



King's College London  
Chair in Computer Science (HCI)  
Department of Informatics

Candidate Pack  
Spring 2019

## Role Purpose

The highest level of academic leadership in research in the area of Computer Science and HCI, and in teaching and administration, as directed by the Head of Department of Informatics.

King's College London is seeking to appoint an outstanding individual with an excellent track record in human-computer interaction understood in the broadest sense of the term. A key aspect that is sought for this post is the adoption of user-focused methodologies for the design, study, development and evaluation of "systems with human stakeholders". Any application area, but preferably related to the Hubs, is welcome, including mobile devices, , natural language, IoT sensors, wearables, augmented reality, accessibility, sustainability, interaction design, urban context, human computation, and social computing.

The applicant will have a proven track record of shaping and delivering strategy in both research and in academic administration, and will take an important role in driving some of the emerging activities, such as leading the Human Centred Computing (HCC) group, linking with the departmental hubs, and shaping the educational portfolio of the department. The successful candidate will join the department as head of the HCC group.

## King's College London

Please see the link below for supporting information for prospective applicants. This also includes some background information about the university including rankings, research outputs, King's Health Partner Trusts and our current fundraising initiative. [www.kcl.ac.uk/aboutkings](http://www.kcl.ac.uk/aboutkings)

## The role and key responsibilities

The appointee will be expected to:

- Provide academic leadership in the areas of Computer Science and HCI within the Department of Informatics, and to play a leading role in this area within the Faculty, and across the College.
- Contribute to the teaching, project supervision, and administration of the undergraduate and postgraduate degrees in the Department of Informatics.
- Provide other teaching and administrative support within the Department as and when required.
- Enhance the research profile of the Department, through maintaining a consistent high-level output of publications and presentations of world-class quality.
- Sustain high-quality research activity through a portfolio of individual, joint and/or network research projects.
- Engage actively and regularly in the pursuit of research funding through grant applications to Research Councils, etc, and to assist other academic staff in the development of research proposals.
- Develop links and collaboration with academics elsewhere at King's College London.
- Engage, when appropriate, in the dissemination of advanced research through knowledge transfer, outreach, continuing professional development, etc.
- Contribute to national and international Research Council activities and similar panels as appropriate.
- Seek continued involvement in international research activities, such as conference programme committees and editorial work for academic journals.
- Supervise and train postgraduate students and postdoctoral research staff to ensure their effective development.
- Contribute fully and conscientiously to administrative tasks in the Department of Informatics, as directed by the Head of Department.
- Be involved in the mentoring of junior staff and act as line manager for non-professorial members of academic staff. At an appropriate time, the appointed candidate may be expected to take on a term of office as Head of Department.
- Lead/contribute to service activities within the Department, Faculty and College.
- Contribute to performance and development review processes as appropriate in accordance with the College's strategy.

## Person profile

### Knowledge, qualifications and experience:

The successful candidate will represent a good match against the following essential and desirable criteria for each category listed below:

#### **Education, qualification, and training**

##### *Essential*

- PhD in computer science, HCI or related field
- Strong research record in computer science and HCI, through high quality publications

#### **Knowledge and skills**

##### *Essential*

- Leadership skills
- Ability to attract and develop talented researchers into the field
- Ability to motivate students and junior colleagues
- Ability to carry out relevant research
- Ability to teach undergraduate and postgraduate modules in computer science and HCI

##### *Desirable*

- Ability to further academic planning and strategic development

#### **Experience**

##### *Essential*

- Outstanding research record of international stature in computer science and HCI
- Established record of acquiring research grants/funding
- Teaching and assessment experience at undergraduate and/or postgraduate level
- Experience of supervision of research students

##### *Desirable*

- Experience of university governance and of academic administration

#### **Personal Characteristics and other requirements**

##### *Essential*

- Ability to organise work to meet demands of research, teaching, and administration
- Ability to manage and interact with staff and students at all levels
- Ability to communicate effectively (written and orally)
- Commitment to providing effective teaching at undergraduate and MSc level

## About the Faculty

The Faculty of Natural & Mathematical Sciences (NMS) comprises the Departments of Chemistry, Informatics, Mathematics and Physics. All areas have highly-rated research activities and the Faculty offers a wide-ranging portfolio of undergraduate, postgraduate taught and PhD programmes. Our work crosses traditional subject boundaries creating cutting-edge research that provides opportunities to engage in multidisciplinary activities across the university, and to develop partnerships with external groups in industry. Importantly, each department has a vibrant research environment, where students work with, and learn from, world-leading academics while benefitting from an open-door policy and a wealth of support. The Faculty has around 2,300 undergraduate and postgraduate students and 180 academic staff, with significant growth planned for the future. It is supported by around 85 Faculty and departmental professional services staff, together with colleagues in central directorates, including admissions, HR, research and management accounting services.

It's an exciting time to join us. The Faculty is embarking on a period of ambitious growth, supported by significant university investment, which aims to build upon our current strengths in natural and mathematical sciences, to deliver world class research, education and innovation. This applies to our core areas of mathematics, physics, chemistry, computer science, telecommunications, robotics, bioinformatics and biomedical engineering, as well as expansion into broader engineering and other areas that complement our current portfolio. Our vision is to establish King's as an outstanding institution in science and technology, competitive with the world's best, by broadening the range of our disciplines and maintaining their quality. We aim to be distinctive and bold, by strengthening our individual departments in their disciplinary identities and their participation in broader cross-King's interactions.

Our unrivalled central London location offers easy access to major research libraries and leading scientific societies such as the Royal Society, Royal Society of Chemistry, BCS, Institute of Physics, IET, IMechE and the London Mathematical Society. We are committing significant investment to the development of our estate, with major capital projects on many of our campuses, including the newly-completed Bush House complex on the Strand campus (which provides new teaching facilities, social areas, office space and student space) and investment in a variety of new laboratories for our experimental disciplines.

We are very proud of the tradition of excellence within the Faculty, which includes a history of high levels of research funding and a number of Nobel Laureates from among our distinguished former staff and students, and we are working hard to promote the careers of women working in science, engineering and technology. The Faculty held an Athena SWAN Bronze Award in recognition of our commitment to gender equality until November 2017, and departments are now working on achieving their own local awards. The Department of Informatics was awarded a Bronze award in November 2017. Our work in this area is helping us to identify best practice for the working environment of *all* staff working in our Faculty. You can find out more at <http://www.kcl.ac.uk/nms/WomeninScience/>.

Supporting our staff is important to us. For Parents we offer a [Parenting & Carers Fund](#) of up to £10k for academic and research staff working in all disciplines as well as a locally managed fund which provides additional support for those with caring responsibilities. The [Carer's Career Development Fund](#) also supports academic, research and professional services staff with the additional care costs associated with attending conferences and events outside normal working hours. Staff are able to apply for flexible working to help them to balance the demands of their professional and personal commitments and we offer comprehensive leave policies for maternity, paternity, adoption, surrogacy, dependant and shared leave. We have a variety of [diversity and inclusion networks](#) at King's including an active [LGBT+ Staff Network](#) and another for [Parent's and Carers](#) who run events throughout the year. We are also keen to help our staff to develop their careers, and we offer a clear and

transparent academic promotion process, including briefing sessions for staff and feedback from our Faculty Academic Staffing Committee on draft applications.

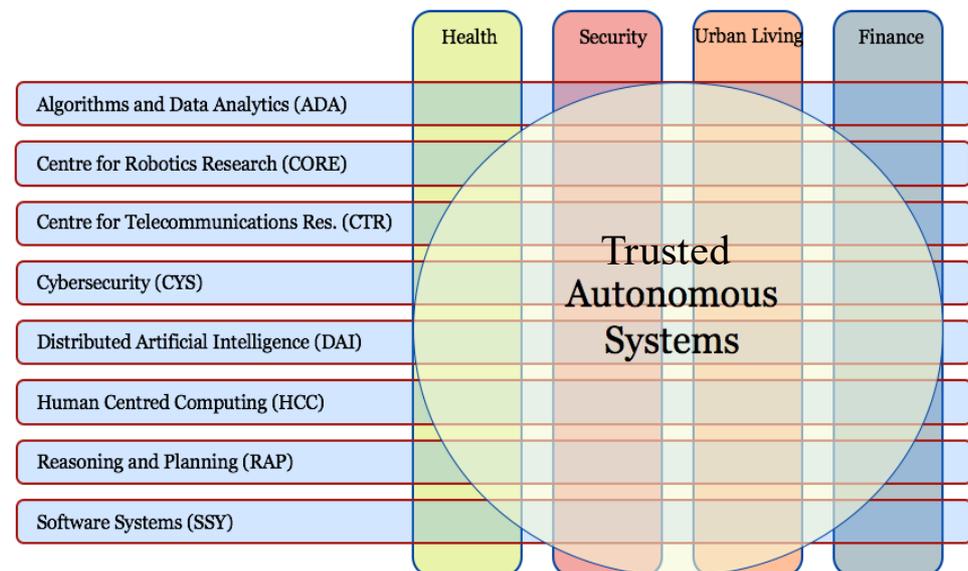
We are international in our outlook. Our staff come from over 45 countries, with around two-thirds coming from outside the UK, and around 40% of our students are from the EU and the rest of the world. Collegiality is important to us, and we host a series of social events for all staff and PhD students in the Faculty to provide an informal setting for colleagues to socialise and connect with one other, including themed coffee mornings, occasional evening events and an annual summer picnic for staff and their families. We also organise lunches for new staff, to help them to meet new colleagues from across NMS. For professional services staff, we run an Information & Skills programme, which offers bite-sized sessions on a range of topical issues and provides the opportunity for staff across NMS and the wider university to share their expertise. Recent sessions included an EU Referendum briefing, an update on our Athena SWAN submissions, mindfulness and the use of social media.

Details of all our departments and programmes are on the Faculty of Natural & Mathematical Sciences website at [www.kcl.ac.uk/nms](http://www.kcl.ac.uk/nms).

## About the Department of Informatics

To better tackle real-world challenges, the Department of Informatics has strategically organised its activities according to eight research groups and five cross-cutting hubs. The groups are as follows (<https://www.kcl.ac.uk/nms/depts/informatics/research/research.aspx>).

**Algorithms and Data Analysis (ADA)** is concerned with theoretical and practical considerations of machine learning techniques and algorithm design applied to very large data sets. **Centre for Robotics Research (CORE)** aims to develop world-leading solutions to critical challenges faced in society where robot-centric approaches can improve outcomes, with applications to health, horticulture/agriculture, manufacturing and humanitarian demining. **Centre for Telecommunications Research (CTR)** aims to be a global leader in telecommunications and data and information processing. **Cybersecurity (CYS)** investigates design, modelling, analysis, verification and testing of networks and systems in order to tackle cybersecurity and privacy problems that are important to industry, society and individuals in this technologically dependent world. **Distributed Artificial Intelligence (DAI)** explores the use of AI in social and economic contexts where an intelligent entity may be interacting with other entities. **Human Centred Computing (HCC)** is concerned with the design, development and evaluation of systems with which humans interact and engage in complex and varied ways. **Reasoning and Planning (RAP)** focusses on the fundamental Artificial Intelligence challenge of creating, representing and reasoning with expressive models of the world, with particular strengths in dealing with complex systems and in reasoning with information that is uncertain, incomplete or subjective. **Software Systems (SSY)** investigates design, modelling and engineering of software systems, reasoning about systems, and algorithms and tools for verification of software.



Hubs provide a virtual clustering of researchers from all parts of the Department around a specific theme. Five hubs have been identified: four focus on sectors of economic activity (health, security, urban living and finance), whereas the fifth hub (trusted autonomous systems) provides a technology focus for the whole Department.

The **Health Hub** centres on computational characterisation of medically relevant study cases and data. Comprising bioinformatics, systems biology, medical and health informatics, well-being, sensors and remotely controlled robotic devices, this multidisciplinary activity not only connects academic groups within the Department of Informatics, but also links Informatics to multiple other disciplines and organisational units across King's and to the Francis Crick Institute. The overall objective is advancement

in understanding fundamental mechanisms in health and disease, enabling remote diagnosis and operations, monitoring the delivery of medical practice and designing effective interventions for therapy or treatment. Through these collaborations, there are opportunities to access unique data sets, which enable the development and evaluation of original computer science research, with the potential to have strong impact in the broad area of health.

The **Security Hub** consolidates the research conducted in Informatics related to security, covering the whole socio-technical and cyber-physical spectrum of modern systems with a strong focus on information security and cybersecurity. This includes topics such as formal and intelligent methods for security and privacy; security design, verification and testing; secure and privacy-preserving telecommunications; human factors and usable security and privacy; data privacy, data anonymization, and personal data protection; data and system transparency; digital forensics and cybercrime; and blockchain and distributed ledger technologies. The Hub also collaborates with other organisational units at King's, in particular the School of Security Studies (including the Department of War Studies and the Department of Defence Studies) and the Department of Digital Humanities, which provide additional security scenarios and access to unique data sets.

The **Urban Living Hub** acts as an umbrella activity for all research in the Department of Informatics addressing urban-related issues. Topics of interest include buildings, energy, culture, entertainment, logistics, town planning, pollution, population, transport and smart cities. The hub is directly aligned with King's 2029 strategic vision of a civic university at the heart of London, with a view to develop research collaborations that address London's challenges. The Hub operates in close cooperation with the Centre for Urban Science and Progress (CUSP) London, a national and international collaborative network of researchers, companies and local governments. Through CUSP London's ambitious program, the Hub offers opportunities to access unique data sets and challenges.

Financial markets are increasingly being underpinned by information technology to the extent that financial markets can be seen as instances of distributed systems technology, and in turn economic and financial incentives are increasingly understood to play an important role in conventional distributed systems technology such as internet protocols. The **Finance Hub** conducts fundamental and applied research at the intersection of finance and computation, a sector which is colloquially known as FinTech. We apply techniques such as network analysis, scientific and high-performance computing, time-series analysis, big-data analytics and agent-based modelling to problems in market micro-structure, risk management, portfolio construction, and the design of crypto-finance and distributed-ledger protocols. The Hub has established collaborations with other departments at King's, such as the Department of Mathematics and the King's Business School, as well as key financial institutions, including the Financial Conduct Authority. These collaborations are key to enabling access to data conducive to original research.

The **Trusted Autonomous Systems** Hub pulls researchers from computer science and engineering together to develop the trustable autonomous systems of tomorrow. Our vision for such autonomous systems is that they are capable of reasoning and planning, they are safe and secure, they efficiently integrate in human-autonomous systems teams, they rely on wireless communications and they might have physical embodiment as robots or intelligent sensors, they interact with humans, they are accountable for their behaviour, thereby allowing users to place their trust in them.

Research undertaken in the department of Informatics as well as in the department of War Studies has contributed to King's College London being recognised as an [Academic Centre of Excellence in Cyber Security Research](#) (ACE-CSR) by the National Cyber Security Centre (NCSC) and the Engineering and Physical Sciences Research Council (EPSRC). The ACE-CSR is a crucial mechanism to facilitate engagement with external stakeholders including government organisations, research funding agencies, and the broader industrial sector.

(<https://www.kcl.ac.uk/nms/depts/informatics/news/newsrecords/king%27s-recognised-for-excellence-in-cyber-security-research.aspx>).

As well as developing research collaborations between the eight research groups, our aim is to further develop interdisciplinary research and teaching initiatives with other departments in the Faculty of Natural & Mathematical Sciences, and across the university. In the 2014 Research Excellence Framework (REF), Informatics at King's was rated as having 92% of its research outputs as world leading or internationally excellent. The 2014 REF results placed the Department in the top 10 of Computer Science and Informatics departments in the UK, when measured by the Power Ranking. There are currently 56 full-time academic staff, supported by teams of professional services and technical staff.

We offer several undergraduate programmes, including the BSc Computer Science, BSc Computer Science with Management, BSc Computer Science with Intelligent Systems, BSc Computer Science with Robotics, BEng Electronic Engineering, BEng Electronic and Information Engineering, BEng Electronic Engineering with Management, and associated MSci and MEng degrees. There are currently approximately 850 full-time undergraduate students.

We also run a group of successful MSc programmes in Advanced Computing, Advanced Software Engineering, Artificial Intelligence, Computational Finance, Computer Systems Engineering with Management, Cybersecurity, Data Science, Electronic Engineering with Management, Engineering with Management, Intelligent Systems, Mobile & Personal Communications, Robotics, and Telecommunications & Internet Technology. There are currently approximately 400 MSc students. We are keen to continue to expand our postgraduate research programme, in which there are currently approximately 160 PhD students.

More broadly, we are also planning to expand our Engineering activity at King's in both teaching and research. These plans are centred on the launch of new additional undergraduate engineering programmes with a 21st Century perspective. Our approach to teaching engineering aims to be distinctive, combining traditional teaching methods with modern, project-based learning, catering for the needs of our students and the industries in which they will work. Engineering research at King's currently focusses on robotics, telecommunications and biomedical engineering, and our aim is to strengthen our existing research activities but also to establish new research themes, building on the strength and complementarity in the Department of Informatics and across King's more generally. For now, our Engineering activity remains part of the Department of Informatics. However, we expect that in time, Computer Science and Engineering will divide into two separate organisational entities once we increase our critical mass.

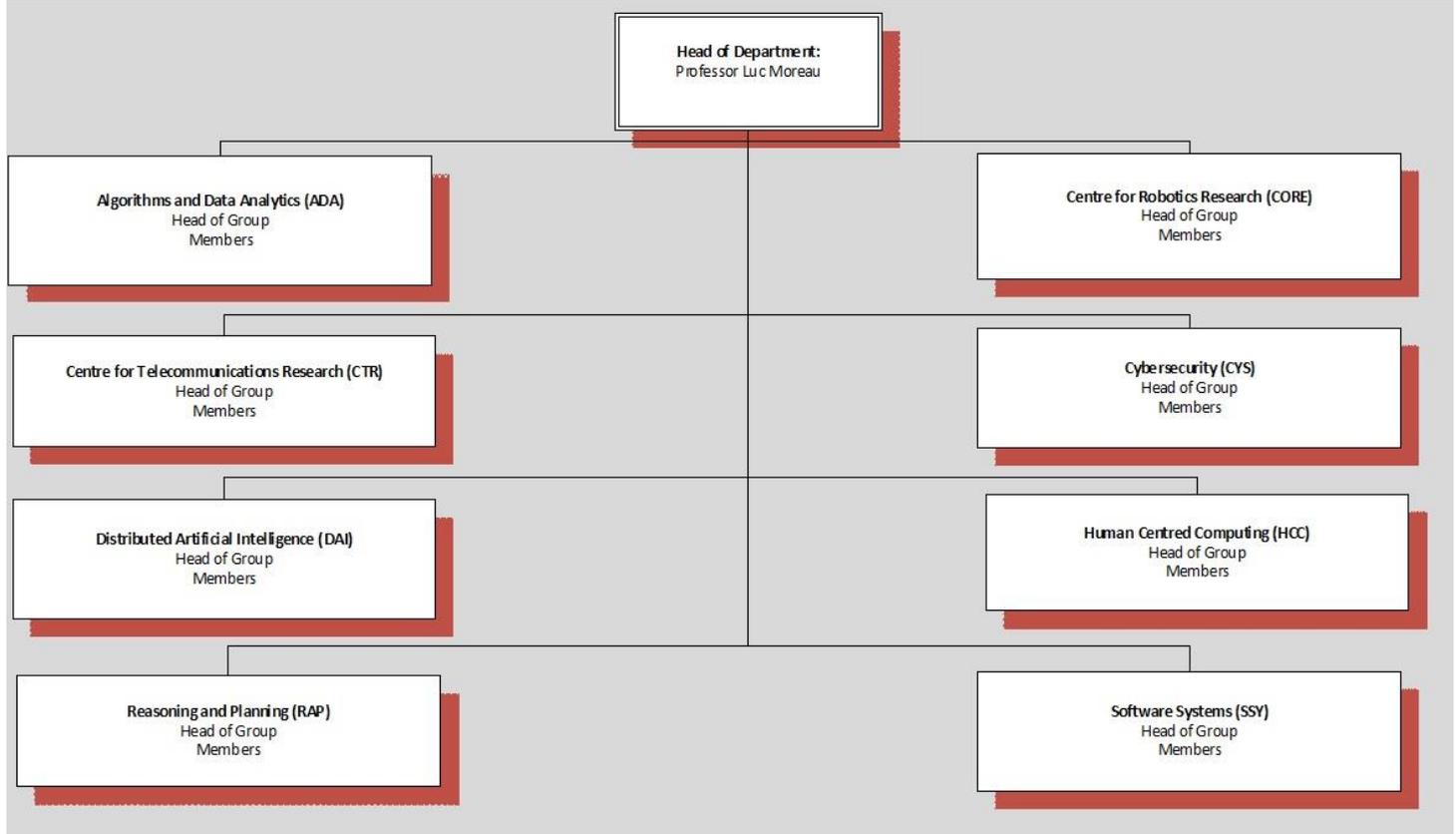
The Department is located on the Strand Campus, in the heart of central London, close to the cultural activities of the West End and the South Bank, to the major departments of state at Whitehall, to the BCS and IET and to the leading financial institutions of the City, and within easy reach of major transport links. The Department moved to the historic Bush House in the summer of 2017, featuring state-of-the-art teaching and research spaces.

In collaboration with the Faculty of Natural & Mathematical Sciences, the Department of Informatics has been engaged with [Athena SWAN](#) since 2013. In April 2018, the Department was awarded a department-level Athena SWAN Bronze Award in recognition of the work we are doing towards gender equality. This is part of a broader programme of activities the Department is engaged in around diversity and inclusion, and ensuring an inclusive and supportive working and learning environment is a key part of the Department of Informatics' strategy. For details about the Department's work in this area, please see the [Diversity and Inclusion](#) (<https://www.kcl.ac.uk/nms/depts/informatics/diversity-inclusion/diversity-inclusion.aspx>) and the [Women in Science](#) webpages (<https://www.kcl.ac.uk/nms/depts/informatics/women-in-science/women-in-science.aspx>), where

you can also find our Athena SWAN application and action plan. Although the Department is fairly large in size, there is a friendly and inclusive culture, with regular social and celebratory events to bring staff and students together. Our staff and students come from all over the world, which provides a rich environment for teaching and research. Diversity is positively encouraged with a number of family-friendly policies, including the operation of a core hours policy, the right to apply for flexible working and support for staff returning from periods of extended absence, for example maternity leave. The Department of Informatics is committed to ensuring an inclusive interview process and will reimburse up to £250 towards any additional care costs (for a dependent child or adult) incurred as a result of attending an interview for this position. All new members of staff are allocated a mentor to support them in their career development and staff are encouraged to participate in the wide range of training opportunities available at King's.

As part of the King's ambition to be among the world's truly great universities, we are now expanding our provision in science and technology, including in areas that offer connections into existing strengths elsewhere at King's. This will allow for the possibility to make new academic connections, address global challenges in new ways and offer a broader education to the very best students from across the world. This includes the growth of both our Engineering and Computer Science activities. We plan to increase our staff numbers to a critical mass of 60 in each of Engineering and Computer Science, to strengthen our existing research activities and explore new areas, and to provide support for our enormously popular undergraduate and MSc programmes.

## Organisational chart



## Terms and Conditions of Employment

This appointment is made under the King's College London Terms and Conditions of Service for Academic staff a copy of which is available upon request.

### **Probation**

Not applicable

### **Annual leave**

27 working days per annum pro rata (please note the annual leave year runs from January-December); bank holidays and customary closure days in are in addition to the annual leave entitlement. Staff receive four additional customary closure days in December. Notification as to how these days are taken is circulated at the start of the academic year.

### **Superannuation**

This appointment is superannuable under the USS [www.uss.co.uk](http://www.uss.co.uk) pension scheme. In accordance with recent legislation, we automatically enrol our staff in a pension scheme if they meet certain age and earning criteria. This is known as auto-enrolment. The university collects pension contributions via a salary sacrifice method called *PensionsPlus*. These deductions are made before the calculation of tax and national insurance is calculated; therefore reducing the amount you pay.

Staff already superannuated under the NHS Superannuation Scheme may opt to remain in that scheme provided an application to do so is received by the NHS scheme trustees within three months of appointment to King's College London. Please note that NHS Superannuation Scheme: Medical Schools are classed as "Direction Employers" and some benefits of the NHS Scheme are not available to Direction members.

Alternatively, staff may opt to take out a personal pension. Please note that the university does not provide an employer's contribution towards a private pension plan.

### **Staff benefits**

King's College London offers a wide range of staff benefits. For the full comprehensive list of staff benefits please refer to our website: [www.kcl.ac.uk/hr/staffbenefits](http://www.kcl.ac.uk/hr/staffbenefits)

## **Equal opportunities**

King's College London recognises that equality of opportunity and the recognition and promotion of diversity are integral to its academic and economic strengths. The following principles apply in respect of the university's commitment to equality and diversity:

- To provide and promote equality of opportunity in all areas of its work and activity;
- To recognise and develop the diversity of skills and talent within its current and potential community;
- To ensure that all university members and prospective members are treated solely on the basis of their merits, abilities and potential without receiving any unjustified discrimination or unfavourable treatment on grounds such as age, disability, marital status, pregnancy or maternity, race, religion or belief, sex, sexual orientation, trans status, socio-economic status or any other irrelevant distinction;
- To provide and promote a positive working, learning, and social environment which is free from prejudice, discrimination and any forms of harassment, bullying or victimisation;
- To foster good relations between individuals from different groups and tackle prejudice and promote understanding.

King's has been a member of the Athena SWAN Charter since 2007 and gained its Bronze institutional award in 2008. Our award was successfully renewed in September 2013 for a further three years. The Athena SWAN agenda forms part of a wider suite of diversity and inclusion work streams. Working with the Charter is helping King's to identify best practice for the working environment of all staff working in science disciplines.

## **Occupational Health Clearance**

As part of our pre-employment checks the successful applicant will be sent a 'Health and Capability Declaration Form' and if they declare that they do have a health condition or disability that may require accommodation measures so that they are able to carry out their work comfortably and efficiently, they will be sent an Occupational Health Questionnaire to determine whether any reasonable accommodation measures are required for the candidate to take up the post.

If you have special needs in relation to your application, please let us know.

## Process

Candidates who would like to discuss this role further are welcome to contact Kerry Shepherd or Ilona Maglia at Minerva.

A CV and personal statement outlining how the candidate will fulfil the role and what they will bring to it, should be emailed to [kcl@minervasearch.com](mailto:kcl@minervasearch.com).

Interviews will be held with Minerva prior to the short-listing meeting.

- Shortlisting meeting: 1 May 2019
- Formal selection and panel interview: 23 May 2019

Appointment will be made subject to satisfactory references, and in line with the usual terms and conditions of employment of the College.

It is expected that the successful candidate will commence work in the role by September 2019, or as soon as possible thereafter.

## Contact

Minerva can be contacted as follows:

### **Consultants**

Kerry Shepherd

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Ilona Maglia

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### **Assistant**

Natalie Chapman

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