Ref: JA/76/2009



**Principal: Professor Jim McDonald** 

# PROFESSOR OF CIVIL ENGINEERING

### DEPARTMENT OF CIVIL ENGINEERING

#### 1. NATURE OF APPOINTMENT

An engineer of international status will lead education and research in Engineering Mechanics (geomechanics, fluid mechanics/hydraulics, structural mechanics) and/or materials. You may have a research background in Civil Engineering design, analysis or experimental investigation. You will aim to support a focused team in the Department and Faculty of Engineering and through collaboration find synergy within the Glasgow Research Partnership in Engineering, a £25M investment in the Universities of Strathclyde, Glasgow, Glasgow Caledonian and West of Scotland. You will also benefit from a recent £2.3M faculty wide investment in materials and mechanics research infrastructure.

You will join a vibrant Department which has seen significant internal and external investment in academic staff and infrastructure. This investment has transformed the department to one centred on building breadth and excellence in two central themes; **Infrastructure** and **Environment**. The post is within the Infrastructure Research Group, which has been awarded over £1.65M of external research funding since August 2008, and it has strong national and international links, including coordination of e.g. a £2.2M EPSRC consortium and a £1.1M EC/FP7 Industry-Academia Partnerships and Pathways project. Within GRPE the Group contributes to the Joint Research Institutes in Mechanics of Materials, Structures and Bioengineering and Environmental, Infrastructure and Transportation Engineering.

Subject to the Charter and Statutes and Ordinances and Regulations of the University, as Professor you will be responsible to Court of the University through the Principal for providing leadership in your academic area and will report annually on this. This is in addition to the responsibility which each Professor owes to his or her Head of Department.

### 2. APPLICATION PROCEDURE

- A letter of application telling us why we should appoint you.
- A completed application form to which a full curriculum vitae should be attached. The names and
  addresses of three referees should be given on the application form. The referees may be
  contacted by the University without further permission from the candidate unless you indicate to the
  contrary.

Applications should be lodged with Human Resources, University of Strathclyde, McCance Building, 16 Richmond Street, Glasgow, G1 1XQ by **28 August 2009.** 

Applicants who wish an acknowledgement of their paper application should address and stamp the enclosed postcard. Online applications will be acknowledged electronically.

Informal enquiries regarding the post can be directed to Prof. Robert Kalin (Tel. +44 141 548 4649, Email: <a href="mailto:robert.kalin@strath.ac.uk">robert.kalin@strath.ac.uk</a>).

Formal interviews for the post will be held on 15 September 2009 preceded by a presentation and informal meetings on 14 September 2009.





The University operates a normal retirement age of 65 or the September following 65<sup>th</sup> birthday. Applications will only be accepted from people up to the age of 64 years and 6 months at the date of their application unless otherwise stated. This is in line with the Employment Equality (Age) Regulations 2006.

#### 3. DUTIES OF THE POST

## Job Purpose

 Lead and contribute to the education, research and knowledge exchange activities in the Department in the area of Engineering Mechanics (Geomechanics, Fluid Mechanics or Structural Mechanics) and/or Materials; and

#### Primary responsibilities/activities

- To provide supporting leadership to the Head of Department.
- To act as a mentor to Academic Staff within the Department.
- Apply actively for internal and external research funding.
- Publish research results in leading international scientific journals
- Teach Engineering Mechanics at undergraduate and postgraduate level as agreed with the Head of Department.
- Engage actively with the profession in Glasgow, west of Scotland and beyond.

### 4. PERSON SPECIFICATION

The following criteria are considered essential:

- A PhD and a good honours degree in Engineering.
- A commitment to and a significant track record of delivering high quality undergraduate and postgraduate teaching and supervision.
- An outstanding record of achievement in research and publication recognised internationally in any area relevant to Engineering Mechanics (Geomechanics, Fluid Mechanics, Structural Mechanics) or Materials, which would have met 3\*/4\* standard in RAE 2008.
- The proven ability to attract research funding and the potential to make a substantial contribution to the activities of the Infrastructure Research Group.
- The willingness to contribute to the management of the Department and the teaching programmes.
- High level communication skills with the ability to listen, engage and persuade and to present complex information in an accessible way to a range of audiences.
- The qualities of an academic leader, mentor, team player and good citizen.

The following criteria are considered desirable:

- A degree in Civil Engineering.
- Chartered Engineer status (MICE/FICE or MIStrucE/FIStrucE or equivalent).
- A high external profile with industry.
- Leadership and Management qualities to become a future Head of Department and to engage at Faculty and University level.

#### 5. THE DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil Engineering is part of the Faculty of Engineering.

The Department of Civil Engineering has a long standing international reputation in education and knowledge generation, with a strong emphasis on practical application. Since 2004, the Departmental policy has been to recruit talented young researchers in a broad range of both traditional and multidisciplinary areas, supported by the appointment of RAEng chair Prof. Robert Kalin under the GRPE to lead the Environment Research Group. Despite of its junior staff profile, in the last Research Assessment Exercise (RAE2008) 60% of the outputs of the 21 staff submitted were rated as 3\* (internationally leading) or better, and 95% as 2\* (international) or better. The Department hosts the David Livingstone Centre for Sustainability (DLCS), which bridges the various departments within the Faculty of Engineering and across other Faculties in the University with the aim to promote crossdisciplinary programmes in teaching and research through combining engineering, design, environmental, social and economic expertise. DLCS run a comprehensive portfolio of taught Master's courses in Environment, Sustainability and Engineering (about 65 students in 2008/2009), and MPhil and PhD programmes with 36 research students in 2008/2009. The Department has a strong cohort of undergraduate students (about 400 in 2008/2009) with accredited degree programmes in Civil Engineering, Architectural Engineering and Environmental Health, which have amongst the highest entry standards in the UK. The graduates have high level of employment and are well-regarded in industry.

For further information on the Department, please visit <a href="www.strath.ac.uk/Departments/Civeng/">www.strath.ac.uk/Departments/Civeng/</a>.

#### 6. THE UNIVERSITY OF STRATHCLYDE

The University of Strathclyde, in the heart of Glasgow, is a vibrant, international, academic community of 16,000 full-time students from 100 countries, and over 3,000 full-time equivalent staff. With a turnover of £220m, we are the third-largest University in Scotland. While still honouring the 200 year old founding vision of Professor John Anderson to be a "place of useful learning", today's Strathclyde is a modern, outward-looking, research-led University with a distinctive reputation for innovation and enterprise. Known for our high entry standards, the quality of our student learning experience, our impressive record on graduate employability and business spin outs, we have led the UK trend by continuing to increase our undergraduate numbers in Science and Engineering.

Within the past two years we have embarked on an ambitious change programme - the Agenda for Excellence - further enhancing the quality of our Research, Education and Knowledge Exchange. This commitment to excellence is supported by major investment in high calibre staff and an ambitious £250m sustainable estate development programme. Already this <u>strategic focus</u> is bearing fruit. Last year we achieved consistent improvement in overall institutional rankings in all major league tables of up to 10 places. According to Research Fortnight, Strathclyde is the only University in the UK top 20 grant earners showing increases in awards in 2006/2007 from all 6 research councils. The Financial Times ranked our Business School's MBA 30<sup>th</sup> best in the world and first anywhere for value for money.

Presently the University is located on two campuses, the John Anderson (Glasgow City Centre) and Jordanhill (Glasgow West). We are also organised into six main budget areas; our five Faculties (Science, Engineering, Business, Law, Arts and Social Sciences, and Education) and Central Administrative Services, although these structures are also being reviewed as part of our Agenda for Excellence.

# 7. FACULTY OF ENGINEERING

Engineering Research at Strathclyde is focused on excellence and the achievement of first class performance whilst delivering cutting edge technological solutions for the benefit of industry and society. There are over 500 postgraduate students and 115 research staff working with academic staff in the Faculty's nine departments.

Multimillion pound investments in the Faculty by Research Councils, government Intermediate Technology Institutes and companies such as Rolls-Royce and British Energy ensure the Faculty's researchers have access to the very best facilities.

Based on the results of the last Research Assessment Exercise (RAE2008), the Faculty is the first in Engineering in Scotland, and in the top ten within the UK in terms of Research Power.

Steered by a challenging Research Strategy allied to industrial and societal needs, the Faculty has five major interdisciplinary Institutes bringing together academic expertise from across Departments:

- Institute for Information and Communications Engineering
- Institute for Infrastructure and Transport Engineering (incorporating Aerospace)
- Institute for Energy & the Environment, Power and Energy Systems
- Institute for Health Engineering
- Strathclyde Institute for Operations Management
- Marine Institute

Cross-disciplinary research at Institute level is also supported by expert Knowledge Centres in underpinning key technology areas:

- Safety Engineering and Conditions Monitoring
- Environmental Impact Assessment
- · Business and Manufacturing Processes
- Digital Electronics
- Design Concepts and Processes
- Computational Methods in Engineering
- Engineering Fundamentals
- Applied Nanoscience
- Biomolecular Engineering

In addition, Departments have a number of specialist Institutes and research groups including:

- The Ship Stability Research Centre
- Medical Diagnostics and Instrumentation
- Rehabilitation Engineering
- Cell, Tissue and Organ Engineering
- Engineering Materials and Metallurgy
- David Livingstone Centre for Sustainability

Links with industry, a particular strength of the Faculty, ensure that research fields are relevant to the needs of society and that the Faculty's staff, and industry, remain at the forefront of technology. Large-scale laboratories, wireless networks, regular seminar programmes and specialist research centres ensure the quality of research.

For further information on the Faculty of Engineering, please visit <a href="http://www.strath.ac.uk/engineering/">http://www.strath.ac.uk/engineering/</a>.

### 8. THE CITY OF GLASGOW

<u>Glasgow</u> is the industrial and commercial capital of Scotland and the various groups that have contributed to its population over the centuries have given it a cosmopolitan feel. It has a lively cultural life as home of the national orchestra, opera and ballet and several theatre companies and it possesses a number of fine art galleries; it is the headquarters of the national press and broadcasting media. Its numerous higher and further education establishments have made it a major educational centre.

The Scottish countryside and its splendid recreation and sporting facilities are easily reached from Glasgow.

### 9. SALARY, CONDITIONS OF SERVICE AND BENEFITS

Appointment will be made in terms of the enclosed conditions of service. The salary offered will be appropriate to the qualifications, standing and experience of the successful candidate and commensurate with the seniority of the appointment. Conditions of service applicable to the post are attached as an Appendix.

We also offer staff a range of other outstanding benefits, including:

- Membership of a <u>Final Salary Pension Scheme</u>.
- Training and Development opportunities underpinned by a 10 year commitment to the <u>Investors in People</u> Standard.

- Reduced or remitted fees for vocational and non-vocational study.
- Sports, Recreation and <u>Wellbeing</u> facilities, including Ross Priory, a stunning 17<sup>th</sup> century house situated in 200 acres of land on the south shore of Loch Lomond, just 40 minutes drive from Glasgow.
- Childcare facilities and voucher scheme.

#### 10. REMOVAL AND RESETTLEMENT

The University will cover the cost of reasonable removal expenses within the UK on the basis of the lower of at least two estimates. A further contribution towards costs involved in moving to Glasgow may be made at the discretion of the University.

It is the University's custom to agree a fixed sum (indicated at the time of offer of contract) to cover removal and resettlement for new members of staff who reside outwith the UK.

#### 11. POSITIVE ABOUT DISABLED PEOPLE

The University is accredited as a "Positive about Disabled People" employer and operates a guaranteed interview scheme for disabled candidates who meet all of the essential criteria for the post that they are applying for. On the appropriate section of the application form please indicate if you consider yourself to have a disability **and** wish to be considered under the scheme.

The Disability Discrimination Act 1995 defines disability as "a physical or mental impairment which has a substantial and long term adverse effect on a person's ability to carry out normal day to day activities".

Please note that if you indicate that you have a disability then you may be asked to provide information on this at interview. The University needs this information to consider the likely impact of your disability on the duties of the position you are applying for and what reasonable adjustments can be made to the position. This allows the University to comply with the Disability Discrimination Act (1995).

## 12. CHILD PROTECTION (SCOTLAND) ACT 2003

It may be a requirement for this post that an Enhanced Disclosure Scotland Check is undertaken prior to commencement of employment. Please note that if a Disclosure check is required then any offer of employment will be subject to the outcome being satisfactory. Further information is available at <a href="http://www.disclosurescotland.co.uk/">http://www.disclosurescotland.co.uk/</a>.

We value diversity and welcome applications from all sections of the community.

The University of Strathclyde is a Registered Scottish Charity, No SCO15263

FB/CS July 2009



### CONDITIONS OF EMPLOYMENT OF PROFESSORS

### 1. GENERAL CONDITIONS

Members of staff are subject to the Charter and Statutes and the Ordinances and Regulations of the University, published in the Calendar, and to any amendments or additions thereto approved by the University Court and, in the case of the Charter and Statutes, the Privy Council.

The University Court recognises the Strathclyde University and College Union (SUCU) as the sole body with which it will negotiate and consult on all collective issues concerned with the terms and conditions of employment of academic and related staff. Such terms and conditions may be varied by the University Court after negotiation and consultation with SUCU.

Further information on the terms and conditions specified in this document is contained in the Staff Handbook, which also includes further details of such conditions as provision for sick/injury leave and pay, leave of absence, holidays and holiday pay, individual grievance procedures, review and disciplinary procedures and collective agreements. Should you not receive a copy of the handbook on appointment a reference copy is accessible by visiting Human Resources.

### 2. CONTINUOUS SERVICE

In the case of new appointments, unless otherwise stated in the letter of appointment, the date of continuous employment for the purposes of statutory employment rights will be taken to be the date of appointment contained therein. In the case of promotions, regradings or transfers, previous service is continuous.

# 3. ALLOCATION OF POST

The post to which each member of staff is appointed is allocated to the department or other area named in the member of staff's letter of appointment and any accompanying papers. Should the University Court deem it necessary, in the furtherance of the objectives of the University specified in its Charter, it shall, having consulted with the parties concerned and having received the advice of the Senate, re-allocate the post and/or duties pertaining partially or wholly to it to another department or area. Any such re-allocation will be without prejudice to the other conditions of employment of the holder.

If the need arises during the course of employment for members of staff to work outside the U.K. for a period (or periods) of more than one month then such arrangements will be subject to mutual agreement. Members of staff, would then be provided with a statement in advance setting out the terms covering such periods of employment.

### 4. RESPONSIBILITY AND SERVICE

Each professor is responsible to the Court of the University through the Principal for the fulfilment of the normal professorial duties. Unless otherwise indicated members of staff are appointed for full time service.

Heads of Departments are responsible to the Court of the University through the Principal for that department as a whole. The conditions of such appointment are as set out in Regulation 1.13, and a separate letter of appointment. Each professor is ex-officio a member of the Board of Study for the Faculty in which the professor's department or area is located.

#### 5. WORKING TIME

Working time is that required to fulfil the duties of the post. The duties are: teaching, research, administrative and professional activities organised by agreement with the Head of Department to produce a reasonable balance of commitment between these duties. The University Court recognises that academics carry out these duties in a wide variety of ways, but expects student contact to take place on the campuses during normal working hours on week days. There are exceptions to this pattern which may involve student contact at other locations or in the evenings, or at the weekends, but these arrangements will be made with the agreement of the member of staff concerned and may involve additional payment.

#### 6. HOLIDAYS

Annual leave entitlement is 31 week days per year to be taken by arrangement with the Head of Department. For calculation of entitlement, annual leave accrues on the basis of 2.5 days per calendar month to be taken within the leave year which begins on 1st October. In addition to annual leave there is an entitlement to eleven public holidays per year which should be taken on the days that the University is closed for this purpose. The University presently closes for four additional days over the Christmas and New Year period. These additional days count against the Annual Leave entitlement.

#### 7. CONSULTANCY/FURTHER ACTIVITIES

For professional development purposes the University Court encourages full time academic staff to undertake in addition to the teaching, research and other duties required of them as staff of the University further activities of their own choice in the field for which they are appointed. Such further activities may occupy no more than twenty-five normal working days in total per University financial year (i.e. during the period 1 August to 31 July inclusive). Such further activities require to be registered and authorised in terms of the University's regulations, the details of which are set out in the staff handbook.

### 8. SICK LEAVE

During any period of absence through illness or injury provided the appropriate medical certificates are received the University will pay a member of staff (having taken account of the aggregate of all periods of absence due to illness during the twelve months immediately preceding the first day of the current absence) as follows:

Period of Continuous Employment	Full Pay	Half Pay
During first year	1 month	1 month
During second year	2 months	2 months
During third year	4 months	4 months
During fourth and fifth year	5 months	5 months
After five years	6 months	6 months

In order to manage the University's sick pay scheme the University requires to maintain sickness absence records on individual members of staff.

When making payments after the expiry of statutory sick pay the University will deduct an amount equivalent to any benefit normally payable by the Department of Health and Social Security. For this and other details see staff handbook.

## 9. SALARY AND SUPERANNUATION

Appointments are made at an appropriate level above the nationally agreed minimum for professorial staff; salaries are reviewed annually. Salaries are payable monthly in arrears by means of credit transfer to a specified bank account.

New members of staff, under age 60, will be admitted to membership of the Universities' Superannuation Scheme on taking up appointment unless they notify the University in advance that they do not wish to be admitted to membership of USS, or have opted against USS in previous university employment. USS requires a contribution from the member of 6.35 per cent of salary, to which a contribution of salary is added by the University as required by USS. New members of staff over age 60 are not admitted automatically as special terms and a higher contribution rate (12 per cent) apply. Staff should contact the Pensions Section if they wish to join the scheme.

New members of staff may opt out of USS within three months of taking up appointment when they will be treated as if they had never been members. After three months members of Staff who wish to withdraw from USS during their employment will be required to give a minimum of 28 days' notice in writing to the University. Any member of staff who wishes to opt out should contact the Pensions Section in the first instance.

Full details of the Scheme are available for reference purposes at the Pensions Section of Finance Office, John Anderson Campus and from Human Resources, Jordanhill Campus.

# 10. PLACE OF RESIDENCE

The University does not normally place specified restrictions upon the place of residence of members of staff. They are, however, expected to reside in a location which is compatible with the satisfactory fulfilment of all the duties associated with their appointment and with membership of the academic community.

#### 11. NOTICE AND TERMINATION

The employment of a professor is terminable by at least six months' notice, in writing, by either party. If notice is being given by a professor, earlier release may be granted if this can be arranged without detriment to the work of the department.

If the appointment is for a fixed term it will expire at the end of the period without the necessity for notice unless it is renewed. Staff whose appointment has so terminated shall not normally be regarded as having been dismissed or removed from office in circumstances to which the terms of Statute XXIII Part III shall apply. Fixed term contracts may be terminated by either party short of the expiry date by the serving of six months notice in writing.

The University is not obliged to continue a fixed term appointment beyond the employment period.

Revised November 2006 WMS.CS



# Our commitment to you as the applicant is:

- Your application will be acknowledged unless stated otherwise in the advertisement within five
  working days of receipt. To enable us to meet this, acknowledgement postcards, where enclosed
  with further particulars, should be completed and returned with your application. Unless otherwise
  stated in the advertisement, you will also be informed of the outcome of your application as soon as
  possible.
- If called for interview you will be advised promptly and clearly of the interview arrangements. Your
  interview will be conducted in a businesslike and friendly manner and will comply with recognised
  good employment practice. To assist us in meeting our standards we ask that you promptly confirm
  your attendance (or otherwise) at interview and advise us of any change in your address or
  Curriculum Vitae.
- You will also be advised of any major delays in the appointment procedure. We will only approach referees nominated by you.
- You will be informed of the outcome of interview as soon as possible. If you are being offered a post
  you will be written to within 2 working days of the decision being taken. The offer will normally
  include a duplicate copy which you are required to sign and return to conclude the contract.
   Payment of an appropriate salary is dependent on this.
- We are committed to achieving the standards we have set and to receiving and acting upon constructive feedback from our clients.
- If you are not satisfied with the service you have received, please raise the matter in the first instance with the person with whom you have been dealing. This person will either deal with the complaint to your satisfaction or else advise you how to proceed next. If you feel that dealing with the matter in this way is inappropriate, then write to me at Human Resources, University of Strathclyde, McCance Building, 16 Richmond Street, Glasgow G1 1XQ, and I will respond.

Bill Sutherland Director Human Resources