



UNIVERSITY LECTURESHIP IN AEROACOUSTICS

ENERGY, FLUID MECHANICS AND TURBOMACHINERY DIVISION

ADVERT

Applications are invited from suitably qualified candidates for a University Lectureship in Aeroacoustics.

The successful candidate will have a record of research in the area of aeroacoustics and will be expected to develop their own research in this field commensurate with the Department's international reputation and top-rank research rating. Teaching responsibilities will include contributing to the teaching of acoustics and fluid mechanics in the engineering undergraduate course, graduate teaching, and supervising research students.

The successful candidate will take up the appointment on 1 March 2010 or as soon as possible thereafter. The appointment will be for a probationary period of five years and, subject to satisfactory performance, with appointment to the retiring age thereafter. The current pensionable scale of stipends is in the range of £36,532 - £46,278 per annum.

Informal enquiries may be made to Professor Ann Dowling, e-mail: apd1@cam.ac.uk.

The University values diversity and is committed to equality of opportunity. The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

Appointment Process

The closing date is Friday 4 December 2009 and applications should be sent to the HR Office, Department of Engineering, Trumpington Street, Cambridge CB2 1PZ, UK (tel +44 (0) 1223 332615/18 fax +44 (0) 1223 766364, email hr-office@eng.cam.ac.uk). Applications should include a completed form (PD18 (Parts I and III) available from www.admin.cam.ac.uk/offices/hr/forms/pd18/), a curriculum vitae, a list of publications, and a brief statement of research interests and future plans (no more than two pages).

The interviewing panel will meet soon after the closing date and agree a procedure for short-listing candidates who will be invited to visit the department, give a short technical lecture and attend a formal interview. This may include soliciting references before a final short-list is agreed. It is anticipated that the selection process will take place in January 2010.

THE DEPARTMENT

The Department of Engineering at the University of Cambridge is a vibrant and leading international centre for research. The two best regarded world rankings* place Cambridge as number 1 outside the USA for technology. The UK Research Assessment Exercise 2008 not only placed the Department top in General Engineering but with a score that

* Shanghai Jiao Tong University 2008 and THES world rankings 2009

would have placed it at the top in any other scientific or engineering area. Ninety percent of the research submission was judged to be either world-leading or internationally excellent in terms of originality, significance and rigour. These results reflect the excellence of individuals comprising the Department's 132-strong faculty and also show the power of uniting these academics in a single integrated department. The Department spans a wide-range of engineering disciplines and, within this one department, can easily team-up to work collaboratively to address the world's most pressing challenges.

The Head of the Department is Professor Dame Ann Dowling. The academic staff of the Department consists of: 43 Professors, 25 Readers, 60 Senior Lecturers and Lecturers as well as a large number of contract research staff. There are also 31 academic-related staff (Design Engineers, Administrators, Computer Officers, the Librarian etc.) and 250 technical and administrative support staff.

The Department has six academic divisions. Collaborations within and across divisions are encouraged which gives the Department greater flexibility in responding to new initiatives:

Division A: acoustics, energy, fluid mechanics and turbomachinery

Division B: electrical engineering

Division C: mechanics, materials and design

Division D: civil, structural and environmental engineering

Division E: manufacturing and management

Division F: information engineering

More information on the Department can be found at www.eng.cam.ac.uk

THE UNIVERSITY

The city of Cambridge is in the south east of England, 50 miles north of London. It is well served by road and rail links, and is within an easy distance of the major London airports.

Cambridge University is famous for its heritage of scholarship, historic role and magnificent architecture. This heritage supports one of the world's most important centres for teaching and research. The collegiate structure gives a strong sense of community, and the University is at the forefront of international scholarship and research.

Throughout the last 800 years, its contribution to the world has ranged from the discovery of the mechanism of blood circulation to the structure of DNA, from the great philosophers of the early 15th Century, to the groundbreaking work of its many Nobel Prize winners.

Acoustics has long been an area of strength in the University. Lord Rayleigh, Sir James Lighthill and Professor JE Ffowcs Williams were all at Cambridge. The current post has been created because of the appointment of Professor Dame Ann Dowling as Head of the Department of Engineering.

THE ROLE

The successful candidate will join Division A as listed above. The role mainly concerns research and teaching. There will inevitably be some administrative duties, but every effort is made to keep these to a minimum. For research, the primary requirement will be to develop a record of world-class research commensurate with the Department's international reputation. It is essential that the appointee plays a full part in ensuring that

the Department maintains its top-rank research rating. For teaching, responsibilities will include contributing to undergraduate courses, supervising final-year projects, examining and supervising graduate students. More detailed information on research and teaching is given below.

Teaching

All undergraduate students take common courses in their first two years, before specialising in their third and fourth years. The four-year course leads to the degrees BA and MEng for all branches of engineering.

There are approximately 1,100 undergraduate and 600 postgraduate students in the Department. The standard of both undergraduate and graduate entry is exceptionally high.

The teaching responsibilities associated with this post lie predominantly in teaching acoustics and fluid mechanics in the MEng course, and supervising project and research students.

Research

Division A currently comprises 26 faculty, 27 post-docs and over 100 graduate students, and is recognised as an international leader in research. Currently members of the Division hold a research portfolio in excess of £13.5M. There is a track record of high quality research in aeroacoustics. The approach has been to view aeroacoustics as a branch of unsteady fluid mechanics, with interest in the noise generation processes and their control, as well as design for low noise. The successful candidate would be based within the Fluids Group. There are opportunities to collaborate with staff who are expert in turbomachinery aerodynamics on fan and turbine noise; in Computational Fluid Dynamics on the noise due to turbulence in jets and combustion chambers; in combustion on acoustically-coupled combustion instabilities. A recent project, the Silent Aircraft Initiative www.silentaircraft.org brought these elements together with operations, aerodynamics and structures around the conceptual design of an ultra-low noise fuel-efficient aircraft. There excellent research facilities in turbomachinery and combustion, a small anechoic chamber and a wind-tunnel equipped with two 48-microphone phased arrays. There are also extensive computing resources. The Division has extensive collaborations with industry and is the centre of the University Gas Turbine Partnership with Rolls-Royce. For more detailed information see www.eng.cam.ac.uk/research/div-a/divhomeA.shtml

The person appointed would be expected to develop their own research portfolio, including winning research grants and recruiting research students. They should establish an independent theme within the broad area of aeroacoustics, as well as collaborating with others in related fields.

TERMS AND CONDITIONS OF EMPLOYMENT

Duties

It is the duty of University Lecturers to devote themselves to research, teaching and examining in their subject. Presently teaching duties include from 2 to 4 hours lecturing per term-time week (term-time is 23 weeks/year), and up to 10 hours per week demonstrating and project supervision with the actual amount depending on other contributions. All appointments are subject to the Statutes and Ordinances of the University.

The Department attaches great importance to the generality of its approach to teaching, not being divided into separate specialist departments. Persons appointed will be

expected to play their part in the general teaching programme of the Department and this may mean teaching outside their precise area of specialisation.

Tenure of Appointment

The successful candidate will take up the appointment on 1 March 2010 or as soon as possible thereafter. The appointment will be for a probationary period of five years and, subject to satisfactory performance, with appointment to the retiring age thereafter.

The current pensionable scale of stipends is in the range of £36,532 - £46,278 per annum

Most Lecturers are Fellows of a College. College fellows are usually required to enter into a teaching commitment for the college, in return for which they are typically paid an additional salary of £4000 - £5000. Additional college benefits usually include free meals, travel grants and assistance with accommodation or home loans. Lecturers may also retain external income which they receive from book royalties, consultancies, etc.

A University officer is required to be a member of the Universities Superannuation Scheme. The USS runs a final salary scheme and the pensions benefits paid by USS are based on salary and length of service. A dependants' scheme is included.

Recruitment Package

The University has a scheme whereby in appropriate cases a single recruitment incentive payment may be made on appointment.

Relocation Expenses

The University has a scheme to provide financial assistance with relocation costs for moves within the UK and overseas.

Persons appointed from abroad may also be reimbursed for the cost of travel to take up the appointment for them and their family.

Housing

There are a limited number of furnished flats (managed by the University) which may be available for newly appointed staff while they make arrangements for house purchase. A large number of houses and flats are available to rent in the private sector in Cambridge. The University Accommodation Service at 18 Silver Street (Tel 01223 338099) is able to provide contacts and help for rented accommodation. Alternatively, there are a large number of independent letting and estate agents in the City.

Start-up Funding

Funds may be available to assist with setting up a laboratory.

Consultancy Work

The University's policy 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 under the University Lecturer'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 CUTS Ltd. Anyone wishing to do so should, in the first instance, contact Cambridge Enterprise at www.enterprise.cam.ac.uk.

Information if you have a Disability

The University's recruitment and selection procedures follow best practice and the requirements of the Disability Discrimination Act. Fair selection for employment is based on the ability or potential ability of an applicant to carry out the duties of the post and decisions on appointments are based on the merit and suitability of the candidate. If you have a disability you are invited to request any special arrangements you may require for interview, or adjustments you may anticipate would be needed in your working arrangements, at the point of application. However, the University recognises that you may prefer to forward this information if and when you are called for interview and you may do so at that stage without prejudice, if you prefer.

Part-Time and Flexible Working

The University has a Flexible Working Policy, details of which are set out at www.admin.cam.ac.uk/offices/hr/policy/flexible/policy.html. Flexible arrangements offered to members of staff under this policy cover a wide range of different arrangements including part-time or term-time working, job share, compressed or annual hours, staggered hours or flexitime. At all times, the arrangements that are agreed will attempt to balance the needs of the member of staff with the work to be carried out and should be in the interests of the institution concerned. Some of these arrangements will be of a permanent nature and, where appropriate, will fulfill the University's obligations under the Flexible Working Regulations. Others will be of a temporary nature, to accommodate a member of staff's need for an adjustment of their working arrangements to balance commitments outside work.

Equal Opportunities

The following statement of policy on equal opportunities has been approved by the University (Reporter, 1998-99, p.944): "The University is committed to a policy and practice which require that entry into employment with the University and progression within employment should be determined only by personal merit and by the application of criteria which are related to the duties of the particular appointment and the relevant stipend or salary structure. 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 status, race, ethnic or national origin, colour, or disability. If an employee considers that he or she is suffering from unequal treatment on grounds of sex (including gender reassignment), marital status, race, ethnic or national origin, colour, or disability, he or she may make a complaint which will be dealt with through the agreed procedures for dealing with grievances. "

Health screening on appointment to University Office

The General Board agreed in 1994 that Offers of appointment made to prospective University officers whose work will fall within certain categories will be conditional on the completion of a medical questionnaire and, if necessary, on a satisfactory health check by the Occupational Health Service. The successful candidate will be asked to complete the questionnaire at the time of appointment.