



THE UNIVERSITY
of LIVERPOOL

Department of Computer Science

**TWO LECTURESHIPS IN
ECONOMICS & COMPUTATION (COMPUTER SCIENCE)**

Application Procedure

Applications, by curriculum vitae, stating age, academic qualifications and experience, together with the names and addresses of three referees, should be received by The Director of Personnel, The University of Liverpool, Foundation Building, Liverpool, L69 3BX **not later than 30 April 2010**.

Interviews

Interview arrangements are the responsibility of the **Department of Computer Science**. You should contact **Prof Wiebe van der Hoek (email: Wiebe.Van-Der-Hoek@liverpool.ac.uk)** if you have a query about shortlisting and interview after the closing date. If you have any particular requirements should you be invited to interview, please make this clear in your application.

**Quote Ref: A-
570581**

Further Particulars

1. The Council of the University invites applications for 2 Lectureship in Economics and Computation in the Department of Computer Science.
2. **Background to the University and the City of Liverpool**

The University of Liverpool was founded over a century ago, and is now one of the UK's leading research universities, with a reputation nationally and internationally for high quality teaching and research. In the course of its history the University has been associated with seven Nobel Laureates. The University of Liverpool now has over 22,000 registered students, making it one of the largest non-collegiate universities in the UK. The large student body in the city has led to a rich and diverse cultural life, with activities for students ranging from (of course) football (the city has two premier league clubs), nightclubs (the city is home to many venues that offer live music or famous dj's), and classical music (the city hosts a symphony orchestra a stone's throw from the city centre campus). Liverpool was the European Capital of Culture in 2008, a prestigious award which gave rise to a major programme of regeneration and investment in cultural activities in the city. Finally, Liverpool is uniquely situated within comfortable travelling distance of three of the UK's most beautiful National Parks. Heading west, North Wales, with the well-known hiking and mountaineering centre of Snowdonia, is only ninety minutes drive, while north of Liverpool, the

Lake District is less than two hours drive. Heading east, the Peak District and the Pennine Way is less than an hour.

Background to the Department of Computer Science

The Department of Computer Science was founded in 1982, and was ranked in the top 10 of UK Computer Science Departments in RAE2008 (the UK Government's periodic assessment of research quality), with 30% of the Department's research activity being judged "world leading", and a further 45% of activity being judged internationally excellent. The Department offers a range of courses in all aspects of contemporary computing, from undergraduate BSc degrees in Computer Science to postgraduate MSc courses and PhDs. Members of the Department carry out both fundamental and applied research in several internationally renowned research groups, in the areas of complexity theory and algorithmics, agent technology, logic and computation, and economics and computation.

The Department currently employs 32 full-time academic staff, with 6 technical/support staff, 5 admin/clerical staff, and many contract research staff.

The Department is housed in a beautiful Grade-II listed building at the heart of the University's city-centre campus. The building was refurbished specifically for the Department in 2006.

It is the mission of the Department to be an internationally recognised centre of excellence for computer science, with a research and teaching portfolio that balances the theoretical underpinnings of the discipline with applications-oriented research and development.

Departmental Research Groups

There are four main research groups in the Department:

* Agent Applications, Research, and Technology (Agent ART) group.

Professors:

Prof Trevor Bench-Capon
Prof Michael Wooldridge
Prof Wiebe van der Hoek

The Agent ART group at Liverpool is one of Europe's leading agent research groups. It works primarily in the area of autonomous agents and multi-agent systems, with particular interests in the use of formal methods for specifying/reasoning about agents (particularly modal, dynamic, and epistemic logics), logics of games and their applications within multi-agent systems, argumentation and dialogue, negotiation, legal reasoning, ontologies, and agents in the semantic web.

* Complexity Theory and Algorithmics (CTAG) Group

Professors:

Prof Leszek Gąsieniec
Prof Leslie Ann Goldberg

The CTAG group is internationally renowned for its work in design and analysis of discrete algorithms, combinatorial structures and studies on computational complexity theory. Current

research interests of the group include work on parallel and distributed algorithms, communication in interconnection networks, random graphs and randomised algorithms, text/compression algorithms, complexity of agent design and phase transition phenomena.

* Logic and Computation (LoCo) Group

Professors:

Prof Michael Fisher
Prof Frank Wolter

The LoCo group is renowned for its work on modal, spatial, temporal, and ontological reasoning. Temporal logics, verification, and theorem proving are a particular strength. The group also carries out research in the area of theorem proving, particularly resolution methods for modal and temporal logics, contextual reasoning, WWW-like databases, and executable logics. The group is currently involved in the development of a Verification Lab, which addresses some real-world verification tasks for use in industry.

* Economics & Computation Research Group

Professors:

Prof Paul Goldberg

This newly established group has Prof. Goldberg, Dr Martin Gairing, Dr. Piotr Krysta and Dr Rahul Savani as members, and adjunct members are Mike Wooldridge, Wiebe van der Hoek, Peter McBurney and Terry Payne. The group will carry out research in the computational foundations of economics/game theory and economic theory in computer science, and will also carry responsibility for an MSc in Computation and Game Theory. The new group will enjoy close collaborative links with the existing Complexity Theory and Algorithms research group and the Agent Applications, Research, and Technology research group. Current topics of interest include, but are not restricted to:

- * algorithmic game theory;
- * mechanism design and auction theory;
- * complexity and computation of solution concepts;
- * optimization problems in economics;
- * computational social choice.

The Lectureships

The successful candidates will be attached to the Economics & Computation research group, and will be expected to have a strong research track record in this area.

The main duties of the successful candidate will be to:

- undertake and publish research of international excellence in the research area of the group to which they are attached;
- apply for and obtain external research funding;
- teach on undergraduate/postgraduate programmes, as directed by the Head of Department;
- supervise and tutor students at undergraduate/postgraduate (MSc/PhD) levels, as directed by the Head of Department;
- undertake assessment and examination duties, as directed by the Head of Department;

- participate in and contribute to the running of the Department, Faculty of Science, and University, by undertaking administrative duties, and in so doing, to represent the best interests of students, the Department, the University, and the faculty;
- contribute in all respects to the establishment and maintenance of a Department that is internationally recognised as a centre of excellence for research and teaching in contemporary computer science.

Potential applicants for the post are encouraged to contact the Head of Group, Prof Paul Goldberg (<mailto:goldberg@liv.ac.uk>) or the Head of Department, Prof Wiebe van der Hoek (email: wiebe.van-der-hoek@liv.ac.uk) for informal discussion.

The Department's WWW page provides further information about research, staff, and teaching programmes: <http://www.csc.liv.ac.uk/>. The University's WWW page is: <http://www.liv.ac.uk/>