JOB DESCRIPTION

POST TITLE: Professor

DEPARTMENT: Computer Science

POST RESPONSIBLE TO: Head of Department

SALARY IN THE RANGE: Negotiable

REFERENCE NUMBER: 71077-041

CLOSING DATE: 16 May 2011

JOB PURPOSE:

You will undertake, and provide leadership in, research, teaching, administration and other activities supporting the work of the Department of Computer Science, and developing and enhancing its reputation, both internal and external to the University. You should have an excellent research record in Theoretical Computer Science (Algorithms and Complexity) or in Discrete Mathematics and its applications, or in relevant areas on the boundary of Computer Science, Operational Research, and Mathematics.

DUTIES AND RESPONSIBILITIES:

You will play a key role in research, teaching, and administrative activities within the Department of Computer Science, its Foundations of Computer Science Research Group, and the Centre for Discrete Mathematics and its Applications.

Research

1.   To provide research leadership within the Department in order to pursue research of high quality consistent with making a full active research contribution to the Department in line with the departmental objective of achieving international excellence.

2.   To secure, in collaboration with colleagues as appropriate, external funding through research grants or contracts to support a developing research agenda.

3.   To manage research projects within the University, including their financial control and to supervise post-doctoral research assistants, research students, technical and other support staff engaged in research.

4.   To publish research outcomes in appropriate journals of high international standing and to publish and disseminate the result of research and scholarship in other outlets.

5.   To attend and present research findings and papers at academic and professional conferences, and to contribute to the external visibility of the department.

6.   To contribute fully to the research plans developed by the Department, including providing such information as may be required by the Department to monitor the progress of each member of staff's research programme and to support the Departments fully in the preparation of material required for Research Assessment or similar activities.

Teaching

7. To co-operate with colleagues in the continuous review and development of the curriculum and in the design and launch of new degrees or other academic awards where appropriate.

8. To design, and be responsible for the contents of specific areas of teaching and learning within the undergraduate and postgraduate programmes.

9. To give lectures, seminars, tutorials and other classes as appropriate in support of the required teaching obligations and to supervise laboratory work by undergraduate and postgraduate students, as appropriate.

10. To supervise undergraduate and postgraduate project work.

11. To ensure that student feedback on teaching is sought through questionnaires and other sources and to respond constructively to such feedback.

12. To maintain a broad knowledge of up-to-date research and scholarship in relevant fields to ensure that teaching meets the standards expected within a research-led University.

13. To undertake academic duties (i.e. setting examination questions, marking, invigilation and pastoral support of students) required to sustain the delivery of high quality teaching.

14. To support and comply with the University and Departmental teaching quality assurance standards and procedures including the provision of such information as may be required by the Department or the University.

Administration and Other Activities

15. To undertake such specific departmental roles and management functions as may be reasonably required by the Head of Department.

16. To attend departmental meetings and to participate in other committees and working groups within the department, the faculty and the University.

17. To participate in relevant professional activities.

18. To engage in continuous professional development.

19. To undertake external commitments, which enhance the reputation of the University.

20. To ensure compliance with health and safety in all aspects of work.

The duties and responsibilities outlined are not intended to be an exhaustive list but provide guidance on the main aspects of the job. You will be required to be flexible in your duties.

POST TITLE: Professor

DEPARTMENT: Computer Science

The Person Specification focuses on the knowledge, skills, experience and qualifications required to undertake the role effectively.

REQUIREMENTS The post holder must be able to demonstrate:	REQUIREMENT ESSENTIAL (E) or DESIRABLE (D)	MEASURED BY: a) Application Form b) Test/Exercise c) Interview d) Presentation
Possession of a PhD or equivalent	E	a
Outstanding record of international level publications and research and planning for future research	E	a, c
Experience of teaching and research supervision at postgraduate level	D	a, c
Strong record of generating external funding (grants, contracts etc) to support research projects	E	a, c
Capacity to work with and support other staff in developing both their teaching and research potential	E	a, c
Strong academic leadership within a University setting	E	a, c
Senior level administrative experience within a University setting	D	a, c
Experience of promoting externally-funded research programmes	E	a, c
Ability to initiate development in the curriculum and to take responsibility for the effective and efficient delivery of teaching programmes	E	a, c, d
Good effective communication (oral and written) skills, presentation ant training skills	E	a, c
Good interpersonal skills	E	a, c

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FURTHER PARTICULARS

The University of Warwick

For further information about the University of Warwick, please visit our website at
http://www2.warwick.ac.uk/services/humanresources/jobsintro/furtherparticulars.

Professor in Theoretical Computer Science and Discrete Mathematics and its Applications

The Department of Computer Science at the University of Warwick invites applications from
candidates with proven excellence in research in theoretical computer science (algorithms and
complexity), discrete mathematics and operational research, to complement, strengthen and provide
leadership in research and teaching. The Professorship is a permanent position (subject to the
University's normal arrangements for probation) based in the Department of Computer Science. The
appointee will be expected to participate in activities within the Computer Science Department and the
Foundations of Computer Science Research Group, and to contribute to the development of the
Centre for Discrete Mathematics and its Applications. Special considerations will be given to
candidates with interdisciplinary interests (related to algorithms, operational research, and discrete
mathematics) and industrial research experience.

Contributions to teaching will be by agreement with the Head of Department.

The Department of Computer Science

The Department of Computer Science at the University of Warwick is one of the leading Computer
Science Departments in United Kingdom for both research and teaching. The Department's research
has a strong theoretical foundation upon which is built a variety of activities. Research activities in the
Department include algorithms and complexity, formal methods and the semantics of programming
languages, computational biology, software technologies and human aspects of computing, intelligent
and adaptive systems, high-performance computing, and image and signal processing.

The Department is located in its own, purpose-built building on the main university campus and has
about 25 academic staff, about 60 research associates and research postgraduate students with 13
technical and support staff. Five undergraduate degree courses are offered: Computer Science,
Computing Systems, Discrete Mathematics (run jointly with the Warwick Mathematics Institute),
Computer and Management Sciences and Computing with Business Studies (run jointly with the
Warwick Business School). The Computer Science and Computing Systems courses can be taken as
a three-year bachelor degree or a four-year MEng programme. All degree courses can be taken with
or without an Intercalated Year. The Department offers also two taught postgraduate MSc degrees:
MSc in Computer Science and Applications and MSc in Cognitive Systems.

The Department offers a stimulating research environment and has consistently achieved the highest
rankings for its teaching and research.

Further information can be found at: http://www.dcs.warwick.ac.uk/.

Foundations of Computer Science Research Group (in Computer Science Department)

The position is affiliated with the Foundations of Computer Science Research Group (FoCS) group in
the Department of Computer Science. FoCS is a leading research group in the Department of
Computer Science and is closely affiliated with DIMAP. Research in FoCS is concerned with various
topics of Theoretical Computer Science, Algorithms, and Complexity Theory, Logic, and Automata and
Verification. Our research aims at providing understanding of fundamental problems arising in
Computer Science and to design mathematical tools and better algorithms to solve these problems. In
particular, we study the inherent (mathematical) limits which determine what can (and what cannot) be
efficiently computed.

The method of our research is to consider particular computational problems and, for each problem, (1) to study the limits which determine how quickly the problem can be solved on a computer, and (2) to develop algorithms for solving the problem which are as efficient as possible. Our key research areas include:

- randomised and approximation algorithms,
- network algorithms,
- complexity theory,
- discrete mathematics, combinatorics, and their applications,
- parallel and distributed algorithms,
- algorithmic aspects of game theory and economics,
- graph algorithms,
- string matching, etc

Academic group members:

- Dr Amin Coja-Oghlan,
- Prof Artur Czumaj,
- Dr Matthias Englert,
- Dr Charilaos Efthymiou,
- Dr Marcin Jurdziński,
- Dr Ranko Lazic,
- Dr Rajagopal Nagarajan,
- Prof Mike Paterson, FRS,
- Dr Angélica Pachón Pinzón,
- Dr Rajiv Raman,
- Dr Benjamin Sach,
- Dr Troels Bjerre Sørensen,
- Dr Alexander Tiskin.

The Department of Computer Science is currently in the process of appointing a new Assistant Professor to be affiliated with the FoCS Research Group and the DIMAP Centre (provisional starting date of the appointment: September/October 2011).

Further information about FoCS can be found at: www.dcs.warwick.ac.uk/research/focs/.

The Centre for Discrete Mathematics and its Applications (DIMAP)

The Centre for Discrete Mathematics and its Applications (DIMAP) was launched in March 2007 by the University of Warwick, partially funded by an EPSRC Science and Innovation Award of £3.8 million. The Centre builds on collaboration among

- the Department of Computer Science,
- the Warwick Mathematics Institute, and
- the Operational Research & Management Sciences group in Warwick Business School.

DIMAP is a multidisciplinary research centre supporting an internationally competitive programme of research in discrete modelling, algorithmic analysis, and combinatorial (discrete) optimisation. It aims to support a thriving Industrial Affiliates Programme, and develop collaborative research rooted in discrete mathematics, involving researchers at other UK universities. The Centre also contributes to the development of undergraduate and taught postgraduate modules within degrees offered by the participating departments. With a number of internationally renowned researchers, an extensive programme of scientific seminars, international workshops and visiting researchers, and a multidisciplinary angle, DIMAP is one of the leading international research centres in discrete mathematics and its applications in computer science and operational research.

Main research areas:
- Algorithms and Complexity
  - Randomised Algorithms
  - Online Algorithms
  - Approximation Algorithms
  - Network Optimisation
  - Parallel and Distributed Algorithms
  - Algorithmic Game Theory
  - Algorithms on Strings
- Discrete Mathematics and Combinatorics
  - Algorithmic Graph Theory
  - Structural Graph Theory
  - Extremal Graph Theory
  - Statistical Physics and Discrete Mathematics
- Mathematical Aspects of Operational Research
  - Combinatorial Optimisation
  - Scheduling
  - Approximation and Heuristics

DIMAP academic members:
- Prof Jürgen Branke (Business School),
- Prof Bo Chen (Business School),
- Dr Amin Coja-Oghlan (Computer Science and Mathematics Institute),
- Prof Artur Czumaj (Computer Science),
- Dr Vladimir Deineko (Business School),
- Dr Matthias Englert (Computer Science),
- Dr Charilaos Efthymiou (Computer Science and Mathematics Institute),
- Dr Nalan Gulpinar (Business School),
- Dr Marcin Jurdziński (Computer Science),
- Prof Roman Kotecký (Mathematics Institute),
- Dr Ranko Lazic (Computer Science),
- Dr Rajagopal Nagarajan (Computer Science),
- Prof Neil O'Connell (Mathematics Institute),
- Dr Angélica Pachón Pinzón (Computer Science and Mathematics Institute),
- Prof Mike Paterson, FRS (Computer Science),
- Dr Rajiv Raman (Computer Science),
- Dr Benjamin Sach (Computer Science),
- Dr Troels Bjerre Sørensen (Computer Science),
- Prof Colin Sparrow (Mathematics Institute),
- Prof Andrew Stuart (Mathematics Institute),
- Dr Alexander Tiskin (Computer Science),
- Dr Daniel Ueltschi (Mathematics Institute).

Events organised by DIMAP:
- DIMAP seminars, weekly, see http://go.warwick.ac.uk/dimap/seminars/.
- 39th International Colloquium on Automata, Languages and Programming (ICALP'12), July 2012.
- DIMAP Workshop on Combinatorics and Graph Theory, April 2011.
- Workshop on Extremal and Probabilistic Combinatorics, July 2010.
- DIMAP Summer School on Approximation and Randomized Algorithms, July 2010.
- Mike's DIMAP mini-workshop on Algorithms, December 2009.
- DIMAP workshop on Public Transport and Public Service Operations, April 2009.
- 25th British Colloquium for Theoretical Computer Science (BCTCS 2009), April 2009.
- DIMAP Workshop on Algorithmic Graph Theory, March 2009.
- DIMAP Algorithms Day, October 2008.

- Mike66, a workshop in honour of Professor Mike Paterson's 66th birthday, September 2008.
- 19th Postgraduate Combinatorial Conference (PCC 2008), July 2008.
- 3rd Workshop on Flexible Network Design, July 2008.
- Biennial International Symposium on Combinatorial Optimisation (CO 2008), March 2008.
- DIMAP Workshop on Algorithmic Game Theory, March 2007.

Further information about DIMAP can be found at: http://go.warwick.ac.uk/dimap .

Further information for the individual Departments can be found at:

- Department of Computer Science: http://www.dcs.warwick.ac.uk/
- Centre for Discrete Mathematics and its Applications Mathematics Institute: http://go.warwick.ac.uk/dimap

Contact Information:

Prof Artur Czumaj (Head of Computer Science): A.Czumaj@warwick.ac.uk

Applications should include a CV and a summary of research plans (2 pages max).

Recruitment of Ex-Offenders Policy
(Developed in line with the CRB Disclosure information pack, part DIP011)

This Policy applies to all staff recruitment at the University of Warwick.

As an organisation using the Criminal Records Bureau (CRB) Disclosure service to assess applicants' suitability for positions of trust, the University of Warwick complies fully with the CRB Code of Practice and undertakes to treat all applicants for positions fairly. It undertakes not to discriminate unfairly against any subject of a Disclosure on the basis of a conviction or other information revealed.

The University of Warwick is committed to the fair treatment of its staff, potential staff or users of its services, regardless of race, gender, religion, sexual orientation, responsibilities for dependants, age, physical/mental disability or offending background.

Our written policy on the recruitment of ex-offenders is made available to all applicants at the outset of the recruitment process.

We actively promote equality of opportunity for all with the right mix of talent, skills and potential and welcome applications from a wide range of candidates, including those with criminal records. We select all candidates for interview based on their skills, qualifications and experience.

A Disclosure is only requested after a thorough risk assessment has indicated that one is both proportionate and relevant to the position concerned. For those positions where a Disclosure is required, all application forms, job adverts and recruitment briefs will contain a statement that a Disclosure will be requested in the event of the individual being offered the position.

Where a Disclosure is to form part of the recruitment process, we encourage all applicants called for interview to provide details of their criminal record at an early stage in the application process. We request that this information is sent under separate, confidential cover, to a designated person within the University of Warwick and we guarantee that this information will only be seen by those who need to see it as part of the recruitment process.

Unless the nature of the position allows the University of Warwick to ask questions about the applicants entire criminal record, we only ask about 'unspent' convictions as defined in the Rehabilitation of Offenders Act 1974.

We ensure that all appropriate staff in Human Resources at the University of Warwick who are involved in the recruitment process have been suitably trained to identify and assess the relevance and circumstances of offences. We also ensure that they have received appropriate guidance in the relevant legislation relating to the employment of ex-offenders, e.g. the Rehabilitation of Offenders Act 1974. Line managers are advised who to approach for support on these issues.

At interview, or in a separate discussion, we ensure that an open and measured discussion takes place on the subject of any offences or other matter that might be relevant to the position. Failure on the part of the applicant to reveal information that is directly relevant to the position sought could lead to withdrawal of an offer of employment.

We make every subject of a CRB Disclosure aware of the existence of the CRB Code of Practice and make a copy available on request.

We undertake to discuss any matter revealed in a Disclosure with the person seeking the position before withdrawing a conditional offer of employment.

We do not accept Disclosures transferred from other organisations and do not supply Disclosures requested by us to any external organisations.