Role Purpose

The highest level of academic leadership in research in the area of Computer Science and Computational Finance, 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 computational finance or related areas. Topics of interest include computational data analytics applied to time series and in particular financial data, machine learning, data mining or visualisation for financial data, high-frequency algorithmic trading, financial risk management, crypto-finance, price formation.

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 in computational finance in Informatics, such as forging research links with the Department of Mathematics and King’s Business school, taking responsibilities related to the Master’s program in Computational Finance, and providing leadership for the Finance Hub.

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
The role and key responsibilities

The appointee will be expected to:

- Provide academic leadership in the areas of Computer Science and Computational Finance 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, computational finance or related field
- Strong research record in computer science and computational finance, 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 computational finance

*Desirable*
- Ability to further academic planning and strategic development

Experience

*Essential*
- Outstanding research record of international stature in computer science and computational finance
- 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 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 75 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 Bush House complex on the Strand campus (which will provide 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. In September 2014, the Faculty was awarded the Athena SWAN Bronze Award in recognition of our commitment to gender equality, and several departments are now working on departmental Bronze applications. 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/.

---

[Charter for women in science]

Recognising commitment to advancing women’s careers in STEMM academia
Supporting our staff is important to us. For parents we offer a Parenting Leave Fund of up to £10k for academic and research staff working in all disciplines returning from a career break, as well a childcare voucher scheme which enables eligible staff to make savings on the cost of childcare through a 'salary sacrifice’ agreement. For carers we offer a Carer’s Career Development Fund to support academic and research 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, dependants and shared leave. We have a variety of diversity and inclusion networks at King's, overseen by the King's Diversity Community Steering Group and an active LGBT+ Staff Network which runs events throughout the year. We're 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 across the Faculty 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 across the Faculty. 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 the Faculty and wider university to share their expertise. Recent sessions include 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.
About the Department of Informatics

To better tackle real-world challenges, the Department of Informatics is strategically reorganising its activities according to eight research groups and cross-cutting hubs. The new groups are as follows.

**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 (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 Trustworthy 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.

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 Computing with Management, Advanced Software Engineering, Advanced Software Engineering with Management, Computing & Security, Computational Finance, Computing & Internet Systems, Computer Systems Engineering with Management, Data Science, Electronic Engineering with Management, Engineering with Management, Intelligent Systems, Mobile & Personal Communications, Robotics, Telecommunications & Internet Technology, and Web Intelligence. There are currently approximately 350 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 in Bush House, part of the Strand Campus. This location is 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. 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.
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 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
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.

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

- Shortlisting meeting: w/c 19 March 2018
- Formal selection and panel interview: 23 April 2018

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 2018.

Contact

Minerva can be contacted as follows:

**Consultants**
Kerry Shepherd  
kerry@minervasearch.com  
0203 714 3477  
Ilona Maglia  
ilona@minervasearch.com  
0203 714 0965

**Assistant**
Natalie Chapman  
natalie@minervasearch.com  
0203 714 0963