CANDIDATE PACK

Professor in Digital Resilience

School of Computer Science and Electronic Engineering

Closing Date for Applications

23:59 Sunday 26th February 2023

Interviews Thursday 23rd March 2023

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Inclusion ❱ Inspiration ❱ Innovation ❱ Integrity

UNIVERSITY OF SURREY

WELCOME MESSAGE FROM THE VICE CHANCELLOR

FORWARD THINKING AND DOING

Surrey is made up of many talented individuals who make us a great institution. And working together, and connecting with external institutions, businesses and government make us even stronger.

Since the University's founding in the 1960s, and before that at Battersea College, our community has thrived on strong connections with the world outside our campus. This spirit of collaboration is evident across the University today at every level. It informs our teaching, adds value to our research and increases our impact – connecting people with ideas, students with opportunities and businesses with technology.

Collaboration begins with the connections we make in our community, supporting projects that make a difference locally, and extends to our global partnerships that are enabling transformative research that brings great benefits to society.

The impact of Surrey's research plays a significant role around the globe and will continue to do so as we invest in our students and strong research capabilities. Our pan-university Institute for People-Centred Artificial Intelligence aims to augment human capabilities by delivering Artificial Intelligence as an inclusive and responsible force for good. Similarly, the new Surrey Institute for Sustainability will maximise the positive impact of our research and innovation in projects such as sustainable living, net-zero energy and clean air. The Surrey Medical School will train a new generation of doctors and investigate innovative solutions to healthcare for humans and animals.

There's real energy, momentum and ambition to Surrey. It has always been part of us, and I'm excited to be able to share with you how we're taking that energy forwards into the future using our values of;

- **Inclusion -** to value everyone in our community
- **Inspiration -** to find it in ourselves and each other
- **Innovation -** to work together to make tomorrow better than yesterday
- **Integrity -** to do the right thing, individually and collectively

These collaborations, and many others, are bringing improvements across a diverse range of fields, and new connections are propelling us in surprising directions. At Surrey, we are continuously redefining and joining together the many spheres that surround us – from real worlds to virtual ones, and from the worlds inside ourselves to those at the farthest reaches of our imagination.

Professor G Q Max Lu AO DL FAA FTSE
President and Vice-Chancellor
University of Surrey

See our Key Facts and Figures here.
Find out more here about Sustainability at Surrey

JOIN OUR SUCCESS STORY

WE HAVE ALREADY MADE SIGNIFICANT PROGRESS TOWARDS THIS GOAL, AS DEMONSTRATED BY OUR METRICS

As a Top 20 university nationally and Top 200 globally, we generate nearly £50m of research income annually and were amongst the Top 30 in the last Research Excellence Framework (REF). We are 9th nationally for overall student satisfaction and are financially sustainable, with a healthy 3.5% underlying surplus.

University of Surrey celebrates strong performance on student satisfaction in National Student Survey 2022. Improvements in teaching quality, assessments and feedback, support and services for students have helped lift the University of Surrey into the top 10 for this year's National Student Survey – with an overall satisfaction score of 84 per cent.

This strong performance builds on the excellent graduate employment outcomes released last month, with Surrey ranked in the top 10 in the UK for graduate employability in the HESA Graduate Outcomes Survey 2022.

The University now ranks as the 9th placed university in the UK (excluding specialist providers) for student satisfaction in the Office for Students' benchmark survey – up from 25th in 2021 and 111th in 2020.

In 2021, Surrey was one of only six institutions to improve on student satisfaction. The continued significant improvement in 2022 reflects a University-wide strategic focus on delivering an excellent student experience.

Student Satisfaction Report 2022

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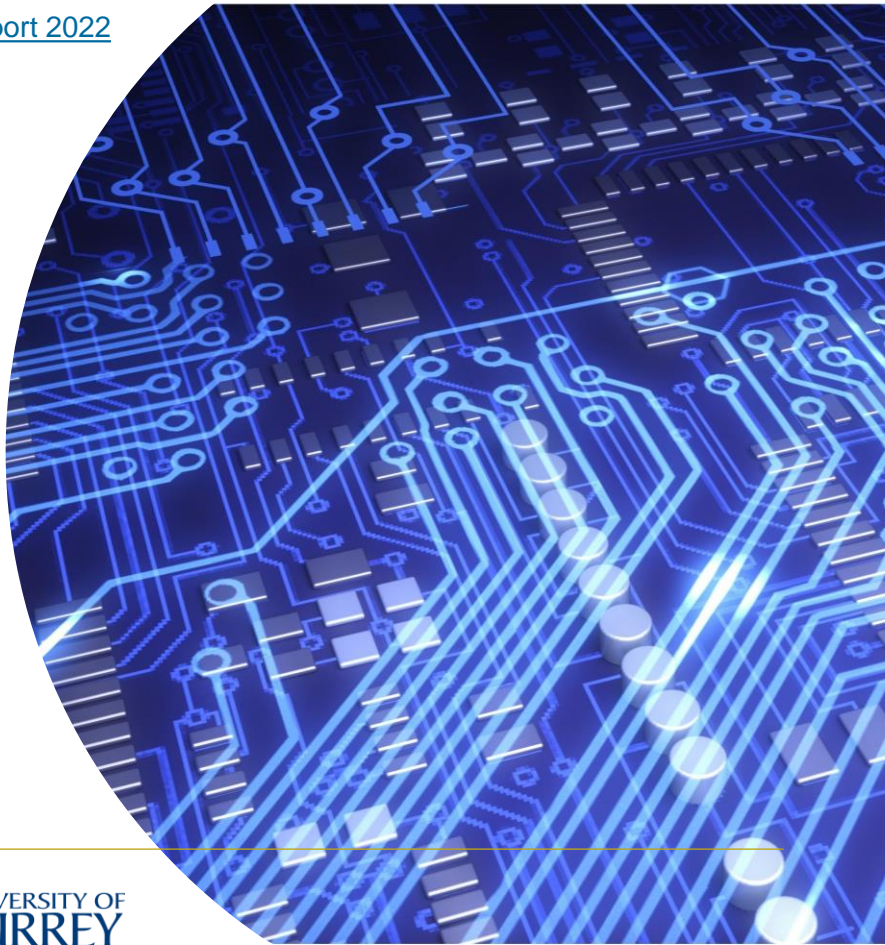
OUR AMBITION

"To be a leading global university renowned for the outstanding quality and impact of its graduates, research, and innovation, together making great contributions to society."

Our Ambition and Goals

- To be a global leader in higher education research and innovation and a destination of choice for researchers, including postgraduate research students, in the UK and internationally.

- To be a leading research institution with talented staff and students committed to research and innovation excellence and to benefitting the economy, society and the environment.

- To become a preferred partner for government, business, industry and other universities in creating knowledge, technological solutions, digital transformation and policy innovation.

- To be an engaged and connected university which is the intellectual home for alumni, supporters, and the local community.

- A financially astute and sustainable institution with diverse funding support, including philanthropy.

Read the latest Social Impact Report here.

FORWARD THINKING AND DOING

As society emerges from the global pandemic, we are continuing our focus on building the foundations for a better future. We are creating an environment where our community comes together as one to educate and develop the future leaders and citizens that will make the world a better place. At the same we are creating new knowledge, sharing our ideas and innovating to contribute to society in collaboration with our stakeholders and partners around the world.

We need academics who can conduct research at the cutting edge, who are forward-thinking, who provide an exceptional experience for our research students and partners, and who value and generate innovation outcomes. They are the agents for the 'Surrey Advantage', culminating in the premium that each and every student or partner gains by choosing us as the place to complete postgraduate research or to collaborate.

This strategy refresh extends our existing Forward Thinking. And Doing Corporate Strategy to 2024 to bridge the University's ambitions from where we were pre-pandemic, through the national and international recovery period, to build a strong platform from which we can aspire to even greater achievements in the future.

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OUR PRIORITES

Our priorities for the next three years address the core of what we do:

Drive student experience.

Students are at the heart of our University and we will deliver an excellent student experience for all students regardless of background. Surrey is renowned for enabling our students to realise their potential. We will continue to push the boundaries of pedagogy, ensuring our students experience a research-led education delivered by engaged academic staff using technology for greater flexibility to facilitate learning. We will be relentless in our pursuit of improvements to the overall student journey.

Our aim is to empower our students to be responsible for their Surrey journey. We will support our students to achieve their potential and prepare them to thrive throughout and beyond university. We will do this by working in partnership with students to build a strong Surrey community, fostering pride and belonging and championing diversity, inclusivity, and togetherness. We will listen to, work with and support our students to help them succeed, identifying and improving support services and the necessary infrastructure for a truly joined up experience.

Focus research intensity.

We will focus our resources and support around our existing and emerging critical masses of excellence. We will enhance excellence and build scale, bringing together disciplinary strengths from across the University to share ideas and address the challenges of our time. New pan-University institutes will serve as flagships of cross-disciplinary research concentration from which to elevate our global impact and visibility.

We will start upscaling and broadening our excellent innovation ecosystem to grow our innovation activity within our academic community, through educating, stimulating, and facilitating. We will continue to bring the research and education missions of the University ever closer together, building on the synergies already achieved by individual teachers and researchers. We will align our research and innovation support to be researcher-centric, 'can-do', digital and integrated which will help our researchers improve their effectiveness, and continue to be extraordinary collaborators, with each other and our partners around the world

Create the conditions for success.

We will foster talent and create an environment where all our staff, students and postgraduate researchers are empowered and supported to flourish, valuing each and every contribution. We have redesigned our resource allocation model and our support processes to reward excellence, enable growth, and to create more capacity for the academic mission.

We will use technology to enhance our systems and simplify processes, putting our community at the heart of everything we do, building Surrey as the place to start and grow a career for all our staff – support and academic alike. The success of our strategy will be underpinned by the quality, energy and commitment of our staff, supported by a strong and inclusive culture in an environment where all members of our community can bring their whole selves, flourish and fulfil their full potential.

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RESEARCH AND INNOVATION

THE UNIVERSITY OF SURREY HISTORY OF COLLABORATION. THE CONNECTIONS WE MAKE ACROSS DISCIPLINES AND DEPARTMENTS, AND WITH OTHER INSTITUTIONS AND INDUSTRY, ENABLE US TO ACHIEVE RESEARCH BREAKTHROUGHS THAT MAKE A DIFFERENCE TO SOCIETY

There are many examples of this across the University. We host the UK's largest research centre in 5G and 6G – which is developing the communications infrastructure that will underpin the way we communicate, work and live in the future – and are also home to the GCHQ-accredited Surrey Centre for Cyber Security. In 2017, three decades of ground-breaking research on the relationship between nutrition and health won us a coveted Queen's Anniversary Prize, while our newest School of Veterinary Science is already advancing research for the improvement of animal welfare, consistent with a broader 'one-health' agenda.

This research excellence is also at the heart of what we offer at Surrey in terms of teaching, adding real-world relevance and unique content to our undergraduate and masters courses, and enabling our PhD students to benefit from a world-class research environment. We are proud to welcome high calibre young researchers to our community as they begin their academic careers, and even prouder to see them moving.

Read more here Research and Innovation Strategy

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EQUALITY, DIVERSITY AND INCLUSION

AT SURREY, WE ARE VERY PROUD OF THE DIVERSITY WITHIN OUR COMMUNITY AND ARE COMMITTED TO PROVIDING AN INCLUSIVE ENVIRONMENT THAT OFFERS EQUITABLE OPPORTUNITIES FOR ALL

We strive for Surrey to be a place where everyone feels welcomed, valued and safe. Our vision to be a leading global university relies on our proven ability to attract the best people from the UK and internationally to work and study here; this can only be achieved when we work together to create a truly inclusive culture.

Our Equality, Diversity and Inclusion (EDI) Plan 2020-2025 lays out our aims to develop our inclusive and supportive culture, eliminate discrimination, harassment and victimisation, and advance equality of opportunities. Across University of Surrey, we are working actively towards fulfilling our EDI Plan targets and encourage everyone to engage with and participate in its progress. To achieve culture change, we are working to embed EDI in all teaching and learning, research and partnerships, as well as supporting our professional services colleagues. This will enable a self-sustaining process that will support EDI in becoming 'second nature' for our community.

See the plan here Equality, Diversity and Inclusion Plan 2020 - 2025

We are proud members of the Race Equality Charter and the Athena SWAN Charter for gender equality (holding University and departmental awards). We are also a Stonewall Diversity Champion and a committed Disability Confident employer.

Our AccessAble app provides accessibility support to people who need it around our campus and we have thriving staff networks and equality groups that support our work in all our areas of equality (gender, race/ethnicity, LGBTQI+, disability and faith).

Watch our Inclusion Video

WELCOME LETTER FROM THE HEAD OF SCHOOL OF COMPUTER SCIENCE & ELECTRONIC ENGINEERING

I became Head of the School of Computer Science and Electronic Engineering (CSEE) in April 2022. I am proud to be leading a School   which delivers world-class research in Computer Science and Electronic Engineering , areas which are making a difference in our rapidly changing world.

The School is dedicated to both research and teaching excellence. We are ensuring that we focus on driving the student experience so that we provide a nurturing environment for our future graduates to enable them to thrive and succeed. We will respond to the changing demands of the discipline by delivering a clear set of programmes that focus on the foundations, reflecting our collaborative and research-led approach to teaching and our passion for inspiring students through innovation in collaborative projects.

The school is renowned for its research in communications, space, computer science, artificial intelligence (AI), cyber security as well as nanotechnology and energy materials. We are passionate about making a difference to society and work closely with industry and our partners around the world to innovate in these areas.

We have a thriving research environment which encourages collaboration within the School, across the University and with our stakeholders and partners externally, enabling our research community to come together as one to make a societal contribution.

At the same time, we have ambitious plans to grow research within the area of Computer Science, which sits at the heart of the national agenda.

This means that we are well placed to create new knowledge in the fundamental area of digital systems security, highlighting the importance of developing robust approaches to managing digital resilience, reflecting the ubiquitous and critical nature of digital systems.

I am proud of the work we are doing across the School and fully support our staff through their professional development, placing a strong emphasis on their well-being. It is always a delight to celebrate our successes together and to see our colleagues realising their career aspirations.

Helen

Professor Helen Treharne,
Head of the School of Computer Science and
Electronic Engineering

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THE DEPARTMENT OF COMPUTER SCIENCE

THE DEPARTMENT OF COMPUTER SCIENCE HAS A LONG-STANDING REPUTATION FOR ITS VIBRANT AND SUPPORTIVE TEACHING AND RESEARCH ENVIRONMENT. WE HAVE A GROWING COMPLEMENT OF AROUND 35 ACADEMIC STAFF, AND A CURRENT PROFILE OF 400+ UNDERGRADUATE STUDENTS, 150+ MASTERS STUDENTS, AND 50+ PHD STUDENTS.

The department has a world class reputation in Cyber Security, Distributed and Networked Systems, and Nature Inspired Computing & Engineering, and regularly publishes at top-level conferences and journals.

- In the area of Computer Science, we ranked 7th in the national Research Excellence Framework 2021 for the quality of outputs submitted.
- We are ranked 6th in the UK and top 100 globally for computer science (and engineering) in the Shanghai Global Ranking 2022.

Our Computer Science BSc and Computing and Information Technology BSc programmes have been running successfully for many years and continue to attract strong students. The Department offers Information Security MSc and Data Science MSc programmes with healthy student numbers.

The Surrey Centre for Cyber Security (SCCS) is one of only seven in the UK holding recognition as an Academic Centre of Excellence in both Cyber Security Research and Cyber Security Education by the UK government. SCCS has world-leading research expertise in applied cryptography, trusted computing, secure systems, privacy and authentication, secure communications, blockchain and distributed ledger technologies, and security verification.

The Distributed and Networked Systems (DANS) group is internationally recognised for its fundamental and applied research in several areas such as; consensus protocols, distributed trust and coordination, fault-tolerance, edge and cloud computing, networks in space, web tracking and privacy, online harms such as hate speech and misinformation in social networks.

The Nature Inspired Computing and Engineering (NICE) group holds world-leading expertise in machine learning and AI, including trustworthy AI (explainable, secure and privacy preserving machine learning), systems biology, bioinformatics, image processing, natural language processing, computational neuroscience, computational optimization, AI planning and optimal control. The NICE group is a key partner in the new Surrey Institute for People-Centred AI. All research groups maintain close links with leading industries, the public sector and governmental bodies, leading to a strong heritage of real-world impact.

As part of the School of Computer Science and Electronic Engineering, we also have strong links with other Research Centres in the School, including the Centre for Vision Speech and Signal Processing, the Institute for Communication Systems, and the Surrey Space Centre.

The Department has made significant investment in its facilities with a new 200-seater computer science teaching laboratory, a virtual cloud computing platform, a secure systems facility and an HPC cluster for research. Other state-of-the-art facilities include a distributed RDMA/SGX/NVM testbed, P4 testbed for programmable networks, UK's first testbed for space networks to emulate megaconstellations of LEO satellites (in collaboration with the Surrey Space Centre), high performance computing cluster for data analysis, Surrey Blockchain Testbed, and 5G/6G wireless network testbeds

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ROLE AND RESPONSIBILITIES

Aims of the Role

The purpose of the Professor is to establish the new group, develop the team, and support the University develop this innovative multi-disciplinary agenda. It will involve leading a significant programme of research in line with the Faculty's Research Strategy, attracting and securing significant research funds, and providing academic leadership in undergraduate and postgraduate courses.

We are also looking to build a Digital Resilience Group through the recruitment of an Associate Professor and two other Senior Lecturers/Lecturers. We would welcome you brining your team.

The post holder will have the opportunity to complement and extend our existing strengths in cyber security, distributed and networked systems, and nature inspired computing and engineering, and have the potential to collaborate extensively across the School, Faculty and University, and with external partners

Salary Range

Competitive Salary

Location

The role is based from Guildford with flexible-working.

Role and Responsibilities

- Leading a significant programme of research, sustaining an extensive track record of published research findings.

- Managing the financial and physical resources associated with the research activities. Supervising and guiding the work of staff and research and doctoral students on own specialist area.

- Leading innovative research proposals and submitting funding bids, winning support for them and planning the research to be taken, as a self-contained item or as part of a broader programme.

- Seeking collaborative research opportunities with other members of Faculty staff and develop multidisciplinary research links with other parts of the University where appropriate.

- Engaging in external activities in accordance with the Faculty's research strategy at a national and international level. Such activities will include contribution to professional networks, national and international meetings, societies and bodies (including governmental ones).

- Attending appropriate national and international conferences for the purpose of disseminating research results.

- Contributing to the wider national and international academic community general life and work of the University through, for example, editing journals and refereeing papers.

- Providing academic leadership at undergraduate and/or postgraduate level, as appropriate, by leading the development of new teaching methods and designing programme units and taking responsibility for the quality of programme units.

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ESSENTIAL CRITERIA

Essential Criteria*

• A proven track record in academic leadership.

• A sustained record of securing significant research funding; for example EPSRC grants.

• Successfully supervising PhD students.

• Developing and leading innovative teaching techniques.

• Scholarly contributions to conferences, professional meetings and societies at an international level.

• A strong international network developed through utilising effective communication and interpersonal skills.

*We will consider applications as a team if your circumstances mean that this is a more viable option for you to join us.

Simply state on your application your preference. All information you share with us is private and confidential.

Personal Qualities

• As a pioneering leader, you will have outstanding interpersonal skills, able to both listen to and inspire others, engaging your stakeholders with your clear strategy to grow and sustain a collegial and inclusive teaching and research environment.

• You will be a role model for our University values, leading by both personal example and team relationships, striving to ensure that excellence permeates each and activity within the Department.

• You will have the ability to foster networks which enable applied/commercialisation activity inside and outside of the discipline.

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HOW TO APPLY

To make a formal application please apply on Surrey jobs site.

Applications should include a full and up-to-date CV and a supporting statement evidencing (of no more than 2 pages) how you meet each and every essential criteria listed in the "Essential Criteria" section of the candidate pack .

The closing date for applications is 23:59 on Sunday 26th February 2023. Initial telephone screens for shortlisted candidates will be held on the afternoon of Monday13th March 2023 and panel interview on Thursday 23rd March 2023 in Guildford.

The appointment of this role will be determined by a selection panel. A search exercise is being undertaken by Dixon Walter who will support the selection panel to identify the widest field of candidates and to assist in their assessment.

For further information on the role please contact Simon Critchley of Dixon Walter at simon@dixonwalter.co.uk or on 07891 842 347.

To make a formal application, please do so via the Surrey Recruit system at https://jobs.surrey.ac.uk/054122-R

University of Surrey is committed to providing an inclusive environment that offers equal opportunities for all. We place great value on diversity and are seeking to increase diversity in our community. Therefore, we particularly encourage applications from under-represented groups such as people from Black, Asian and minority ethnic backgrounds, women and people with disabilities.

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INDICATIVE TIMETABLE FOR INTERVIEW

The Interview Panel will consist of;

- Tim Dunne, Provost and Senior Vice President
- Professor Bob Nichol, PVC and Executive Dean of the Faculty of Engineering and Physical Sciences
- Professor Helen Treharne, Head of the School of Computer Science and Electronic Engineering
- Professor Steve Schneider, Director of Surrey Centre for Cyber Security and Head of Department of Computer Science
- Professor Monique Raats, Director of the Food, Consumer Behaviour and Health Research Centre
- Natalie Downey, Faculty HR Business Partner

The Interview Process includes;

- A 30 minute video screening interview with the Head of Department of Computer Science and Head of School of Computer Science and Electronic Engineering
- A presentation of no more than 20 minutes +10 minute Q&A to the relevant School or Department.
- Panel interview of 45 minutes based on the essential criteria, leadership and management approach.

Should you want to speak to the Head of Department, Professor Steve Schneider more informally you can contact him at s.schneider@surrey.ac.uk to arrange a conversation.

Activity	Date	Location
Advert closes for applications*	Sunday 26th February 2023	On Surrey Careers Pages and www.jobs.ac.uk
Telephone Interview	Monday 13th March 2023	By MS Teams (VIDEO)
Presentation and Interview*	Thursday 23rd March 2023	Ideally on Campus in Guildford, Surrey
Outcome Announced	March 2023	

*Should you require any reasonable adjustments to support your application or interview please contact resourcingteam@surrey.ac.uk who will ensure that you have the support you need to maximise your application.

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TERMS AND CONDITIONS

Pay Scale and Model - follow the links to find out more

Pay Scale and Pay Model

What are the benefits?

Link to our Benefits

What pension scheme do you offer?

Link to USS Pension Scheme
See other schemes available in the link to our Benefits

What's it like to work at Surrey?

Professor Ravi Silva Head of the Advanced technology Institute (ATI) Staff profiles | University of Surrey

Location

The role is based flexibly from our campus in Guildford**.**

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For more information contact
simon@dixonwalter.co.uk