EPSOM & EWELL TIMES
For the community, by the community. A not-for-profit service

26th November 2026

ISSN 2753-2771

Surrey scientists invite children to reach for the stars

15 September 2024



Children need to dream big and reach for the stars to become the country's future space engineers and budding astronauts, say the organisers of Guildford's World Space Week High Street Takeover.

Scientists from the University of Surrey and the Institute of Physics are encouraging young people, who may one day want to build the rockets and technology that make their way to space, to join them at Guildford High Street and Tunsgate Quarter, all day on Saturday, 5 October.

Event-goers will have the chance to get up close and personal with a miniature version of the Mars Rover and find out how it works on Mars; thanks to the Observatory Science Centre, there will be a state-of-the-art pop-up planetarium. Researchers from Surrey will be on hand to showcase the range of fascinating space-based work taking place at the University, and employers from the local space sector will be on hand to answer any questions that young people may have about working in the field.

Professor Adam Amara, Head of the School of Mathematics and Physics at the University of Surrey, who is also an astrophysicist, said:

"Our primary goal as educators is to inspire people – and that is why our University is delighted to once again host this event with our partners from the Institute of Physics.

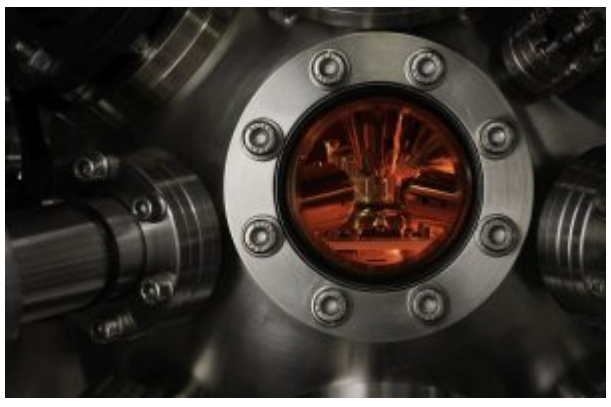
"The space sector in our region is a truly exciting, forward-thinking place and the goal of events like this is to ensure that the sector has a pipeline of skilled young people who dream big and reach for the stars."

For more information on other activities happening at the World Space Week High Street Takeover, visit our website.

Image: credit: Grant Pritchard / University of Surrey

Surrey Uni joins top beam team

15 September 2024



The creation of a first-of-its-kind imaging system at the **University of Surrey** could help the UK lead a revolution in materials sciences. The new facility promises a better understanding of the effects of pharmaceuticals and could eventually lead to better drug development.

Thanks to a £3 million grant from the Engineering and Physical Sciences Research Council, Surrey will work with the UK SME Ionoptika and the University of Manchester to deliver a new Multimodal Ion Beam Imaging Facility, which will allow researchers and businesses to understand materials at an unprecedented microscopic level.

Professor **Melanie Bailey**, Principal Investigator of the project from the University of Surrey, said:

"The fact that Surrey and, indeed, the UK has the ambition to build this truly unique facility should not only excite researchers in academia and industry, but it signals that we are serious about breaking new ground in a range of scientific areas."

The facility will house a "multimodal 3D elemental and molecular imaging system at a sub-micron scale". This highly advanced system, similar to a powerful microscope, will be able to see the tiniest details of materials and molecules, smaller than a speck of dust.

The new system will be the first in the world to use beams of charged particles at high and low energies to measure biological systems and materials. The high-energy beams will be delivered by a particle accelerator at the UK National Ion

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY

ISSN 2753-2771

Beam Centre, a national research facility funded by EPSRC and led by Professor **Roger Webb** at Surrey. The system will produce X-rays, gamma rays, and particles, and the combination of this information will give a detailed map of the elemental and molecular makeup of materials.

Professor Roger Webb, co-investigator of the project and Director of the Surrey Ion Beam Centre, said:

“This is a really exciting development for the Surrey Ion Beam Centre. We have been a national research facility since 1979, and we support over £100 million in funding from more than 30 universities. This is one of several upgrades to our centre, and we are looking forward to opening our doors to researchers across the UK to make the most of this investment.”

Surrey’s new facility is expected to benefit more than 25 UK universities and companies in health, energy, technology, and engineering.

Professor **Paul Townsend**, co-investigator of the project, said:

“There is currently nothing in the world quite like this new facility of ours. It signals to the global scientific community that the UK means business. We are confident that we will attract researchers worldwide to use this facility, giving the UK an edge in materials science.”

Along with medical breakthroughs, Surrey’s researchers believe the facility could help the energy sector create more efficient solar cells and durable batteries. The team also hopes this project will allow them to understand pollutants better and develop new ways to reduce climate change.

Paul Blenkinsopp, Managing Director of Ionoptika, said:

“Ionoptika is delighted to have been chosen to build the new imaging system in collaboration with Surrey. Whilst an SME, we have established ourselves as global experts in ion beam technology over the past 30 years and will be very proud to bring our decades of imaging expertise to this unique facility.”

This project contributes to the United Nations Sustainable Development Goals (SDG), especially SDG 3 (Good Health and Wellbeing), SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action).

Image of Ionoptika’s J105

Excellence in aging for LGBTQ+

15 September 2024



More can be done to make sure LGBTQ+ adults age with dignity and their needs are met in the UK, say researchers from the **University of Surrey**. Together with Tonic Housing, the UK’s first LGBTQ+ affirmative retirement community, researchers from Surrey are launching The Life House Project – a participatory theatre-based initiative to explore the unique housing and care needs of the LGBTQ+ community in London.

Many LGBTQ+ individuals face anxieties about housing and care as they age. The Life House Project aims to address these concerns by providing a platform for older adults to share their experiences and explore solutions collaboratively.

Through seven workshops and one-on-one interviews, the project will create a space for participants to use creative expression through theatre, scriptwriting, and poetry. This approach will help participants tell their stories and highlight their specific needs and desired forms of support.

Dr **Georgia Bowers**, Lecturer and Programme Leader of Applied and Contemporary Theatre BA (Hons) at the Guildford School of Acting and lead researcher, said:

“We are particularly interested in how creative methods can support LGBTQ+ older adults to not only share their own experiences but also become advocates for themselves and the wider LGBTQ+ community. By communicating their concerns and aspirations through theatre and creative expression, we hope to ignite a conversation that leads to a more inclusive future for individuals in terms of housing and care.”

Dr **Richard Green**, Surrey Future Fellow at the University of Surrey, said:

“We are excited about the potential of theatre and creative expression to empower LGBTQ+ older adults to share their stories and advocate for better care and housing options.

“This project goes beyond simply collecting data; it’s about creating a space for authentic expression and collaboration. By working together with participants to explore their needs through creative mediums, we aim to amplify their voices and create a lasting impact on how LGBTQ+ care is approached.”

Professor **Andrew King**, Head of Sociology and Co-Director of Surrey’s Centre of Excellence on Ageing at the University

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY

ISSN 2753-2771

of Surrey, said:

“The Life House Project can make a significant contribution to creating more inclusive and supportive housing and care environments for LGBTQ+ people. It provides a new interdisciplinary and creative approach to highlight often hidden inequalities and issues and we hope it will influence policy changes and inspire service providers to create spaces where individuals can truly feel safe, valued, and supported as they age.”

A celebratory event will also be held on Monday 24 June, to coincide with London Pride week. This event will showcase a project film documenting the journey of The Life House Project and its impact on participants. The event will also serve as an opportunity to connect the project’s findings with the broader LGBTQ+ community and discuss potential solutions for creating more inclusive and supportive housing and care environments.

Bob Green OBE, Head of Operations at Tonic Housing said:

“Tonic is very excited to take part in the University of Surrey’s Life House Research Project. The use of theatre and drama to examine the themes of housing and care in later life has piqued the interest of many residents and it has attracted other older LGBT people from outside Tonic.

“We are particularly interested to learn about residents’ experience of living in the UK’s first LGBT+ Retirement Community as well as how housing and care services for older LGBT people can be improved.

“Some older LGBT people have had terrible experiences in the past but having worked with University of Surrey researchers, we value their inclusive approach and supportive attitude, so we look forward to exploring challenging incidents safely and positively.”

Animal health benefits human health

15 September 2024



Ensuring animals are treated well throughout their lives and using sustainable farming practices are at the heart of an ambitious partnership to control the spread of infectious diseases and improve animal welfare. The University of Surrey’s School of Biosciences and School of Veterinary Medicine have joined the European Partnership on Animal Health and Welfare. The University is set to receive over £2 million from the Horizon Europe Research and Innovation Programme.

Along with helping to prevent and control diseases in terrestrial and aquatic animals, the partnership will also encourage the careful use of medicines and develop methods to maintain high welfare standards. The partnership involves 90 members from 24 countries, and the initiative’s total funding is €360 million.

Professor Roberto La Ragione, the Surrey Principal Investigator and Head of the School of Biosciences at the University of Surrey, said:

“With the rising numbers of diseases in animals that are spreading to humans, the scientific community is waking up to the fact that animal health and welfare are inextricably linked to our own.

“I’m proud that our University is joining colleagues from across the country and Europe, so that we can not only share and tackle these issues at a large scale, but also find sustainable solutions that improve the wellbeing of the animals that we share this planet with.”

The European Partnership on Animal Health and Welfare aims to support a food system that is fair, healthy, and environmentally friendly. Its goals align with the European Green Deal and the related Farm to Fork strategy, which focuses on sustainable food production.

Professor Kamalan Jeevaratnam, Head of the School of Veterinary Medicine at the University of Surrey, said:

“Our University has a long-standing commitment to the One Health, One Medicine ethos, and we are excited to share our expertise and learn from our partners. This collaboration underscores the UK’s significant role in advancing the wellbeing of humans, animals, and our natural environment for a better future.”

Nathalie Vanderheijden of the University of Ghent, coordinator of the EUP AH&W, sums up the partnership as follows:

“Our partnership is a new, open initiative, bringing together EC funding, national/regional funders and research-performing organisations to concentrate efforts on developments with high societal, economic and policy impact. Belgium, with its current presidency of the European Council for six months, appreciates the potential of unity in driving change!”

Speaking of the Partnership EFSA’s, Chief Scientist Carlos Das Neves said:

“We are pleased to announce that EFSA will be a full partner of the European Partnership Animal Health & Welfare. This is the first time that we will be a beneficiary in a research partnership under Horizon Europe, which will enable a

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY

ISSN 2753-2771

smoother transition from research to regulatory science. We are prepared and committed to bring our expertise to the table, together with the best experts in Europe, for the benefit of animal health and welfare."

The European Partnership on Animal Health and Welfare started on the 1st of January 2024 and held its kick-off meeting on the 26th and 27th of February 2024 in Brussels. All partners signed the Grant Agreement on the 29th of March 2024.

Image: Marie Anna Lee

Surrey Uni works on self-drive safety

15 September 2024



As the UK prepares to introduce legislation that paves the way for self-driving vehicles later this year, scientists and experts led by the University of Surrey have launched a new network to ensure that this new technology is safely implemented.

The MASSDRIVE (Methods for Assurance of Self-Driving Vehicles) project has been funded by Innovate UK to help the country and industry develop robust methods of approving and certifying self-driving cars as they become available.

Professor Saber Fallah, co-investigator on the project and the Director of Connected Autonomous Vehicles Research Lab (CAV-Lab) at the University of Surrey, said:

"MASSDRIVE is all about bringing together industry, scientists, regulators, and the public to begin a conversation about how we can make self-driving cars safe for our roads.

"Our main goal is to make sure these vehicles are safe. We want to create strong connections between car makers, people who set the rules, academics, government groups and local communities. By having regular discussions, workshops and meetings, we're creating a space where everyone can share ideas and good ways of doing things, focusing particularly on making sure the AI in cars is trustworthy."

MASSDRIVE is a collaboration between the universities of Surrey, the West of England and Bristol.

If you want to know more about MASSDRIVE or if you are interested in shaping methods for the safety of self-driving vehicles, please contact Professor Saber Fallah.

Image: Creator: eschenzweig Common License 4.0

£1.1 m boost for Surrey Uni's solar thermal research

15 September 2024



Solar-thermal devices that have the potential to transform how we heat our homes and generate power on a larger scale are being developed by a team led by the University of Surrey. This exciting project has received a £1.1 million grant from the Engineering and Physical Sciences Research Council (EPSRC).

The main goal of this research is to create new designs for surfaces that can selectively absorb sunlight while also efficiently emitting heat in the form of near-infrared radiation. These devices are different from solar cells, which typically convert sunlight into electricity; solar-thermal devices use sunlight to generate heat, which can then be used for driving mechanical engines or converted into electricity.

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY

ISSN 2753-2771

The research project is led by Surrey, in collaboration with the University of Bristol and Northumbria University and combines their expertise in photonics, advanced materials, applied electromagnetics, and world-class nanofabrication facilities.

Professor Marian Florescu, Principal Investigator from the University of Surrey, said:

“Our project is not just about innovating; it’s about responding to a global necessity. The sun showers us with a tremendous amount of energy every day, far more than we currently capture. By developing these advanced solar-absorbing surfaces, we are opening up new, efficient ways to harness this abundant solar energy. Our goal is to transform how we use sunlight, making it a powerhouse for clean and sustainable energy that meets our growing needs without harming the planet.”

The project has several aims:

- To develop solar absorbers that can work well even at very high temperatures.
- Improve the efficiency of the team’s special solar-absorbing structures. The team plans to build prototype models to demonstrate how well they work.
- To better understand and ultimately improve how these devices handle and perform with the heat they generate from sunlight.

Professor Marin Cryan, Co-Principal Investigator from the University of Bristol, said:

“The University of Bristol has been developing thermionic solar cell technology for a number of years. These use concentrated sunlight to heat materials to the point where thermionic emission of electrons occurs, which can form the basis of high-efficiency, low-cost solar cells. This exciting project will develop very efficient solar selective absorbers, which will be an important component of the overall cell design.”

Dr Daniel Ho, Co-Principal Investigator from Northumbria University, said:

“Northumbria University is at the forefront of thermophotovoltaic research, utilising a specialised microscope heating stage alongside an in-house built Fourier imaging spectroscopy system. This advanced thermal analysis technique enables comprehensive and angle-resolved scattering analysis across both visible and infrared spectrums, even under vacuum conditions and at temperatures as high as 1000°C.

“We are excited to work with our partners to help achieve pioneering developments in renewable energy research.”

Surrey’s vulnerable without expert legal advice

15 September 2024



Surrey has become a ‘legal aid desert’, marked by a critical shortage of support services, leaving vulnerable individuals without expert advice on key issues such as, community care, education, and immigration.

The Access to Justice Report, by South West London Law Centres (SWLLC), was launched at the University of Surrey’s School of Law Access to Justice Clinic on Wednesday, 20 March, by His Honour Sir Robin Knowles CBE, Chair of the Commercial Bar Association of England & Wales. Sir Robin is a member of the Civil Justice Council and chairs its Standing Committee on access to justice for those without means.

The report highlights the need for accessible legal aid and representation and raises awareness of the challenges faced by vulnerable people in Surrey.

It catalogues the gaps in legal aid within Surrey; it highlights cases where people have had to rely on non-legal advice services instead of specialist legal services. The lack of specialist legal advice is particularly acute in employment, education and immigration.

The report shows that most social welfare advice is provided by voluntary or not-for-profit agencies, with Citizens Advice taking the leading role; however, there is a lack of specialist legal services.

People were left without expert legal advice on areas such as:

- School admissions and appeals
- School transport

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY

ISSN 2753-2771

- Special Education Needs
- Community care packages and complaints
- Immigration advice.

Stacey Edgar, Deputy CEO, South West London Law Centres, said:

“At the South West London Law Centres, we have directly observed the significant difficulties faced by individuals and families lacking proper guidance on matters such as immigration and education.

“Our findings now confirm that Surrey has limited mechanisms for accessing justice, signalling the urgency of leveraging insights from this new research to implement a strategy that addresses community needs.

“We’re pushing to fill these gaps because access to justice shouldn’t depend on where you live or what you can afford.”

The report proposes new initiatives to improve legal support, including a Family Law Court Help Desk, an Education Rights Advice Project, and Immigration and Asylum Caseworkers in Surrey.

Currently, the research proposals are transforming into a project to create these mechanisms in Surrey, and SWLLC is welcoming donations, volunteers, and partners to be involved in expanding access to justice to meet the needs of impacted community members.

Liz Williams, Associate Professor and Director of Clinical Legal Education at the University of Surrey, said:

“The Access to Justice Clinic at the School of Law understands that social transformation and legal impact is only possible through a collaborative approach. The Clinic has been a flourishing initiative since its launch four years ago and plans to expand in partnership with South West London Law Centres, local charities and legal professionals on a broad range of collaborations to help solve the access to justice crisis in Surrey.”

Professor Veronica Rodriguez-Blanco from the School of Law added:

“The School of Law is committed to placing access to justice at the centre of legal education in developing social sensitivity among the future lawyers that we are educating.”

Surrey Uni taking lead on future network security

15 September 2024



A national effort is needed to train the next generation of the United Kingdom’s workforce in intelligent and resilient telecom networks, says a world-leading 5G and 6G expert from the University of Surrey.

The comment comes as the Engineering and Physical Sciences Research Council (EPSRC) announced that Surrey’s 5G/6G Innovation Centre will lead a new £8 million Centre for Doctoral Training in Future Open Secure Networks (FORT).

Over the next eight years, FORT will train more than 50 post-graduate researchers, who will become leaders with unique expertise in wireless communications, cybersecurity, networking, and artificial intelligence (AI). Surrey’s future cohort will influence the roadmaps of future open networking and security technologies and their applications.

In partnership with Queen’s University Belfast’s (QUB) Centre for Secure Information Technologies, FORT also enjoys support from more than 21 industry partners. These partners include: Amazon Web Services, Ampliphae, Angoka, AWTG, Catapult Satellite Applications, Codasip, Ericsson, Hewlett Packard Enterprises, HP, Intel, Interdigital, Keysight Technologies, Kyndryl, National Physical Laboratory, Nvidia, OpenWeb, Qualcomm, Rolls Royce, Virgin Media O2, and Viavi Solutions.

Regius Professor Rahim Tafazolli, FREng, Director of the 5G/6G Innovation Centre at the University of Surrey and Principal Investigator of FORT, said:

“I want to extend my heartfelt gratitude to EPSRC for backing the Future Open SecuRe NeTworks (FORT) initiative. I am equally thankful for the support of our 21 industry partners and look forward to working closely with colleagues from Queen’s University Belfast. This powerful team has a unique vision, expertise, and mission of making the UK a powerhouse for future telecommunications.

“In a world evolving at breakneck speed, our programme is designed with this dynamic future in mind. We’re committed to nurturing future visionaries and leaders with in-depth knowledge of advanced space and terrestrial networks, environmental considerations, and AI technology. The UK’s focus must now shift towards upskilling individuals capable of

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY

ISSN 2753-2771

addressing the cyber security challenges posed by AI and take advantage of opportunities presented by societal shifts, environmental concerns, and industrial advancements."

Along with providing a world-class education with access to industry, FORT will create an environment for students to research new and better ways to build communication networks that are safe, reliable, and ready for the future. FORT is committed to conducting responsible, ethical research in cybersecurity, AI technologies, and future networks, with a strong societal focus. This approach is designed to generate world-class academic contributions and establish a pipeline of talent for the future.

Dr Jesus Martinez del Rincon, Co-Director of FORT and Research Director of Secure Intelligence at CSIT at QUB, said:

"With the FORT programme, we aim to create a community of 50 PhDs who will become the future, industry-conscious thinkers and leaders on secure, trustworthy and autonomous future network communications."

Along with Professor Tafazolli and Dr Martinez del Rincon, FORT will be led by: Dr Tim Brown from Surrey, who will serve as Director of FORT, and Professor Máire O'Neill from QUB, who is Co-Investigator of FORT.

© 2021-2026. No content may be copied without the permission of Epsom and Ewell Times Ltd. Registered office: Upper Chambers, 7 Waterloo Road, Epsom KT19 8AY