International Conference on Innovation through Knowledge Transfer 2015

InnovationKT 2015 is an international conference focussing on innovation and knowledge transfer. InnovationKT 2015 is the conference for knowledge professionals - those academics, business people, managers and researchers working with innovation, enterprise, knowledge transfer, exchange and sharing.

Featuring world-class speakers, oral and poster presentation sessions and interactive workshops, the InnovationKT 2015 Conference will provide an excellent opportunity to disseminate, share and discuss the impact of university-business and business-business interactions. Applicable themes include:

- Processes of knowledge transfer, knowledge origination, knowledge exchange and knowledge sharing
- Innovation, open innovation and the relationship between knowledge transfer and innovation
- Human and organisational aspects of knowledge management
- Incubators and entrepreneurship schemes
- Commercialisation (licensing of intellectual property, spin-outs formation, and incubators)
- Collaborative applied research and consultancy
- Knowledge Transfer Partnerships
- All other aspects of university-business and business-business collaborative working

InnovationKT 2015 will be hosted by the University of Staffordshire on its Stoke-on-Trent campus, and chaired by Dr Matthew Hocking.

The organisers

InnovationKT 2015 is organised by KES International in partnership with the Institute of Knowledge Transfer and the Staffordshire University.
STFC Innovations Club would like to invite you to the Launch Event for the STFC CLASP Security call, which will be held at the Royal College of Physicians in London on 20th May 2015.

The event aims to bring together academia, industry and knowledge exchange professionals from across the security sector to discuss how CLASP can support projects that apply STFC-funded research and capabilities to address key security challenges.

STFC External Innovations is now offering £1.5M to fund a range of projects from short feasibility studies to large developmental projects using STFC-funded research to solve key challenges in the Security sector, focusing on but not limited to the key areas, which will be announced in March 2015.

CLASP is intended to support the de-risking of the R&D process for industry through the development of technology demonstrators and industry-ready prototype systems.

The day will comprise of presentations from academic researchers and security professionals highlighting their work in the security sector, as well as information on funding opportunities and a chance to meet your future collaborators.

We hope that this will be a busy and informative day and that you make good contacts to further your research and your business.

Register for this free event: [here](#)

For more information contact: Dr Phillip Tait or Dr Vlad Skarda or go to [www.stfc.ac.uk/clasp](http://www.stfc.ac.uk/clasp)
PraxisUnico Conference 2015 - Expanding Horizons

Croke Park, Dublin, 10-12 June 2015

Now open for registration

Last year’s conference was the biggest ever, with more than 360 delegates from over 180 organisations, representing 13 countries. This year the PraxisUnico Conference visits Dublin, a vibrant and valuable city at the heart of Ireland’s burgeoning economic revival.

“Expanding Horizons” looks at key issues facing research commercialisation professionals both from within the sector and beyond, with an eye on the increasingly globalised environment in which we operate.

The Conference is taking place at the iconic Croke Park. Discounted accommodation has been reserved at four hotels in Dublin. Transport will be provided between the hotels and Croke Park at the beginning and end of each day of the conference. Click here for details.
Call for Applications and Nominations to STFCs Science Board, Committees and Peer Review Panels 2015

A number of vacancies have arisen for outstanding individuals to become members of STFC’s committees and panels, as listed below.

This is an annual call and, as a result, membership may commence at different times.

The vacancies have arisen, or will be arising, due to the normal rotation of membership on:

- Astronomy Grants Panel (AGP)
- Challenge Led Applied Systems Programme (CLASP) Panel
- Computing Advisory Panel (CAP)
- DiRAC Resource Allocation Committee (DiRAC RAC)
- Education, Training and Careers Committee (ETCC)
- Innovations Partnership Scheme Panel (IPS)
- Life Sciences and Soft Materials Advisory Panel (LS&SMAP)
- Nuclear Physics Advisory Panel (NPAP)
- Nuclear Physics Grants Panel (NPGP)
- Particle Physics Advisory Panel (PPAP)
- Particle Physics Grants Panel (PPGP) - (Theory and Experimental)
- Physical Sciences and Engineering Advisory Panel (PS&EAP)
- Projects Peer Review Panel (PPRP)
- Science Board
- Solar System Advisory Panel (SSAP)

If you wish to apply or to nominate a colleague please complete our online form.

The closing date for these posts is Thursday, 30th April 2015.
IOP Innovation Awards open for entries

The Awards are a unique celebration of commercial success built on physics, so to raise the profile of your company, and to celebrate the contribution of physics and physicists to the UK economy, enter now.

Winners of the awards will be presented with their trophy at a high-profile exhibition, where they’ll showcase their winning innovations.

Speaking at the celebratory reception in Westminster last year, Baroness Neville-Rolfe, parliamentary undersecretary of state for business, innovation and skills and minister for intellectual property, described the 2014 winners as living representatives of what can be done in physics and innovation.

As Institute of Physics president Frances Saunders explains: “The successful application of physics creates businesses and industries that meet the widest range of needs – from precision manufacturing and energy generation to devices designed to help us better understand our environment, and those which aid our defence.”

The closing date for entries is 17 May 2015.
For more information, contact innovation.awards@iop.org
Global Challenge Networks

The STFC is announcing a new call for Global Challenge Networks
Opens - 30th March 2015  Closing date: 11th June 2015

The STFC provides funding to create new multidisciplinary research communities at the STFC-Global Challenge interface which are focused on addressing user needs, including those of Government departments, Government agencies, industry and other academic communities. Three types of Networks are funded, depending on the stage of development of the community: Standard Network, Network+ and Extended Network+.

The aims of Standard Networks are to:
• Support interactions between STFC-funded researchers and appropriate science, technology, industry and end-user groups to build interdisciplinary communities at the interface between STFC science and Global Challenge areas
• Facilitate knowledge sharing and identify priority user-needs that STFC science could have a role in addressing
• Create new multidisciplinary project teams to develop proposals to seek funding for projects addressing the Global Challenges

Network+ and Extended Network have the same aims as Standard Networks but additionally aim to:

• Network+
  o Demonstrate STFC-funded capability to address Global Challenges and de-risking of concepts to facilitate applications for next-stage funding
• Extended Network+
  o Maximise the impact of earlier Standard Network or Network+ activities
  o Further demonstrate STFC-funded capability to address Global Challenges and de-risking of concepts to facilitate applications for next-stage funding

For Further information please see the Guidance for Global Challenge Network Applications
The STFC would like to remind applicants that the next quarterly assessment date for the Global Challenge Exploration awards is the 24th April 2015.

A key enabling activity in developing the Global Challenge Programme, especially in the creation of Networks, is early-stage exploration of challenge-led priorities and identification of where STFC-funded capabilities could be applied to help provide solutions to these. The Global Challenge Exploration Awards scheme provides a mechanism for Research Organisations to undertake early stage enabling activities aimed at identifying and exploring the potential of STFC-funded research to contribute to solutions to Global Challenges. STFC expects to make awards up to a total budget of £75k in the 2015/16 financial year.

Funding may be used to:

• Engage with potential users at the STFC-Global Challenge interface to identify their research priorities and matching STFC capabilities

• Identify existing and potential applications of STFC-funded research to the Global Challenges

Proposals may cover any topic of relevance to the Global Challenges. The scheme will provide funds of up to £20k to be used for:

• Interdisciplinary workshops, exchange visits or other appropriate activities to help STFC-funded researchers to engage with potential users (academic or non-academic) of research in the Global Challenge Theme areas, in order to identify user priorities and matching STFC-funded capabilities

• Identification and review of past, current and potential future applications of STFC-funded capability to Global Challenge Solutions within a department or Research Organisation in order to identify potential new projects and demonstrate impact

The aim is to contribute to the community’s and STFC’s knowledge of the Global Challenge landscape, inform strategy and provide evidence of impact.

For more information and to apply please go to http://www.stfc.ac.uk/3384.aspx

Next quarterly cut-off dates for assessment:
24th April 2015
24th July 2015
23rd October 2015
22nd January 2016
RSE/STFC Enterprise Fellowships 2015

The STFC, along with the RSE (Royal Society of Edinburgh), offer support for STFC funded scientists who want to develop a business idea based on STFC funded research. The fellowship gives one year’s salary and business training, to the Enterprise Fellow - the aim being to give someone the time and skills to set up a viable business as a result of the STFC science programme.

Enterprise Fellowships are designed to encourage exploitation of the STFC research programme. Applications may be submitted on any subject provided that the original research or technological developments have their origin as part of a programme largely funded by STFC, or in the case of nuclear physics programme previously funded by the Engineering and Physical Sciences Research Council (EPSRC).

Key facts

The next closing date for applications is 27 April 2015

This scheme is run jointly by STFC and the Royal Society of Edinburgh (RSE) and is part of the Council’s Industry Programme.

Fellowships include one year’s salary costs and some additional support funding, and can be held at any UK Higher Education Institution or Institution that agrees to host the work. The Fellowships provide a unique opportunity for researchers to spend a year gaining business training whilst developing the commercialisation of their existing research. The training provided aims to support fellows through an active process of business planning and implementation.

Contacts

For further information and application forms, please go to the RSE website

If you have any questions, please email Anne Fraser at the RSE: afraser@royalsoced.org.uk or Phillip Tait at STFC: phillip.tait@stfc.ac.uk
STFC launches VELA – bringing a new imaging capability for UK industry

A new imaging capability for the UK that could take materials and biological research beyond the limits of what is currently possible, and eventually generate ‘molecular movies’, was showcased at STFC’s Daresbury Laboratory in Cheshire, as part of the official launch of STFC’s newest electron beam accelerator - VELA, the Versatile Electron Linear Accelerator.

One of the industrial companies attending were Rapiscan Systems, a global provider of walk-through metal detectors and cargo-scanning x-ray machines, who have been one of the first organisations to use VELA to perform proof-of-concept experiments in its research into methods of generating three-dimensional X-ray images for more comprehensive cargo security screening.

Academic and industrial researchers attended to see how they can benefit from this exciting new facility and how it could help them bridge the gap between proof-of-concept, prototypes and market ready products.
Dr Edward Morton, Chief Technical Officer, Rapiscan Systems, said: “VELA has been the ideal place to successfully test our theories, and this would have been impossible anywhere else in the UK. Rapiscan Systems is committed to creating a secure future for the travelling public, and the development of new and innovative imaging techniques, such as those here at VELA, is key to achieving this. It’s very early days to tell what kind of impact this new emerging technology will have for our research, but we are very excited about the prospect of what we hope to achieve here in the near future.”

In October last year VELA achieved a UK first when it used ‘shutter speeds’ close to one ten-thousandth of a billionth of a second to achieve ‘ultrafast electron diffraction’. This is a technique which uses very short, fast pulses of electrons, to image the atomic structure of materials, atom by atom, without causing damage to materials that would be caused by traditional x-rays. In doing so, it became one of only a handful of sites globally with the capability to take this technique forward to the next level and generate ‘molecular movies’ – to see a chemical or biological reaction as it happens.

Professor Susan Smith, Head of STFC’s Daresbury Laboratory, said: “Achieving ultra-fast electron diffraction last year was a major milestone for STFC, and now we want to ensure that UK industry and researchers can benefit from this exciting new research tool for their research and product development. Today’s official launch of VELA is a fantastic opportunity to show how we can work with them at this development stage to ensure that the potential of this technique is fully realised to the benefit of the UK economy and society.”

Being able to understand the structure of a material and its properties has already led to numerous advances over the last 100 years. From the development of new drugs, to new technologies such as flat screen TVs and even better tasting chocolate; structural imaging has fundamentally underpinned advances in almost every aspect of modern day life.

Representatives from UCL, the University of St Andrews, The Max Planck Institute, SLAC and the University of York all took part in today’s event, which comprised a programme of talks exploring the value of this technology and its potential. Local MPs, Graham Evans, Andrew Miller and Derek Twigg also attended.

VELA is the result of £2.5m government investment into STFC’s Daresbury Laboratory for accelerator technology developments, as part of a series of investments across the Sci-Tech Daresbury science and innovation campus, one of the Government’s flagship Enterprise Zones.
UK physicists getting closer to reading the inside of stars

UK nuclear physicists are one step closer to being able to read the inside of stars and discover new elements that exist for only a trillionth of a trillionth of a second inside exploding supernovae.

Part of an international project, R3B, they have taken the latest step towards the development of a detector that will reveal missing information about extreme states of matter, with the successful commissioning of one its first silicon detector modules. R3B is developing a ground breaking detector system that will provide key technology for NuSTAR (Nuclear Structure, Astrophysics and Reactions), one of the four main international experiments planned for FAIR (Facility for Antiproton and Ion Research) in Germany which, when completed, will be the most advanced nuclear physics research facility in the world.
UK physicists getting closer to reading the inside of stars

The Science and Technology Facilities Council’s (STFC) physicist Roy Lemmon said: “Nobody knows exactly how many elements are out there waiting to be discovered, or how they are created, but we will be able to study new nuclei that have never been seen before, and find answers to information that is still missing about extreme states of matter in the Universe. The advances in technology that will result from the work on R3B make it a very exciting time to be involved in this area of research. Through R3B and NuSTAR we will be able to address a very broad spectrum of science that will answer some really fundamental questions.”

At FAIR, NuSTAR will create extraordinarily rare nuclear species that only exist momentarily within exploding stars such as supernovae. R3B will be made up of a series of highly complex sub-detectors and, for its part, the UK team has developed a state-of-the-art silicon tracker that will be capable of exploiting these high intensity beams at NuSTAR, allowing researchers to study the properties of these rare nuclear species that do not occur naturally on earth.

Professor John Simpson, Head of STFC’s Nuclear Physics Group, added: “FAIR will be the world’s most important nuclear physics research facility for many years to come creating an opportunity for UK nuclear physics scientists to work at the cutting edge in the development of new and innovative applications, such as in brand new techniques for medical imaging and radiation monitoring. The UK will benefit enormously as a result of these international research programmes and there will be built-in opportunities to contribute to and profit from new technologies.”

Nuclear physics research is already responsible for a host of world changing applications across many areas of our lives, such as providing the technology behind scanners in hospitals, in the early detection of brain tumours and cancer therapy, as well as in anti-terrorism security applications.
STFC funded boost for UK nuclear physics as York appoints first professor of Nuclear Physics Theory

An exciting new initiative between STFC and the University of York that will significantly strengthen the UK’s nuclear research capability has taken a major step forward today with the appointment of Professor Jacek Dobaczewski as York’s first professor of Nuclear Physics Theory.

Made possible by a special funding award from STFC, the appointment is the first stage of this new initiative driven by a strategic need for theory and modelling support to the UK’s national experimental programme which was identified in a 2012 Institute of Physics report.

Professor John Womersley, Chief Executive of STFC, welcomed the appointment of Professor Dobaczewski: “The arrival of Professor Dobaczewski at York is the first step in applying additional funding from STFC to strengthen the UK programme in nuclear physics theory. This new collaboration between STFC and the University of York reinforces our commitment to help keep the UK at the forefront of nuclear physics research.”

STFC’s special funding award means that a PhD studentship will also be in place by October 2015, while in addition York will fund a nuclear physics theory lectureship.

The new theory group will complement the work of York’s experimental groups and will work closely with theory groups at Manchester and Surrey Universities, as well as other groups across Europe and beyond.
RIKEN, UK Atomic Energy Authority and ISIS team up for recycled science!

RIKEN, Japan’s largest research organisation, the UK Atomic Energy Authority and the Science and Technology Facilities Council (UK) are collaborating on the transfer of science equipment from RIKEN to UKAEA.

RIKEN and ISIS, STFC’s neutron and muon source, have been collaborating for over 20 years. The RIKEN-RAL muon facility, based at ISIS, is a large UK-Japan science collaboration for fundamental and applied studies using muons – short-lived sub-atomic particles which have a variety of science uses.

The agreement between the three organisations has seen some of the equipment which RIKEN have used at ISIS being transferred for further use to UKAEA at Culham. The equipment is no longer required by RIKEN, but, rather than dispose of it, it will now go on to have new life and new applications – fully recycling it!

Philip King, Director of the RIKEN-RAL Muon Facility, said “It is great that RIKEN, UKAEA and ISIS are collaborating on a project which is very beneficial for all three organisations. We are very glad that the RIKEN equipment is finding a good new home.”

Stuart Knipe, Head of the Tritium and Vacuum unit at UKAEA, added “We are very pleased to be partnering with RIKEN. The equipment transferred to us will be used within the new Material Research Facility which we are establishing at Culham – a lovely example of recycling!”

The equipment is a tritium gas-handling system, which RIKEN have been using for muon studies of fusion between deuterium and tritium nuclei at the RIKEN-RAL muon facility. The RIKEN work has enabled new insights into this area, but with the focus of the facility turning to other muon science, a home was needed for the tritium system. Team Leader of Muon Deta Team at RIKEN Nishina Center Teiichiro Matsuzaki said “The tritium system has been at the heart of the RIKEN-RAL muon facility for many years, has produced some excellent science results, and we shall be sad to see it go. But it is a very nice legacy for it to be reused by UKAEA for new science projects, and we are very pleased that it will continue to be doing research in the future.”

Tei Matsuzaki (RIKEN), Stuart Knipe (UK Atomic Energy Authority) and Philip King (ISIS) with the tritium gas handling system Credit: STFC.
UK climate toolkit takes a ride on NASA plane

A cutting-edge science instrument being used to monitor greenhouse gases and developed by researchers from STFC’s UK Astronomy Technology Centre (UKATC) in Edinburgh took to the skies aboard a NASA research aircraft for the first time on 6 March 2015.

Based on technology originally used in deep space astronomy the GHOST instrument (Greenhouse Observations of the Stratosphere and Troposphere) was developed by UKATC in a joint effort with the Universities of Edinburgh and Leicester.

The device, on board NASA’s Global Hawk aircraft, is flying above the equatorial regions of the Pacific Ocean at an altitude of 20km, measuring greenhouse gases such as carbon dioxide and methane across large regions in fine detail.

These detailed measurements will allow scientists to produce precise maps of where greenhouse gases are being released and taken up at the Earth’s surface – vital information for international climate negotiations.

Andy Vick, Innovations Manager at STFC’s UKATC facility and the lead investigator for the GHOST project celebrated the successful first flight of GHOST and said: “These incredibly sensitive instruments, that were originally developed to meet major astronomical challenges by dealing with very low levels of light, are now being used to instead accurately measure the incredibly tiny fluctuations in the levels of greenhouse gases. This new information will allow us to better understand these changes and the data collected will be used to evaluate and improve global models used to predict future climate change.”

Also on board the aircraft is a second instrument, AIITS (the Aerosol Ice Interface Transition Spectrometer), which measures particles like dust, water droplets, and ice crystals.

The transport of particles and pollutants between the troposphere and stratosphere plays a crucial role in the climate system and the health of the ozone layer. AIITS was jointly developed by the universities of Hertfordshire and Manchester.
UK climate toolkit takes a ride on NASA plane

The two instruments were developed as part of a four-year collaboration between the Natural Environment Research Council’s (NERC) Co-ordinated Airborne Studies in the Tropics (CAST) project and are the first from the UK to take advantage of the Global Hawk’s capabilities.

The uninhabited aircraft, based at NASA’s Armstrong Flight Research Centre, California, can fly at twice the height of Mt. Everest, well above the altitude of commercial jets, for more than a day at a time, travelling the equivalent of half of Earth’s circumference in a single flight.

The two UK pieces of kit were joined onboard by instruments from NASA’s Airborne Tropical Tropopause Experiment (ATTREX) project.
Isis Innovation spinout Oxbotica to provide control systems for UK’s first driverless car

Oxbotica - spun out in late 2014 from the University of Oxford’s Mobile Robotics Group - will provide control systems for 40 autonomous pods as part of a multi-million pound driverless car challenge.

UK Business Secretary Vince Cable and Transport Minister Claire Perry officially launched the Government’s ‘Introducing Driverless Cars’ competition, aimed at establishing the UK as the global hub for the R&D and integration of driverless vehicles and associated technologies.

UK Autodrive is one of three projects that will see trials of driverless cars taking place over the next few years in Milton Keynes, Coventry, Greenwich and Bristol. The UK Autodrive consortium comprises the UK’s leading high tech and automotive businesses, academic institutes and forward-thinking local authorities, and will develop autonomous vehicle technologies and integrate driverless vehicles into existing urban environment in a £20m, three-year programme.

Oxbotica is a specialist provider of autonomous control system technologies and a recent spin-out from Oxford University’s Mobile Robotics Group and Isis Innovation, the University’s technology commercialisation company. Oxbotica will be a pivotal contributor in the project and will develop the autonomous control systems that enable real-world operation of driverless vehicles in urban and pedestrianised areas around Milton Keynes.

A key element of the UK Autodrive project is the implementation of a Low-Speed Autonomous Transport System (L-SATS), which will see 40 self-driving pods carrying members of the public on routes around Milton Keynes city centre, linking in to key transportation hubs and car parks and travelling through pedestrianised areas.

Trials will explore the opportunities and challenges of using L-SATS fleet to provide a working public transport system. Oxbotica will play a key part in the project and will develop and provide the entire autonomous control system and sensor sub-system to the L-SATS pods.
Dr Graeme Smith, Chief Executive of Oxbotica said, “Oxbotica is all about mobile autonomy. Our technology enables robots and autonomous systems to understand their environment and navigate safely through a pedestrianized environment. In this application Oxbotica will provide the smart software that enables the pod to understand where it is, how to navigate, and how to operate in challenging urban environments including obstacles, pedestrians and cyclists. The L-SATS project will provide the first commercial scale demonstration of a solution for last-mile urban mobility and will have global significance, positioning the UK – and Oxbotica – at the very forefront of this society-changing technology.”

Professor Paul Newman, Oxbotica co-founder said: “It’s important that the UK invests not only in its research institutions and the technology that underpins autonomous self-driving vehicles but also that it supports and builds companies that can exploit and deliver this technology to the market. It’s time to transition the UK’s leading edge intellectual property in mobile autonomy from our research institutions to global markets in a coherent and integrated fashion. We created Oxbotica to accelerate this transition, and we are now in a superb position to deliver world leading autonomy tech into the L-SATS project, which will be the first of its kind to demonstrate such a substantial implementation of real autonomy.”

Professor Ingmar Posner, Oxbotica co-founder said: “Our plan with the practical demonstration phases of L-SATS is to demonstrate autonomous pods operating in a public environment, and to build up to a point where all road users, as well as legislators, the police and insurance companies, are confident about how self-driving pods and autonomous cars can operate safely on roads and in pedestrianized environments.”

Read the Oxbotica press release

Read Isis Innovation spin-out targets new frontiers of robotic technology
Scanning Earth, saving lives

A high-speed camera for monitoring vegetation from space and combating famine in Africa is being adapted to spot changes in human skin cells, invisible to the naked eye, to help diagnose skin diseases like cancer. In fact, the extraordinary digital infrared sensor from ESA’s Proba-V vegetation-scanning satellite is being adapted for several non-space applications.

Mounted on a standard medical scanner, the space sensor can help doctors to look deeper into human tissues for detecting skin diseases earlier. It also has a bright future in industry: it has already been shown to improve solar cell production as well as spotting defective items on production lines.

Leading-edge space technology

The Proba-V camera has such a unique wide field of view that it allows the small satellite to build a fresh picture of our entire planet’s flora every two days. Developed for ESA by the Belgian company Xenics, the camera sees light we cannot by looking in the shortwave infrared range. “To humans, two green trees could look similar. But with this camera, we might detect that one is growing well and the other is unhealthy,” explains ESA’s Michael Francois. On Proba-V, the fresh maps provided on a regular basis by Xenics’s sensor can monitor South America’s rainforest or give farmers in Africa the ability to predict crop yields, for example. “Based on the experience of preceding years, you can determine whether crop growth is on schedule or behind, and you can get early information on whether there will be sufficient food,” points out Koen van der Zanden from Xenics.
Rigours of space force innovation on Earth

Proba-V’s ability to ‘see the unseeable’ as Earth hurtles past beneath made the commercialisation of the camera a natural step. With support from ESA and the Belgian Space Technology Transfer Programme, the Xenics team created ‘Machine Vision’, integrating cameras on inspection systems to replace humans in looking for imperfections. “The high-speed resolution of our ‘line-scan’ cameras makes them ideal for detecting hidden defects on fast-moving production lines, such as bottle manufacturing or sorting different types of plastics for recycling – all of which look similar to the human eye,” explains Koen. “The items are moving fast, just like Earth spins below the satellite, so by scanning one complete line at a time we can quickly cover the whole area.”

The Proba-V camera captures a 2250 km-wide picture of the land below on every sweep, made possible by Xenics’ 3072-pixel line sensor. Unlike conventional rectangular detectors, like those used in consumer digital cameras, this sensor captures information one line at a time, which it can do very rapidly. It builds up a complete image as the target moves past – more efficient for imaging rapid objects on production lines.

This ability also makes the camera very useful for spotting defects on solar panels. When the panels are illuminated, the camera can gauge their efficiency quickly by spotting any dulling of the weak glow the cells emit when they absorb light.

In the medical sector, Xenics are now adapting their technology to improve a doctor’s ability to diagnose skin diseases. Scanners have been giving detail-rich cross-section images of living tissue for some 20 years, but the space camera’s sensitivity at certain wavelengths means it can see deeper to help diagnose skin diseases such as cancer. The game-changers here are the significantly higher sensitivity achieved by the sensor and the speed, making it possible to complete the scan in a reasonable time. “It may still be a few years away but once our sensors start helping doctors to diagnose skin diseases and catch them at earlier stages, then we can all feel doubly proud of this spin-off from space,” reflects Koen.

“The transfer of this specially developed camera technology for ESA’s Proba-V has positioned a European company in a leading position globally for linear shortwave infrared sensor technology,” said Sam Waes from Verhaert, ESA’s Belgian technology broker. “It is an excellent demonstration of how investments in our space programmes help European industry benefit from space technology spin-offs.”
External Innovations and Innovations Club

The External Innovations team manages the activities that aim to realise the impacts and benefits that flow from STFC's investments in science and technology towards commercialisation through one to one brokering, events and a range of funding schemes.

If you wish to contact the teams for more information please see the following contacts and email addresses.

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For Tender Opportunities: tenderopportunities@stfc.ac.uk

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The Innovations Club newsletter contains a selection of articles drawn from our partner organisations that we think you will find interesting. We welcome your comments innovationsclub@stfc.ac.uk