

THE DR JOHN C. TAYLOR PROFESSORSHIP OF INNOVATION

DEPARTMENT OF ENGINEERING

1 The Professorship

Background

Following a generous benefaction from Dr John C. Taylor the University is seeking to appoint the first Dr John C. Taylor Professor of Innovation. The Professorship will be held within the Institute for Manufacturing which forms Division E (Manufacturing and Management) of the Department of Engineering.

Selection Criteria

Candidates will be considered for the Professorship on the basis of the following selection criteria, which they should address in their application.

- An outstanding research record of international stature in innovation and technology management.
- The vision, leadership experience and enthusiasm to build on current strengths in maintaining and developing a leading research presence, and an established record in attracting research grant support to further this development.
- The ability to further the academic planning and strategic development of innovation and technology management in the University and, where appropriate, to facilitate its development within the UK.
- The ability to manage and interact effectively with staff and students at all levels.
- An enthusiastic commitment to the recruitment, training and mentoring of the next generation of researchers, including undergraduates, research students, and postdoctoral research fellows

Candidates will hold a PhD or equivalent postgraduate qualification.

2 The Department of Engineering

The Department of Engineering is the largest department at the University of Cambridge and one of the leading centres of engineering in the world. Renowned for both its teaching and research, the Department's aim is to address the world's most pressing challenges with science and technology. To achieve this aim, the

Department collaborates with other disciplines, institutions, companies and entrepreneurs. Cross-linking themes foster connections. A major philanthropic development programme within the Department's strategy will create new academic posts, fund new studentships, regenerate and extend facilities, and support outreach to schools.

Since its foundation in 1875, the Department of Engineering has grown to become the largest department in the University and the largest integrated engineering department in the UK with approximately 150 faculty, 260 contract research staff and research fellows, 650 research students, and 1200 undergraduates.

Growth throughout its history has been consistently strong. For instance, between 2000 and 2013, research expenditure tripled, the number of contract research staff more than doubled, and the number of research students nearly doubled. Rapid growth has been coupled with greater integration through the development of cross-linking themes and stronger connections with other disciplines.

Internationally, Cambridge leads the Times Higher Education Rankings for Engineering and Technology (2014-15) outside the USA, jockeying for pole position among the top four American institutions. The REF 2014 assessment of UK research showed that Cambridge has the greatest concentration of world-leading engineering research in the country and the best environment for engineering research with a perfect score unrivalled by any other general engineering submission. The combination of academic excellence and a superb environment enabled Cambridge to deliver the highest concentration of world-leading impact in general engineering, creating real benefits to industry and society more widely.

The Department has six academic divisions that represent core strengths. They build teams and facilities that can maintain and develop leading positions in engineering disciplines. The Head of Department is Professor David Cardwell and the successful candidate will be assigned to Division E upon appointment. The Head of Division E is Professor Andy Neely.

- A Energy, fluid mechanics and turbomachinery - build on research in fluid mechanics and thermodynamics to develop a systems view of energy generation and utilisation, particularly in ground and air transport, to mitigate environmental impact.
- B Electrical engineering - pursue fundamental electrical, electronic and photonic research at the material, device and system levels with a focus on creating integrated solutions in the fields of nanotechnology, sensing, energy generation, energy conversion, displays and communications.
- C Mechanics, materials and design - extend fundamental and applied research in mechanics, materials, and design, exploiting cross-disciplinary partnerships across the University; and build on existing strengths to develop excellence in bioengineering and healthcare systems research.
- D Civil engineering - advance the mechanics of civil and structural engineering systems within the broader context of the design, construction and operation of sustainable infrastructure and the stewardship of Earth's resources and environment.

- E Manufacturing and management - develop new understanding of manufacturing technology, operations, strategy and policy, in close partnership with industry, in order to improve industrial performance.
- F Information engineering - develop fundamental theory and applications relating to the generation, distribution, analysis and use of information in engineering and biological systems.

The quality of the staff and research students within these divisions are the key to the Department's success. Their recruitment is driven by the aim to create "world-leading engineering knowledge," so the Department seeks and attracts the best candidates in the world. Academics are sought who can both increase the strength of a research discipline within a division and also connect across the Department through strategic themes. Recruitment is also used to maintain a healthy balance of new blood and experienced staff across the Department. In addition, there is a drive to increase the number of female academics (Women in Engineering - <http://www-womeninengineering.eng.cam.ac.uk>). Students and postdoctoral researchers are an important output of the Department, but also provide excellent gearing for academics to build research capacity, so further growth in numbers and improved training is planned.

Research within the IfM addresses the most pressing issues facing manufacturing today. The IfM's research activities are carried out in partnership with industry across a wide variety of sectors both in the UK and around the world and lead to practical techniques that companies can apply to improve their strategy, operations and technology. Research is clustered into a number of areas, including the integration of technology considerations into business decisions; international manufacturing and supply networks; strategy and performance; inkjet technologies; distributed information and automation systems; and industrial photonics. A number of interdisciplinary programmes have been established to address issues such as servitization, industrial sustainability and translating new science and engineering ideas into novel technologies and emerging industries. The IfM is housed in the recent (2009) purpose-built Alan Reece Building on the University's West Cambridge site, which includes lecture theatres and other teaching facilities, workshops, and laboratories for industrial automation, laser and other methods of materials processing, and micro/nano fabrication methods including inkjet technology.

The Alan Reece Building also houses a company wholly-owned by the University, IfM Education and Consultancy Services Ltd., which works with companies of all sizes to create and capture value and with national and regional governments to support and grow their industrial sectors. It does this by transferring the new ideas and approaches developed by researchers at the IfM through a programme of education and consultancy services.

More information on the Division can be found at <http://www.ifm.eng.cam.ac.uk/>

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3 Standard Duties

Teaching and research

The Professor will be required to deliver lectures and give instruction in Manufacturing Engineering and Innovation Management and in particular to perform the following duties:

- (i) to give at least 16 lectures or classes (or equivalent teaching) per academic year
- (ii) to undertake original work and the general supervision of research and advanced work in his/her subject and Faculty/Department, and to assist students in their studies by supervision or informal instruction.

Examining

The Professor will be required to undertake such university examining as may be required by the relevant Faculty Board or comparable body.

Supervision

The Professor will be required to act as the supervisor of graduate students as and when requested.

Administration

Administrative duties are shared equitably among the teaching members of the Faculty. The Professors are expected to play significant roles from time to time on the Faculty Board and Faculty Committees dealing with such matters as academic and other appointments, admission of graduate students, research and teaching assessments, the libraries and computing arrangements. They are also encouraged to accept appointment to University Committees.

4 The Colleges

The University, the Faculties and Departments, and the Colleges are linked in a complicated historical relationship that is mutually beneficial but not simple. Students (both graduate and undergraduate) are admitted by one of the 31 Colleges, although in the case of graduate students the Faculties and Departments determine admissions before the Colleges are involved. Almost all undergraduates, and many graduate students, live in a College. The teaching of undergraduate students is shared between the Colleges and the Faculties and Departments, with the Colleges arranging small group teaching ("supervision") and the Departments providing lecturing, laboratory classes, and advanced supervisions. Most academic staff will also be invited to join a College as a teaching or professorial fellow. College teaching is remunerated separately from the University teaching, and appointment to a College is a separate matter from a University appointment. Membership of a College adds an important social and intellectual dimension for many of the academic staff. The Chair of the Faculty/Head of Department or senior colleagues can give more advice.

5 Procedure for Appointment

The appointment will be made by a Board of Electors, chaired by the Vice-Chancellor or his Deputy, with a membership which includes members of the Faculty/Department, members of cognate Departments and external experts.

All applications will be acknowledged. The Board of Electors will decide how they wish to proceed towards making an election, which may include interviews and/or presentations. Short-listed candidates may be invited to visit the Faculty / Department to give a seminar on their work and meet prospective colleagues in the course of the process.

Candidates will be informed of the progress of their applications as agreed by the Electors.

It is anticipated that the successful candidate will take up the appointment on 1 October 2017 or as soon as possible thereafter.

6 Enquiries and Applications

Informal enquiries about this Professorship may be directed to Professor Andy Neely, Head of Division E / Department of Engineering, Cambridge, telephone +44 (0)1223 765608 or email adn1000@cam.ac.uk.

Further information on the University is available at the following address:
www.cam.ac.uk.

Applications, consisting of a letter of application together with a statement of current and future research plans, a curriculum vitae and a publications list, along with details of three referees should be made online no later than 2 May 2017.

If you are unable to apply online, please contact the Human Resources, University Offices, The Old Schools, Cambridge, CB2 1TT (email ibise@admin.cam.ac.uk).

GENERAL INFORMATION

All appointments to University Offices are subject to the Statutes and Ordinances of the University.

A Salary

Salary on appointment will be determined by the Vice-Chancellor at the appropriate point on the University's salary spine for grade 12, taking account of the criteria for the respective contribution band. Professorial salaries are reviewed periodically, on the basis of research, teaching and general contribution, by the Vice-Chancellor with the assistance of a small Advisory Committee.

There is a normal sabbatical entitlement of one term in seven on full pay, subject to the University regulations.

B Headship of the Department

Should a Professor be appointed to the Headship of a Department, a pensionable payment in addition to salary is made.

C Recruitment Incentive

The University has a scheme whereby a single recruitment incentive payment may be made on appointment at the Vice-Chancellor's discretion.

D Removal Expenses

If the person appointed is not resident in Cambridge, a contribution from University funds towards expenditure incurred in removal to Cambridge to take up a University office will be made.

E Consultancy Work

The University's policy on consultancy work is that consultancy arrangements must be entered into privately between the employee and the organisation concerned. The consultancy work must not interfere with the duties required of the officer under the officer's contract of employment with the University. Consultancy work is not covered by the University's insurances, even when the University has knowledge that such work is being done. The University must not be regarded as being directly or indirectly involved in any consultancy arrangement through the use of University letterheads, advice given or work done in the individual's capacity as an employee of the University. Individuals undertaking private or consultancy work are advised to take out personal insurance.

Alternatively, professional indemnity cover may be obtained by channelling private work through the University company Cambridge Enterprise Ltd. Anyone wishing to do so should, in the first instance, contact Cambridge Enterprise at www.enterprise.cam.ac.uk.

F Professorial Fellowships

The great majority of Professors at Cambridge hold a professorial fellowship of a College. Although election to a fellowship is a matter for an individual College, the University takes active steps to draw to the attention of Heads of House the names of those Professors eligible for election.

In seeking the views of referees, their permission will be sought for the release of their comments on the successful candidate if it were to be requested by the professorial fellowship electors of a College.

G Health screening on appointment to University Office and in the case of University Officers undertaking a change of duties

Offers of appointment made to prospective University officers whose work will fall within certain categories are conditional on the completion of a medical questionnaire and, if necessary, on a satisfactory health check by the Occupational Health Service.

Only the person elected will be asked to complete the questionnaire at the time of election.

H Family friendly policies and benefits

The University has a range of family friendly policies to aid employee's work-life balance including maternity, paternity and parental leave, flexible working and career break schemes. In addition, childcare vouchers, access to two nurseries and a holiday play scheme are available through the Childcare Office to help support University employees with childcare responsibilities. Further information can be found at:

<http://www.admin.cam.ac.uk/offices/hr/staff/benefits/family.html>

I Eligibility to work and reside in the UK

UK immigration procedures stipulate that an employer may not consider the appointment of any person unless they have seen evidence of their immigration status. Accordingly, shortlisted candidates, whatever their nationality, will be asked to provide such evidence at an appropriate stage in the recruitment procedure.

J Equal Opportunities Information

The University of Cambridge appoints solely on merit. No applicant for an appointment in the University, or member of staff once appointed, will be treated less favourably than another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

K Information if you have a Disability

The University welcomes applications from individuals with disabilities. Our recruitment and selection procedures follow best practice and comply with disability legislation.

The University is committed to ensuring that applicants with disabilities receive fair treatment throughout the recruitment process. Adjustments will be made, wherever reasonable to do so, to enable applicants to compete to the best of their ability and, if successful, to assist them during their employment. We encourage applicants to declare their disabilities in order that any special arrangements, particularly for the selection process, can be accommodated. Applicants or employees can declare a disability at any time.

Applicants wishing to discuss with or inform the University of any special arrangements connected with their disability can, at any point in the recruitment process, contact, Dr Gosia Wloszycka, who is responsible for the administration of the recruitment process for this position, by email on mw425@admin.cam.ac.uk