The position is full-time continuing, subject to the completion of a satisfactory probation and/or confirmation period for new appointees. It is expected that the appointee will begin duties on, or as soon as possible after 1 July 2010.

An attractive remuneration package commensurate with the responsibilities of the position will be offered. This comprises AUD\$170,802 p.a. (which includes a base salary Professor Level E AUD\$144,871 p.a., leave loading and up to 17% employer's contribution to superannuation). Any additional benefits would be subject to negotiation. Membership of a University approved superannuation scheme is a condition of employment for new appointees.

Further information about the University can be found at [www.usyd.edu.au](http://www.usyd.edu.au) and about information about the School of Mathematics and Statistics can be found at [www.maths.usyd.edu.au](http://www.maths.usyd.edu.au).

Initial enquiries, and request for a full information pack including details of how to apply, may be directed in confidence to Fabrice Noël, Principal Recruitment Consultant. Telephone +61 2 9036 7295 or email [srsacademic@usyd.edu.au](mailto:srsacademic@usyd.edu.au)

For further specific enquiries about the position please contact Professor Andrew Mathas, on +61 2 9351 6058, e-mail: [A.Mathas@usyd.edu.au](mailto:A.Mathas@usyd.edu.au) or Professor Nalini Joshi, Head, School of Mathematics and Statistics, on +61 2 9351 4533, or e-mail: [hos@maths.usyd.edu.au](mailto:hos@maths.usyd.edu.au).

**Closing date:** 18 September 2009

*The University is an Equal Opportunity employer committed to equity, diversity and social inclusion. Applications from equity target groups and women are encouraged. The University reserves the right not to proceed with any appointment for financial or other reasons.*

The University of Sydney is Australia's oldest university. Founded in October 1850 "to promote liberal education and useful knowledge ... for the benefit of all", its governing body, the Senate, first met in February 1851 and the University's Inauguration Ceremony was held in October 1852.

Over the past 155 years, the University of Sydney has built a reputation for outstanding teaching, as a centre of research excellence and international collaboration, and as an active and engaged community leader. It is also a substantial contributor to the cultural and intellectual life of the city of Sydney, with the main campus of the University being situated just 3 kilometres from the CBD.

Today the University has over 46,000 students, of whom almost 10,000 are international students. It holds a strong position as the first-preference university for school leavers in New South Wales enabling it to attract a growing proportion of high-achieving students into its undergraduate programs. The University also has a reputation for excellence in the postgraduate sphere with almost one-third of the total number of students now enrolled at the postgraduate level.

There are over 3,000 full-time equivalent academic staff working across sixteen faculties and 170 research centres and institutes. The University undertakes comprehensive teaching and research activity in the following areas: agriculture, architecture, planning and design, economics and business, education and social work, engineering, health (dentistry, pharmacy, medicine and allied health), the arts and humanities, law, performing and visual arts, science, veterinary science, and the social sciences.

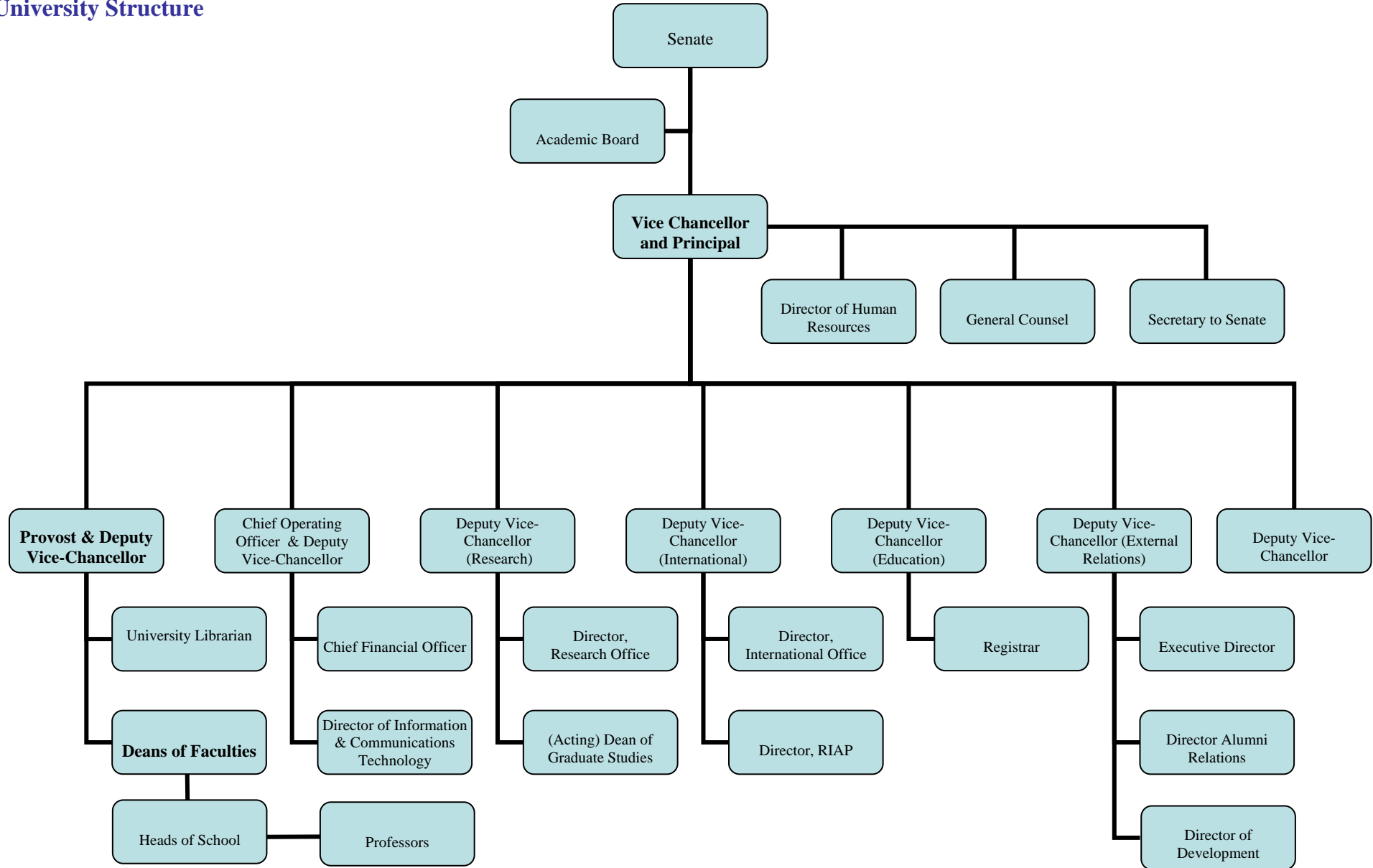
Successive Vice Chancellors have explicitly stated that the University aims to be Australia's top research university and for the University to be ranked among the best 20 universities worldwide. Latest available figures confirmed the University of Sydney as Australia's leading research University, with Sydney researchers being awarded more than \$55 million by the Australian Research Council (ARC) for 147 new Discovery and Linkage research projects commencing in 2009 – the largest amount awarded to any University in Australia.

Internationally, the University has confirmed its place within the top 40 universities in the world. The University was ranked 37<sup>th</sup> in the UK's *Times Higher Education Supplement World University Rankings* published in 2008.

As one of Australia's leading universities, the University of Sydney is a key member of the:

- Group of Eight (Go8) – representing Australia's leading research-intensive universities. Go8 universities currently conduct over 60 percent of Australian university research; receive over 70 percent of national competitive research grants; produce between 60 and 80 percent of internationally recognised Australian research publications in every field of research; and over 80 percent of internationally cited university research from Australia.
- Community of European Management Schools & International Companies (CEMS) – An alliance of international leaders in business and higher education, collaborating to offer international postgraduate students a unique blend of high-quality education and professional experience. The University of Sydney, through the Faculty of Economics and Business, is the only Australian member school of CEMS.
- Academic Consortium 21 (AC21) – An international network of educational, research and industrial organisations in Asia, the United States and Europe. The Consortium has been established to encourage the further advancement of global cooperation to the benefit of higher education and to contribute to global and regional society.
- Association of Pacific Rim Universities (APRU) – Sydney is one of three Australian institutions in this group of prestigious universities drawn from Asia, the United States and South America. APRU aims to foster education, research and enterprise thereby contributing to economic, scientific and cultural advancement in the Pacific Rim.
- Worldwide Universities Network (WUN) – An alliance of 17 leading research-led universities from Asia, Australasia, Europe and North America, making significant advances in knowledge and understanding in areas of current global concern. The alliance supports innovation in research and education on a global scale, through interdisciplinary collaboration, faculty and student exchange, and e-learning.

# University Structure



# THE SCHOOL OF MATHEMATICS AND STATISTICS

The School of Mathematics and Statistics was formed in 1991 from the former departments of Pure Mathematics, Applied Mathematics and Mathematical Statistics. It is now one of the largest mathematics schools in Australia and pursues a vigorous program of teaching, scholarship and research. The School pursues the highest standards of academic achievement.

## Research

The School expects all academic members of staff to be active in research and/or scholarship. It provides all the facilities of a well-established and progressive research institution, including a dedicated computing network that supports a number of high-speed processors for research and access to a well-equipped mathematics library.

The School hosts regular seminars, workshops and conferences and supports a large visitor program. It has a flourishing community of graduate students in all areas of mathematics and statistics. Research in Pure Mathematics is organized into five broad research groups:

- **Algebra:** algebraic combinatorics, algebraic groups, monoids, mathematical physics, reflection groups, representation theory, quantum groups;
- **Analysis:** harmonic analysis, Lie groups, random walks.
- **Computational algebra:** computational algebra and number theory, home to the internationally renowned MAGMA group;
- **Geometry and Topology:** cell complexes, complex singularities, differential geometry, knot theory, manifolds;
- **Non-linear analysis:** functional analysis, optimization, partial differential equations, cross-disciplinary links with applied mathematics.

In addition, the School is home to SUTMEG, the Sydney University Tertiary Mathematics Education Group, which is a focus group within the School for activities and discussions related to teaching and learning of mathematics at tertiary level.

## Teaching

The School offers three and four year undergraduate degree programs in Pure Mathematics, Applied Mathematics and Mathematical Statistics with a common first year. Over 2000 students enrol in mathematics and statistics units at the first-year level and more than 300 students graduate in mathematics or statistics each year. The four year program builds upon the three year program by adding an intensive Honours year to the students' degree. The Honours year, which is offered with specializations in Applied Mathematics, Pure Mathematics and Mathematical Statistics, consists of advanced coursework and a substantial essay project under the supervision of a member of staff.

The School is committed to excellence in teaching. Since their inception in 1989, six members of staff have received University Excellence in Teaching Awards, including the prestigious Vice-Chancellor's Award for Outstanding Teaching. The School is very successful in obtaining funding for new teaching initiatives through University and national teaching grants.

A considerable amount of teaching in the School is computer based. The School runs three large teaching laboratories equipped with computer terminals linked to servers and with a wide range of mathematical software, some of which was developed in the School. The School offers an extensive range of online quizzes for its first and second year undergraduate courses.

The School is a leading participant in Australia's Access Grid Network, having been recently awarded \$AUD1.5M to establish NGAME, the national Grid for Advanced Mathematics Education. The access grid provides sophisticated and highly interactive video teleconferencing environment that can be used to both present and receive undergraduate and postgraduate courses and research seminars. The School's access grid room can also be booked for individual collaboration sessions with mathematicians based in Australia and internationally.

## Current academic personnel (Pure Mathematics)

<b>Professors</b> .....	John Cannon Norman Dancer Gus Lehrer (and Professorial Fellow)
<b>Australian Professorial Fellows</b> .....	Andrew Mathas Ruibin Zhang
<b>Readers</b> .....	Donald Cartwright Jonathan Hillman
<b>Associate Professors</b> .....	David Easdown Robert Howlett Alex Molev
<b>Senior Lecturers</b> .....	Sandra Britton Daniel Daners Anthony Henderson Jenny Henderson Laurentiu Paunescu
<b>Lecturers</b> .....	Emma Carberry Florica Cîrstea Adrian Nelson James Parkinson
<b>Senior Research Associates</b> .....	Matthew Dyer Jun Hu Scott Murray Bill Unger
<b>Postdoctoral Fellows</b> .....	James East Xin Liu Peter O'Sullivan
<b>Research Fellows</b> .....	Claus Fieker J�r�mie Guilhot Michael Harrison Alan Steel Mark Watkins
<b>Research Associates</b> .....	Geoff Bailey Alexei Davydov Steve Donnelly Nicole Sutherland

Further information on the School, publications and research interests can be found at the School web site:  
[www.maths.usyd.edu.au](http://www.maths.usyd.edu.au).

The School of Mathematics and Statistics at the University of Sydney seeks outstanding candidates for the position of Professor of Pure Maths.

**Applicants should address the following essential criteria:**

- Outstanding scholarship and research in Pure Mathematics;
- The capacity to provide dynamic academic leadership and vision in research, teaching and the development of the School;
- Research interests which complement and enhance the department's existing portfolio of strengths;
- A strong commitment to teaching at all levels and to innovation in curriculum design and teaching;
- Good management and interpersonal skills and the willingness and ability to perform high level administrative tasks, including being Head of School from time to time;
- The ability to provide leadership in policy development in the discipline and to represent effectively the School's interests within the University and the wider community;
- The potential to enhance links with other research groups both in Australia and overseas.

*The following special conditions apply in respect of this appointment:*

1. The title of the person appointed will be Professor of Pure Mathematics.
2. In accordance with Section 25 of the Resolutions of Senate, the Professor, in respect of the field of the appointment, shall be responsible for initiating proposals for courses of study, for supervising and participating in teaching and examining and for promoting advanced study and research.
3. The Head of the School of Mathematics and Statistics will be appointed by the Vice-Chancellor in accordance with Section 24 of the Resolutions of Senate, which states:  
Where there is not already a Head of Department or School by terms of appointment, the Vice-Chancellor shall, after consultation with the Dean of the Faculty or chairperson of the College Board, the Professors and the Associate Professors of the Department or School, appoint or reappoint a Head of the Department or School for a period not exceeding four years and, except where in the Vice-Chancellor's opinion there are special circumstances, from among the Professors and Associate Professors.

There is no Head of the School of Mathematics and Statistics by terms of appointment.

*The following provides a summary of conditions of employment applicable to senior staff of the University of Sydney as of May 2009. It has been prepared to provide general guidance to prospective candidates, and does not form part of the terms of any offer of employment or any staff member's contract of employment.*

The University of Sydney offers excellent conditions of employment and a highly rewarding working environment. It seeks to attract and retain staff of the highest calibre, and take pride in its reputation as an Employer of Choice, as recognised by the Australian Government's Equal Opportunity for Women in the Workplace Agency.

### **Term of Position**

The appointment will be on a continuing basis. This may be subject to a probationary period for staff new to the University.

### **Salary**

The successful candidate will be offered a competitive remuneration package commensurate with the responsibilities of the position and the candidate's relevant experience and qualifications. The package will include a base salary and employer superannuation contributions.

Salary sacrificing options are also available under the University's *Flexible Remuneration Packaging Scheme*. This allows staff to structure the way they receive their salary to suit their particular circumstances by 'salary sacrificing' for motor vehicles, superannuation, home loans and a range of other items.

### **Superannuation**

A range of superannuation options will be available to the successful candidate. By law, the University is required to make employer superannuation contributions equivalent to 9% of salary (called 'Superannuation Guarantee' contributions). The successful candidate may elect to have these contributions made to a complying fund of their choice, or to have a higher level of contributions (currently 17% of salary) made to UniSuper, or for existing members of New South Wales statutory superannuation schemes, to their existing schemes. The components of the successful candidate's remuneration package will reflect their choice of superannuation arrangements.

### **Performance Bonuses and Market Loadings**

The University has a performance-based bonus scheme under which senior staff may be awarded annual performance bonuses at a percentage of base salary. Individual academic staff in nominated Disciplines may also be eligible to apply for a market loading, which is determined as a percentage of base salary and applies for a one-year period.

## **Performance Management and Development**

The University is committed to a system of performance management and development for all staff.

## **Leave Entitlements**

Leave entitlements available to senior University staff include:

- four weeks annual leave, plus public holidays observed in New South Wales;
- three months long service leave after 10 years continuous paid service, plus additional long service leave (accruing at a higher rate) thereafter. Service with other Australian universities will be recognised for the purpose of long service leave in accordance with the University's Long Service Leave policy;
- generous maternity leave arrangements which rank among the best in Australia;
- 15 days sick leave per year (accruing from year to year);
- access to up to 10 days of available sick leave credits per year for carer's leave purposes;
- compassionate leave of up to two days' leave for each occasion that such leave is required.

## **Official Travel**

Senior staff are commonly required to travel (including interstate and overseas) on University business. Subject to the University's travel policy, all travel, and travel-related expenses (fares, accommodation and meal expenses) are also met in accordance with this policy.

## **Campus Facilities**

Car parking is available on campus for a modest annual fee. University staff also have access to outstanding sports and fitness facilities on campus through membership of Sydney University Sport.

## **Additional Information on Sydney for Overseas/Interstate Applicants**

The oldest and largest city, Sydney is acknowledged as the gateway to Australia – a truly international location. Along with a cost of living comparable to other major cities around the world, Sydney's world-renowned, laid-back outdoor lifestyle makes it one of the world's easiest and most pleasant cities in which to live and work. Indeed it ranks in the top ten places to live in the world and number two in Asia in the latest Mercer Quality of Living Survey. <http://www.mercer.com/qualityofliving>

The following link will provide a wide variety of information about moving to, living and working in Sydney: [http://www.usyd.edu.au/sydneypeople/careers/relocation\\_weblinks.shtml](http://www.usyd.edu.au/sydneypeople/careers/relocation_weblinks.shtml)

## **Relocation Assistance for Candidates Moving to Sydney**

Where the successful candidate is required to move to Sydney from their present place of residence, the University will meet reasonable air travel and removal expenses for the candidate and accompanying family members. Assistance may also be provided towards short-term rental accommodation and other related costs such as home purchase costs (stamp duty, legal fees and bank charges).

## Further Information

Potential candidates may seek further information about the position from Professor Andrew Mathas, on (+61 2) 9351 6058, e-mail: [A.Mathas@usyd.edu.au](mailto:A.Mathas@usyd.edu.au) or Professor Nalini Joshi, Head, School of Mathematics and Statistics, on (+61 2) 9351 4533, or e-mail: [hos@maths.usyd.edu.au](mailto:hos@maths.usyd.edu.au).

## Information Required

Applications should include:

- full personal details including name, address, telephone numbers and email address;
- a statement addressing each of the selection criteria;
- a full curriculum vitae, including degrees and qualifications, positions held (including details of the most recent and significant career appointments), details of management and/or professional experience, and contributions to professional associations;
- a list of publications, with the most recent first; and
- the names and contact details of at least five potential referees. (Please note that referees need not be contacted in advance, as they will not be approached without the prior approval of the candidate.)

## Completed Applications

Please email your completed application to: Fabrice Noël, Principal Recruitment Consultant on [srsacademic@usyd.edu.au](mailto:srsacademic@usyd.edu.au) quoting reference: **092/0609**

Applications should be received by **18 September 2009**

## Indicative Dates

Closing date for applications:	18 September 2009
Short-listing:	late September 2009
Interviews of short-listed candidates:	late October 2009
Take up the appointment:	on, or as soon as possible after 1 July 2010