DEPARTMENT OF PHYSICS

Research Associate in Human-Computer Interfaces and Language Modelling

1. **The Department of Physics** is one of the largest Departments in the University of Cambridge, with over 400 academic, research and support staff and over 250 research students. It is located on an attractive site at the Cavendish Laboratory on the University's West Cambridge site off Madingley Road. The Cavendish has a worldwide reputation for the quality of its teaching and research.

2. **The Research** in the Department is organised in nine Groups: Astrophysics; High Energy Physics; Biological and Soft Systems (including Biological Physics, and Polymers and Colloids); Microelectronics; Quantum Matter (including Superconductivity and Low Temperature Physics); Physics and Chemistry of Solids; Optoelectronics; Semiconductor Physics; and Theory of Condensed Matter. The Groups also collaborate with other institutions in the University, including the Interdisciplinary Research Centre in Nanoscience (with Engineering); the Department of Chemistry; the Department of Chemical Engineering; the Institute of Astronomy and the Department of Applied Mathematics and Theoretical Physics. There is much international and industrial collaboration as well. The Department has obtained the highest research ratings in both the last two Research Assessment Exercises.

3. **Laboratory Organisation.** Support for the research activity is provided by eleven groups including: Administration; Finance; Stores; Workshops; Library; and IT.

4. **The Group** This post is in the Inference Group. Currently a sub-group of the Astrophysics Group, the Inference Group will shortly become a laboratory group in its own right. The Inference Group's research areas include human-computer interaction, modelling of natural languages, machine learning, information theory and computational neuroscience.

5. **The Post**. The post is for a software developer/research associate to lead development of Dasher, a mature Open Source application (www.inference.phy.cam.ac.uk/dasher). Dasher is multi-platform software which allows efficient input of text by disabled users and on devices without keyboards. Dasher's unusual user interface can be driven using mouse, gaze-tracker or buttons.

   The post requires excellent C++ skills, at least one degree in Science, Maths, Engineering or Computer Science, and an interest in human-computer interaction or human languages. Experience of developing for both Windows and Linux platforms, Linux system administration experience, and an interest in accessibility issues are also highly desirable. There is considerable scope to pursue individual research interests related to the Dasher project; an ability to work independently is essential.

   The technical responsibilities of the position include:
   - researching and developing improvements to Dasher
   - managing the Dasher codebase and providing high-quality releases of Dasher on

multiple architectures
- assisting researchers working on experimental Dasher versions
- maintaining the research group's Linux cluster

The successful applicant will also play a leading role in managing the Dasher project, including:

- collaborating with other open source developers and translators who contribute to or use Dasher
- promoting Dasher to the assistive technologies community and to developers of keyboardless electronic devices
- liaising with institutions making use of Dasher, such as the ACE Centre in Oxford
- managing studies and user trials
- ensuring the long-term future of the Dasher project

The position is available immediately. Initial appointment will be until 31st March 2006, however we expect funding to be renewed annually until 31st December 2007, and this being the case the post will be automatically extended until that date.

6. **Terms and Conditions** The hours of work are typically around 40 per week. Holiday entitlement is 35 days per year including Bank Holidays. Researchers are usually able to join the Universities Superannuation Scheme. Any appointment will be subject, if applicable, to obtaining an appropriate work permit, visa and residency permit, as required by the United Kingdom Government.

7. **The Working Environment**. The Department is on an attractive greenfield site but is within easy reach (especially by cycle along the Coton footpath) of central Cambridge. Facilities within the Department include a Common Room serving hot and cold meals at lunchtime and mid-morning and mid-afternoon refreshments. Car parking is currently available.

8. **Applications** should be addressed to Mrs K E Scrivener, Senior Group Administrator, Cavendish Laboratory, Madingley Road, Cambridge, CB3 0HE so as to reach her by 1st August 2005. Applications must contain a full Curriculum Vitae and a completed application form PD18 (available from http://www.admin.cam.ac.uk/offices/personnel/forms/pd18/).

22 June 2005