

JOIN A PIONEERING CENTRE



SPACE ENGINEERING RESEARCH



Director of Surrey Space Centre (Professor/Reader)

Lecturer in Space Engineering

Lecturer in Aerospace Engineering

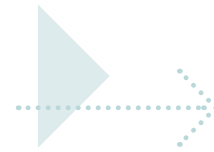


▶▶▶ BACKGROUND ◀◀◀

SURREY SPACE CENTRE (SSC) HAS BEEN A PIONEERING CENTRE OF EXCELLENCE IN SPACE ENGINEERING FOR OVER 40 YEARS. CREATED IN 1979, SSC SOON ESTABLISHED ITS WORLD LEADERSHIP IN MICROSATELLITE MISSIONS AND UNDERPINNING TECHNOLOGIES, FORMING THE HIGHLY SUCCESSFUL SPIN-OUT COMPANY SURREY SATELLITE TECHNOLOGY LTD (SSTL). SINCE THEN, THE CENTRE'S CORE STRATEGY HAS BEEN TO LEAD THE DEVELOPMENT OF THE SPACE INDUSTRY THROUGH ITS ADVANCED ENGINEERING RESEARCH PROGRAMMES.

As part of the University's investment in Space as a strategic priority, the Centre is seeking to recruit a new Director and two new lecturers. The Director will take a leading role in driving the Centre into its next phase. All new postholders will lead and develop significant programmes of research, and contribute to teaching in the Department of Electronic and Electrical Engineering or the School of Mechanical Engineering Sciences.





ENTER

A WORLD OF COLLABORATION

SURREY IS MADE UP OF MANY TALENTED INDIVIDUALS WHO MAKE US A GREAT INSTITUTION. WORKING TOGETHER, AND CONNECTING WITH EXTERNAL INSTITUTIONS, BUSINESSES AND GOVERNMENT, MAKES 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 in areas such as 5G and 6G, AI, cancer treatment and sustainable tourism.

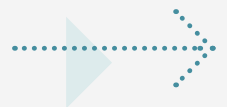
Around the globe and beyond, Surrey plays a significant role. We were one of only a few UK universities invited to take part in the GREAT Festival of Innovation in Hong Kong, a wonderful forum for collaboration and interdisciplinary discussion on

technologies that will drive the UK's future economic growth. We also saw the first successful deployment of the RemoveDEBRIS satellite, a project we are leading with a consortium of space sector organisations.

There's real energy, momentum and ambition at Surrey. It's 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.

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.

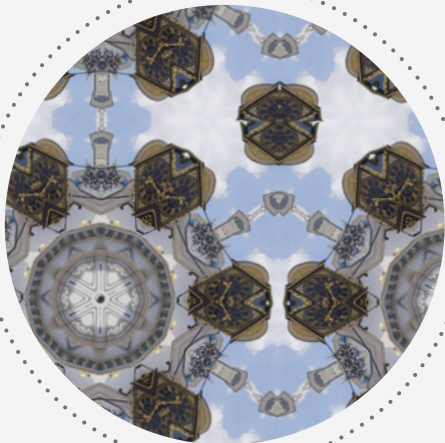
Professor G Q Max Lu AO DL FREng FAA FTSE
President and Vice-Chancellor
University of Surrey



OUR WORLDS OF

COLLABORATION

SURREY IS AN INTERCONNECTED NETWORK OF INTELLIGENCE, INNOVATION AND DISCOVERY – AND THE EFFECTS OF THE CONNECTIONS WE MAKE WITH THE OUTSIDE WORLD CAN BE FELT LOCALLY, INTERNATIONALLY AND IN WORLDS BEYOND OUR OWN.



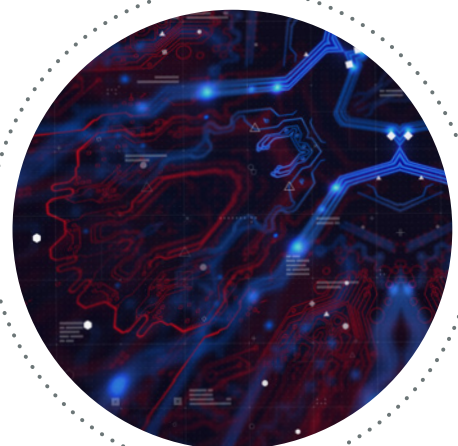
LOCAL

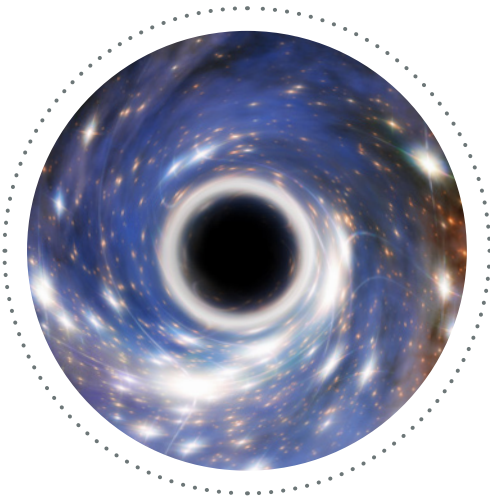
It starts with the active role we play in the community on our doorstep.



INTERNATIONAL

We see opportunities rather than boundaries, making connections across the world in our quest for new discoveries.





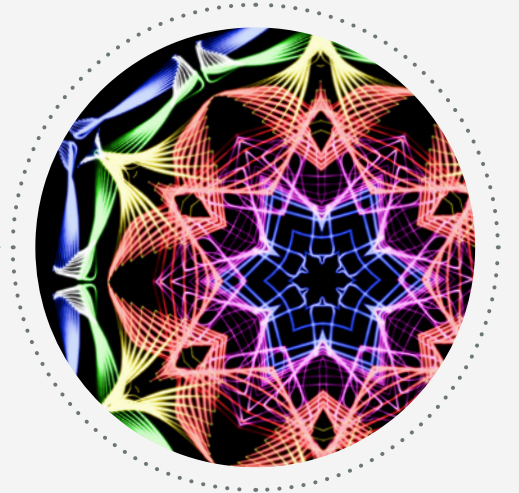
SPACE

Our world-leading research is bringing the high frontier within the reach of more people, companies and countries.



OTHER WORLDS

We go above and beyond what we can see to explore the digital and virtual worlds we will increasingly inhabit.



THE FUTURE

Our curious mindset and spirit of innovation means we always stay focused on what's to come.





DIRECTOR OF

SURREY SPACE CENTRE (PROFESSOR/READER)

AS THE SPACE INDUSTRY UNDERGOES AN UNPRECEDENTED TRANSFORMATION, THE NEW DIRECTOR WILL HAVE THE VISION, AMBITION AND LEADERSHIP SKILLS TO LEAD AND SUPPORT THE MEMBERS OF THE SURREY SPACE CENTRE INTO THE NEXT PHASE OF ITS DEVELOPMENT.

This post will also enable a research leader with an international profile and an excellent track record to lead a substantial and sustained portfolio of space-related research, in fields such as: space robotics and autonomous systems, space situational awareness, space traffic control, space debris, space radiation environment, space avionics and microelectronics, software-defined reconfigurable satellites and space cyber security. In parallel the new leader will boost Surrey's in-space presence

via new payloads and/or missions to support the Centre's research and education.

The postholder will also take an active role in training the space engineers of the future by leading, developing and delivering teaching activities at both undergraduate and postgraduate level, between the School of Computer Science and Electronic Engineering and the School of Mechanical Engineering Sciences.

WHAT DOES THE ROLE OFFER YOU?

The postholder will have a unique opportunity to take a leading role in driving and shaping an internationally renowned space research centre into its next phase. They will also have the opportunity to make a major contribution to the advancement of their field of specialism within space engineering.

Becoming part of a close-knit community of academics dedicated to driving space engineering research for the good of society, they will benefit from the Centre's international reputation for research innovation and its exceptional track record of securing research funding and building strong industry partnerships.

The postholder will have access to the Centre's extensive facilities on campus, including a range of test facilities and

a unique satellite control room, and be able to draw on the University's infrastructure and collaborative, interdisciplinary research culture.

In considering applicants, the Centre is open to candidates with an academic or industry background, and from a broad range of specialisms in space engineering, and welcomes discussions about existing projects and related staff.

The postholder will benefit from a dynamic working environment on a leafy campus close to London, with access to world-class leisure facilities nearby. The role brings a substantial salary and generous relocation package, as well as a variety of academic and professional development opportunities.

AN EXCEPTIONAL CANDIDATE

The successful candidate will be a strategic research leader with an excellent track record of internationally recognised activities in space engineering, and a keen interest in developing academic staff, early career researchers and undergraduate students.

They will have a vision for the Centre that will inspire its members and collaborators to deliver outstanding world-leading research.

THE ROLE

KEY RESPONSIBILITIES

- Lead and manage the Centre, developing a strategic plan designed to deliver excellence in both research & innovation and learning & teaching, in line with University strategy.
- Boost Surrey's in-space presence via new payloads and/or missions to support the Centre's research and education.
- Represent the Centre in a range of high-profile contexts, internationally, nationally, and across the University of Surrey.
- Develop and lead a significant research portfolio.
- Sustain an outstanding track record of publication of high quality research findings in primary journals and international conferences.
- Maintain an excellent level of research funding, leading and coordinating large multi-disciplinary or multi-Faculty bids involving collaborative groups.
- Engage with and influence space agencies, industry and similar institutions at the highest levels, to enhance the reputation of the Centre, maintain and develop key partnerships, and secure funding for future projects.
- Build and enhance relationships with space and aerospace industry and agency partners such as SSTL, Airbus, UK Space Agency, European Space Agency, NASA and JAXA.
- Manage resource planning associated with the Centre and research projects, including recruiting and supporting staff and postgraduate students.
- Mentor junior colleagues to develop their research potential and support their career development.
- Provide academic leadership at undergraduate and postgraduate level, taking an active role in planning and delivering teaching and assessment activities, fulfilling the roles of supervisor and personal tutor, and delivering pastoral care and support.
- Perform administrative duties throughout the Centre/ Department/Faculty/University, contributing to the general life and work of the University.

QUALIFICATIONS AND EXPERIENCE

- Higher research degree (PhD) or equivalent research experience.
- Track record of academic or industry research leadership in Space Engineering, either multidisciplinary or with particular strength in a space engineering subject such as: space instruments/payloads, Remote Sensing & Applications, platform system engineering, astrodynamics, space vehicle dynamics and control, space and planetary environment, spacecraft structures & mechanisms, propulsion, spacecraft autonomy and robotics, spacecraft avionics.
- Outstanding research and publication track record at a national and international level, or evidence of outstanding industry research achievement, which have made a significant contribution to advancing knowledge.
- Strong track record of leading successful research proposals, securing research income and supervising PhD students.
- Capability to deliver Space missions and manage the associate media coverage.
- Familiarity with development, delivery and assessment of teaching programme units.
- Experience of working with partners in industry, academia and other professional bodies, and a strong international network of collaborators.
- A track record in line management, ideally at research group or department level.
- Excellent interpersonal, communication, motivational and team working skills, commensurate with leading an academic Centre.



LECTURER IN

SPACE ENGINEERING

THIS POST WILL ENABLE AN INDIVIDUAL WITH THE POTENTIAL TO BECOME A FUTURE RESEARCH LEADER TO DEVELOP A PERSONAL RESEARCH PORTFOLIO IN AN AREA OF SPACE ENGINEERING, WITHIN THE STRATEGIC FRAMEWORK OF THE SURREY SPACE CENTRE.

The postholder will also take the lead in teaching at both undergraduate and postgraduate level within the School of Computer Science and Electronic Engineering, including on the MSc in Space Engineering. Applicants who are capable of teaching electronics, electrical engineering and/or control are especially encouraged. We also encourage applicants who have experience of working in the space industry.

WHAT DOES THE ROLE OFFER YOU?

The successful candidates have the opportunity to contribute to the advancement of their field of specialism in space engineering, within an internationally renowned space research centre.

Becoming part of a close-knit community of academics dedicated to driving space engineering research for the good of society, they will benefit from the Centre’s reputation for research innovation and its exceptional track record of securing research funding and building strong industry partnerships.

The postholder will have access to the Centre’s extensive facilities on campus, including a range of test facilities and a unique satellite control room, and be able to draw on the University’s infrastructure and collaborative, interdisciplinary

research culture. We have an extensive body of PhD, academic and industrial research, with a direct route for rapid commercialisation through a long-term strategic collaboration with SSTL.

In considering applicants, the Centre is open to candidates with an academic or industry background, and from a broad range of specialisms in space engineering, and welcomes discussions about existing projects and related staff.

The postholder will benefit from a dynamic working environment on a leafy campus close to London, with access to world-class leisure facilities nearby. The role brings a variety of academic and professional development opportunities.

AN EXCEPTIONAL CANDIDATE

The successful candidates will be an exceptional researcher with the potential to become a future research leader, demonstrated by a strong track record of high profile publications and evidence of vision and innovation in their research career to date.



THE ROLE

KEY RESPONSIBILITIES

- Sustain a strong track record of publication of high quality research findings in primary journals and international conferences.
- Develop and lead a research project portfolio in an area of space engineering, managing the associated financial and staff resources.
- Contribute to planning and coordinating large multi-disciplinary or multi-Faculty bids involving collaborative groups.
- Contribute to teaching at undergraduate and postgraduate level including developing programme units, planning and delivering teaching and assessment activities, fulfilling the roles of supervisor and tutor, and delivering pastoral care and support.
- Enhance reputation in subject area by engaging in external activities at national level such as contributing to professional networks, conferences, societies, professional and/or government bodies, and editing/refereeing journals and papers.
- Perform administrative duties throughout the Centre/ Department/Faculty/University, contributing to the general life and work of the University.



QUALIFICATIONS AND EXPERIENCE

- Higher research degree (PhD) or equivalent research experience.
- Expertise in an area of space engineering research, complementing existing expertise in the Centre.
- Evidence of research leadership potential including strong research and publication track record.
- Experience in developing research proposals, securing research income, and supervising postgraduate research students.
- Familiarity with development, delivery and assessment of programme units.
- Experience of working with industry and other professional bodies.
- Excellent presentation, communication and interpersonal skills.





LECTURER IN

AEROSPACE ENGINEERING

THIS POST WILL ENABLE AN INDIVIDUAL WITH THE POTENTIAL TO BECOME A FUTURE RESEARCH LEADER TO DEVELOP A PERSONAL RESEARCH PORTFOLIO IN AN AREA OF AEROSPACE ENGINEERING, WITHIN THE STRATEGIC FRAMEWORK OF THE SCHOOL OF MECHANICAL ENGINEERING SCIENCES AND THE SURREY SPACE CENTRE.

The postholder will also take the lead in teaching at primarily undergraduate and postgraduate level within the School of Mechanical Engineering Sciences, including our Aerospace Engineering or Mechanical Engineering courses. Applicants with experience of teaching spacecraft structures and mechanisms, material selection for spacecraft design, or robotic control systems are especially encouraged.

An ability and enthusiasm for delivering a high quality student experience are essential and experience in and enthusiasm for supervising design projects would be welcome.

WHAT DOES THE ROLE OFFER YOU?

The successful candidates have the opportunity to contribute to the advancement of their field of specialism in aerospace engineering.

The postholder will benefit from a School with extensive national and international collaboration, excellent facilities, and strong links with industry, and they will be able to draw on the University's infrastructure and collaborative, interdisciplinary research culture. We have well established teaching programmes which attract high calibre students.

In considering applicants, the School is open to candidates with a broad range of specialisms in aerospace engineering, and welcomes discussions about existing projects and related staff.

The postholder will benefit from a dynamic working environment on a leafy campus close to London, with access to world-class leisure facilities nearby. The role brings a variety of academic and professional development opportunities.

AN EXCEPTIONAL CANDIDATE

The successful candidates will be an exceptional researcher with the potential to become a future research leader, demonstrated by a strong track record of high profile publications and evidence of vision and innovation in their research career to date.



THE ROLE

KEY RESPONSIBILITIES

- Sustain a strong track record of publication of high quality research findings in primary journals and international conferences.
- Develop and lead a research project portfolio in an area of aerospace engineering, managing the associated financial and staff resources.
- Contribute to planning and coordinating large multi-disciplinary or multi-Faculty bids involving collaborative groups.
- Contribute to teaching at undergraduate and postgraduate level including developing programme units, planning and delivering teaching and assessment activities, fulfilling the roles of supervisor and tutor, and delivering pastoral care and support.
- Enhance reputation in subject area by engaging in external activities at national level such as contributing to professional networks, conferences, societies, professional and/or government bodies, and editing/refereeing journals and papers.
- Perform administrative duties throughout the School/Faculty/ University, contributing to the general life and work of the University.



QUALIFICATIONS AND EXPERIENCE

- Higher research degree (PhD) or equivalent research experience.
- Expertise in an area of aerospace engineering research, complementing existing expertise in the School.
- Evidence of research leadership potential including strong research and publication track record.
- Excellent presentation, communication and interpersonal skills.
- Experience in developing research proposals, securing research income, and supervising postgraduate research students is desirable.
- Familiarity with development, delivery and assessment of high quality teaching is desirable.
- Experience of working with industry and other professional bodies is desirable.
- Chartered engineer status is desirable.





INTRODUCING

FACULTY OF ENGINEERING AND PHYSICAL SCIENCES

THE FACULTY OF ENGINEERING AND PHYSICAL SCIENCES (FEPS) IS ONE OF THREE FACULTIES AT SURREY, AND COVERS THE CORE ENGINEERING DISCIPLINES OF AERONAUTICAL ENGINEERING, CIVIL ENGINEERING, CHEMICAL ENGINEERING, ELECTRICAL AND ELECTRONIC ENGINEERING AND MECHANICAL ENGINEERING, ALONGSIDE THE SPECIFIC DISCIPLINES OF CHEMISTRY, COMPUTER SCIENCE, MATHEMATICS AND PHYSICS.

The Faculty embraces a vibrant education network whereby teaching and learning developments across all areas are shared, explored and advanced. Its electrical and electronic engineering courses are ranked number six and chemistry courses are ranked in the top ten in the Guardian University Guide 2021, while its materials technology courses are ranked number three in the Complete University Guide 2021.

Staff within the Faculty are well respected throughout academia and industry, where links are strong, and drive

the belief that a university should contribute to the mainstay sciences while enhancing the technology to improve overall quality of life. Through consistent investment stemming from a deep commitment to develop world-class, sustainable research programmes, the Faculty has built up an impressive infrastructure to support all its activities. The interdisciplinary nature of much of the work also provides opportunities to cross boundaries and offers students the prospect of accessing exceptional facilities.



COMPUTER SCIENCE AND ELECTRONIC ENGINEERING (CSEE) COMPRISING THE DEPARTMENTS OF COMPUTER SCIENCE AND ELECTRICAL AND ELECTRONIC ENGINEERING

THE SCHOOL OF COMPUTER SCIENCE AND ELECTRONIC ENGINEERING DRAWS ON THE SYNERGIES BETWEEN THE TWO SUBJECTS TO DELIVER OUTSTANDING TEACHING AND WORLD-LEADING RESEARCH IN FIELDS SUCH AS COMPUTER VISION AND MACHINE LEARNING, AI, AUDIO-VISUAL MACHINE PERCEPTION, AUTONOMOUS VEHICLES, 5G TECHNOLOGIES, BLOCKCHAIN, VIRTUAL REALITY, GAMING AND SMART HEALTH. THE SCHOOL ENCOMPASSES THE DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING AND THE DEPARTMENT OF COMPUTER SCIENCE.

The Department of Electrical and Electronic Engineering has been ranked one of the best in the UK for many years. Research is carried out in several large research centres and groups with cross cutting themes including the Advanced Technology Institute (ATI), the Centre for Vision, Speech and Signal Processing (CVSSP), the Institute for Communication Systems (ICS), and the Surrey Space Centre (SSC). The ATI brings together researchers with an international outlook in Quantum Information, Nanotechnology, Energy and Advanced Materials; CVSSP is an internationally recognised leader in audio-visual machine perception, machine learning and AI research. ICS is the home of the 5G Innovation Centre, is the largest academic research centre in the UK specialising in information and communication technology and satellite communications. The Surrey Space Centre (SSC) is one of the World's leading Centres of Excellence in space engineering, and has pioneered the development of low-cost satellites. The Department provides excellent opportunities for students and researchers alike to access a wide range of facilities devoted to robotics, artificial intelligence, machine learning, audio-visual processing, security, energy conversion, space missions, healthcare and nanomaterials, amongst others. All members of academic staff have both teaching and research responsibilities.

The Department of Computer Science has a proud reputation of offering a friendly and supportive environment for students

with courses designed to provide the skills necessary to become an IT professional, whether as a software engineer, project manager, consultant or in support. Underpinning this is highly regarded research in cybersecurity, artificial intelligence and nature-inspired computer engineering, allied to excellent professional training opportunities for students to work in industry. In 2019, the University invested in new facilities including a 200-seater computer science laboratory.



MECHANICAL ENGINEERING SCIENCES (MES)

THE SCHOOL OF MECHANICAL ENGINEERING SCIENCES (MES) CURRENTLY HAS AROUND 35 FTE ACADEMIC STAFF AND ABOUT 750 STUDENTS WHO ARE STUDYING ON A RANGE OF PROGRAMMES FROM BENG/MENG THROUGH MSC TO ENGD/PHD.

We offer four strong professionally accredited undergraduate programmes in Mechanical Engineering, Biomedical Engineering, Aerospace Engineering and Automotive Engineering. All of the programmes have the option of a year of Professional Training. The programmes are supported by a range of well-equipped laboratories and computer suites, including a new Engineering Design Centre, incorporating our very successful Formula Student activity. The Department, and its degree programmes, are rated in the top 10 in the UK league tables.

Research is highly rated and is carried out in four Centres: Aerodynamics & Environmental Flow (A&EF), Automotive Engineering, Biomedical Engineering and Engineering Materials.

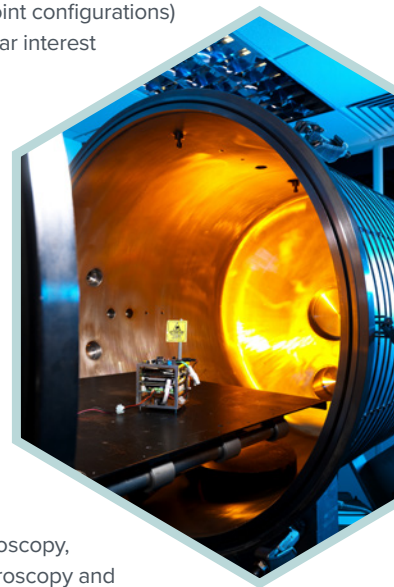
Aerodynamics and Environment Flow is the largest of the four research Centres in MES, addressing challenges in aeronautical, environmental and industrial aerodynamics, including turbulent flows, turbo-machinery, wind energy, novel propulsion, advanced flow sensors and design optimisation. The group includes the Rolls-Royce supported Thermo-Fluid Systems University Technology Centre, which specialises in advanced computer modelling of turbomachinery for aeroengine and power generation, and the Environmental Flow (EnFlo) laboratory, which is part of the NERC National Centre for Atmospheric Science. Other research activities include aero-thermal aspects for electric propulsion systems, development of advanced flow sensors, and multi-disciplinary design optimisation. Research is funded by EPSRC, NERC, InnovateUK, Rolls Royce, Airbus and other public- and private-sector sources.

The members of the Centre for Automotive Engineering work on hybrid vehicles, vehicle dynamics and control and terrestrial mobile and space robotics. The group has extensive and active research links in the form of major research grants and contracts with vehicle manufacturers such as Jaguar Land Rover, Skoda, Fiat, McLaren Automotive, Williams and Gordon Murray Design and original equipment manufacturers such as Lucas Varity and Oerlikon Graziano.

The Centre for Biomedical Engineering has an active interest in human movement. The group's prior focus was on gait,

focussing on lower limb amputees and individuals with cerebral palsy or recovering from a stroke. As a result of this work, the group has acquired an 8-camera Qualysis motion capture system and force-plate equipped laboratory that forms the core of the human movement studies. The second main theme of the group is microelectronics and signal processing, with work on dielectrophoresis, which has resulted in a spin-out company, DEPTech, and the processing of signals from, for example, electroencephalograms for the diagnosis of Alzheimer's disease.

Materials is one of the University's multi-disciplinary research themes and as such the Centre for Engineering Materials in MES contributes to the wider University research agenda. The group has particular strengths in interfacial studies (from fundamental adhesion studies through the joining of dissimilar materials to the modelling of complex joint configurations) and composite materials (with a particular interest in developing nanocomposite materials for supercapacitors and incorporating sensors to produce smart structures). There is a growing interest in bespoke functional and structural materials produced via additive manufacturing. These activities incorporate extensive advanced characterisation of both microstructures and properties; for example, the group hosts the MicroStructural Studies Unit (with scanning, transmission and scanning transmission electron microscopy and associated spectroscopies), the Surface Analysis Laboratory (with atomic force microscopy, X-ray photoelectron spectroscopy, time-of-flight secondary ion mass spectroscopy and Auger electron spectroscopy) and the Mechanical Testing Laboratory (with a suite of instruments enabling the quasi-static and fatigue loading of a range of sample sizes and configurations). The group also has joint activities with the Surrey Space Centre and is keen to develop these collaborations further.



SPACE CENTRE

SURREY SPACE CENTRE (SSC) HAS BEEN A PIONEERING CENTRE OF EXCELLENCE IN SPACE ENGINEERING FOR OVER 40 YEARS. CREATED IN 1979, SSC SOON ESTABLISHED ITS WORLD LEADERSHIP IN MICROSATELLITE MISSIONS AND UNDERPINNING TECHNOLOGIES, FORMING THE HIGHLY SUCCESSFUL SPIN-OUT COMPANY SURREY SATELLITE TECHNOLOGY LTD (SSTL). SINCE THEN, THE CENTRE'S CORE STRATEGY HAS BEEN TO LEAD THE DEVELOPMENT OF THE SPACE INDUSTRY THROUGH ITS ADVANCED ENGINEERING RESEARCH PROGRAMMES.

Researchers in SSC have expertise in many varied aspects of satellite design, control and robotics, and have developed a world-wide reputation for developing innovative solutions in life-cycle satellite engineering that have been adopted by the space industry.

The Centre has a track record of successful and award-winning research projects and space missions, including pioneering microsats with the launch of UoSAT-1 in 1981, followed by UoSAT-2 (UoSAT-OSCAR-11) in 1984, through to the UK's first CubeSat in orbit (STRAND-1) in 2013, and the recent RemoveDEBRIS project, the first mission to successfully demonstrate a range of space debris removal technologies. The RemoveDEBRIS project won the 2019 Sir Arthur C Clarke Award for Space Achievement – Industry/Project Team and the Aviation Week Network 63rd Annual Laureate Award 2020, SPACE - Technology & Innovation

Major recent funding awards include the Surrey-led EPSRC Future AI and Robotics for Space (FAIR-SPACE) National Hub, launched in 2017 with an £8M research grant from UKRI and the UK Space Agency, matched by a £7.5M industrial fund and a projected £15M business development fund. It brings together leading experts from academia, industry and government, and aims at pushing the boundary of AI robotics for future space utilisation and exploration. The Hub is advancing knowledge and technologies in orbital manipulation, extra-terrestrial vehicles, and robotic support for astronaut missions. SSC has recently been awarded £2M to develop a tool that will provide the UK Met Office with global maps of radiation levels in the atmosphere during solar storms; this project is part of the Space Weather Instrumentation, Measurement, Modelling and Risk (SWIMMR) programme funded by the Natural Environment Research Council (NERC).

Facilities on campus include a unique control room with full capability to command and control the satellites to execute mission operations and download data for user's applications. The Daedalus propulsion test facility consists of a vacuum chamber under near space conditions allowing for qualification

and lifetime tests for electric propulsion devices. We also have a physical air-bearing testbed facility offering multiple degrees of freedom for orbital dynamics simulation. The SSC also runs the Realistic Electron Environment Facility (REEF) for spacecraft charging and component survivability research.

The Mechanical Testing Facility (MTF) is a comprehensive experimental facility for investigating the mechanical properties of infrastructure materials and structural components at multi-scales, which supports key research into inflatable and deployable structures for space applications. There are also extensive robotics facilities, such as the Surrey Autonomous Vehicle testbed and the Surface Robotics Testbed Facility, which includes the Surrey autoNOMous software And Rover hardware Testbed (SMART), which is reconfigurable and customisable in terms of the Rover chassis options and has an adjustable gravity effect. We are able to simulate Martian and lunar (icy and non-icy) regolith for lab-based testing and experiments, including subsurface drilling and sampling. Commercial robotic platforms for algorithmic validation and software testing, including Pioneer 3AT, Seekur Jr, Pepper and MIRO are also available.

Our researchers are keen to engage with diverse communities and the public, for example through schools visits, "Pint of Science" outreach events, the "Innovate Guildford Festival" (space robotics demonstrations featured in 2019), and the Royal Society Summer Exhibitions (e.g., Cleaning Up Space Junk, 2016). In addition to its research activities, the Centre leads successful taught programmes to train the next generation of space engineers, including for undergraduates (BEng/MEng in Electronic Engineering with Space Systems) and postgraduates (MSc in Space Engineering), as well as a thriving PhD programme.



HOW TO APPLY

Informal enquiries can be made to:

Prof Mark Plumbley, Head of School of Computer Science
and Electronic Engineering

m.plumbley@surrey.ac.uk

Dr David Carey, Head of Department of Electrical
and Electronic Engineering

david.carey@surrey.ac.uk

Prof Nick Hills, Head of School of Mechanical
Engineering Sciences

n.hills@surrey.ac.uk

Otherwise, we look forward to receiving your application via:

Director of Surrey Space Centre (Professor/Reader) -

<https://jobs.surrey.ac.uk/vacancy.aspx?ref=029521>

Lecturer in Space Engineering -

<https://jobs.surrey.ac.uk/vacancy.aspx?ref=029621>

Lecturer in Aerospace Engineering -

<https://jobs.surrey.ac.uk/vacancy.aspx?ref=029421>

The closing dates for applications are:

Lecturer in Space Engineering & Lecturer in Aerospace Engineering:

27th June 2021

Director of Surrey Space Centre (Professor/Reader):

31st July 2021



UNIVERSITY OF SURREY

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