

ISSTI

THE INSTITUTE FOR THE
STUDY OF SCIENCE
TECHNOLOGY AND INNOVATION
www.issti.ed.ac.uk

newsletter

no. 31 | November 2017



This Newsletter brings news of a series of major research and related awards across the ISSTI network. Through research built on strong interdisciplinary collaborations and covering a wide range of approaches, Edinburgh colleagues continue to achieve recognition and attract major investments by UK research councils and independent funders.



Members of the ISSTI network come together at the 2017 ISSTI Retreat in Carberry Tower to share and develop new insights.

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We congratulate our colleagues on an exceptional series of new grants, awards and recognitions.

Ann Bruce Leads Food Security Research

How do upland sheep and beef cattle production contribute to the resilience of the UK food system? Questions of food security have tended to focus on urban areas as the centres of population and with the most limited access to land to produce local food. However, food security is equally important in remote, upland regions of the UK, where livelihoods have been historically dominated by grazing sheep and beef cattle.

UK is a global player when it comes to sheep meat. It is the sixth biggest producer globally and exports 36% of output to more than 100 countries. Livestock production in uplands has come under considerable pressure, through low economic margins, aging population of farmers and questions raised about the social desirability of ruminant production. At the same time, loss of grazing can have an adverse impact on biodiversity associated with open habitats in upland landscapes and will have wider economic, social and cultural implications for upland rural economies.

This is the focus of a substantial new research project entitled 'The role of livestock in food system resilience in remote, upland regions (ResULTs)' which is led by Dr Ann Bruce and will run for four years, from November 2017. It will examine the resilience of beef and sheep production in upland regions of Northern England and Scotland, in the face of uncertain environments and policy landscapes, and the consequences to the global and local food systems of these responses. Four case studies will be undertaken, on in each of Yorkshire Dales, Scottish Borders, Orkney and Harris/Isle of Skye.



Dr Ann Bruce

The project will be undertaken in collaboration with SRUC (Scottish Rural College) and RAFT Solutions Ltd. and will connect expertise in social sciences (Dr Bruce), agricultural ecology and innovative farming practice (Professor Davy McCracken), agricultural economics (Dr Andrew Barnes), veterinary-led provision of advice to farmers and veterinarians (RAFT Solutions), food sourcing and consumption (Dr Isabel Fletcher) and creative writing on science (Pippa Goldschmidt). Working in collaboration with our stakeholders including: Yorkshire Agricultural Society, Highlands & Islands Enterprise, Scottish Crofting Federation, Quality Meat Scotland, The York, North Yorkshire & East Riding Enterprise Partnership.

This project represents a £686,000 investment from the UK's Global Food Security programme as part of £4.9 million of interdisciplinary research to increase resilience and sustainability of the UK food system. This funding is to ensure greater resilience of the UK's food supply from global shocks, environmental and demographic changes, and threats posed by pests and diseases.

The research programme was driven forward by the UK's Global Food Security programme, with funding from the Biotechnology and Biological Sciences Research Council (BBSRC), Economic and Social Research Council (ESRC), Natural Environment Research Council (NERC) and Scottish government. With this programme we continue our ambition to play a leading role in developing and shaping the future of social science research on science, technology and innovation.

This is the Newsletter of the Institute for the Study of Science, Technology and Innovation (www.issti.ed.ac.uk) This interdisciplinary network, founded in 2000 by Robin Williams, brings together colleagues from across the University studying science, technology and innovation and is hosted by the Science, Technology and Innovation Studies (STIS) Subject Group.

Science, Technology and Innovation Studies (STIS) Subject Group at the University of Edinburgh is internationally recognised as a leading centre of research, teaching and knowledge exchange in this important interdisciplinary field. With more than 40 staff, STIS enjoys outstanding ratings for its scholarly publications and impact, sustains research intensity with a high volume of external research income, and excels in teaching through a suite of undergraduate and postgraduate courses and programmes. For more information, see our website: www.stis.ed.ac.uk.

Edinburgh University to Train NHS Digital Leaders

The University of Edinburgh in partnership with Imperial College London and Harvard Medical School has recently been awarded £6M to launch the NHS Digital Academy, led by Aziz Sheikh, Director of the Usher Unit, with Claudia Pagliari, Dave Robertson and Robin Williams. This is a national educational initiative specifically designed to train a cohort of 300 clinicians and health managers, and to equip them with the skills to effectively deploy and use new technology to improve the patient experience, and deliver service efficiencies.

The academy has been set up as a virtual organisation and was described by Harpreet Sood, associate national chief clinical information officer (CCIO) and lead on the programme, as “an informatics leadership course for NHS digital leaders by digital leaders”. The aim of the three cycles of a bespoke 12 month programme is to help shape a new generation of Chief Information Officers (CIO) and Chief Clinical Information Officers (CCIO) who can help drive through the digital transformation the NHS requires.



Speaking at the launch, Lord Ara Darzi, former health minister, professor of surgery at Imperial and head of Imperial's Health Innovation Unit, and the chair of the new NHS Digital Academy, said: “I think this is one of most exciting pieces of work NHSE has commissioned.”

More information about the Academy can be found here: <https://www.ed.ac.uk/usher/news-events/news-2017/digital-academy-set-to-transform-nhs-care>

Innogen to Research Diagnostic Innovation for Better Use of Antibiotics in Livestock Farming

Are there better ways to diagnose animals in need of antibiotics on livestock farms? How will farmers and veterinarians use novel diagnostics in the fight against animal disease? These are some questions a consortium of academics will address thanks to a £1.75 million grant to understand how better diagnostics can encourage responsible antibiotic use in animals.

Scientific, public and political concern regarding antimicrobial resistance is increasing, and although farmers and veterinarians are reducing their use of antibiotics, improved diagnostic decision making is a critical step to delivering more effective use of antibiotics in animal health. Antimicrobial resistance is a global concern, and part of this project will investigate antibiotic use in livestock in Tanzania.

Our colleagues Professor Joyce Tait, Dr Ann Bruce, Dr Geoff Banda and Dr Vera Mugittu are part of a new award to Innogen entitled “Diagnostic innovation and livestock (DIAL) towards more effective and sustainable applications of antibiotics in livestock farming”. This major collaborative award is led by Professor Henry Buller (PI) with Professor Steve Hinchliffe (University of Exeter) and Dr Kristen Reyher and Professor David Barrett (University of Bristol, School of Veterinary Medicine). This is an interdisciplinary investigation bringing together social, veterinary and innovation sciences with empirical work undertaken on farms, in laboratories, in veterinary practices and organisations and within policy-making and regulatory bodies and institutions.



The four-year award, funded by the Economic and Social Research Council (ESRC) working in partnership with the Department of Health and the Arts and Humanities Research Council (AHRC), is part of the cross-council ‘Tackling antimicrobial resistance: behaviour within and beyond the healthcare setting’ call, part of the antimicrobial resistance cross-council initiative supported by the seven research councils in partnership with other UK funders including the Medical Research Council (MRC).

New Research Centre for Biomedicine, Self and Society

The School of Social and Political Science is proud to be supporting the development of a new Centre for Biomedicine, Self and Society at the University of Edinburgh. Academics from the College of Arts, Humanities and Social Sciences and the College of Medicine and Veterinary Medicine have been awarded a grant of over £1 million from the Wellcome Trust to develop new interdisciplinary approaches to exploring the issues, challenges and questions raised by biomedicine, biotechnology and health care in today's society.



The team is led by Sarah Cunningham-Burley (Usher Institute), Graeme Laurie (Law), and Steve Sturdy (STIS) with co-investigators Sarah Chan (Mason Institute/Usher Institute), Gill Haddow (STIS) and Martyn Pickersgill and Devi Sridhar (Usher Institute). The University has also contributed to the development of the Centre through the appointment of four new Chancellor's Fellows: Lukas Engelmann (STIS), Agomoni Ganguli-Mitra (Mason Institute), Ellen Stewart and Ingrid Young (Usher).

Over the next five years, the team will investigate a range of issues across five broad themes: "Beyond the Body", "Beyond Disease", "Beyond Global", "Beyond Legal" and "Beyond Engagement". These strands, as well as highlighting areas of contemporary importance to biomedicine and society, will allow us to demonstrate how novel interdisciplinary team science approaches can go 'beyond' current research to produce new insights and understandings. The Wellcome funding will also support recruitment of six new postdoctoral researchers. We will also be hosting a range of doctoral students to complement the existing team.

Through a programme of scientists and artists in residence, colleagues will work alongside Centre researchers to explore new ways of integrating social science and humanities into the study of biomedicine, as well as new approaches to public and stakeholder engagement.

Major ESRC Awards for ISSTI Colleagues

ESRC Research Grant for Fire Safety Research

In addition to the large EPSRC grant reported in the last issue of the ISSTI Newsletter, our partnership with the Fire Engineers led to a further programme of work on social aspects of fire safety. Graham Spinardi has secured a major ESRC Research Grant of £468,308 for a study entitled 'Tackling Fire in Informal Urban Settlements: An Interdisciplinary Approach'. About one billion people live in such settlements around the world. Fires are frequent due to use of flammable materials and open flames for lighting and cooking, often spread rapidly between close-packed shacks. Finding technical and governance solutions requires inputs from different areas of expertise, so Graham will lead a truly interdisciplinary team of researchers, made of Sarah Jane Cooper-Knock (African Studies), Luke Bisby, Rory Hadden and David Rush from School of Engineering as well as Richard Walls of Stellenbosch University.

ESRC Research Grant to Study High Frequency Trading

Donald MacKenzie (Sociology), Iain Hardie (Politics), and Juan Pablo Pardo-Guerra (formerly of Edinburgh University, but now at the University of California at San Diego) have been successful in a bid to the UK Economic and Social Research Council to research the automated, ultrafast 'high-frequency trading' (HFT) that is increasingly dominant in many of the world's most important financial markets. Their research will combine a 'science and technology studies' emphasis on the materiality of HFT systems with an 'economic sociology' focus on conflict between new HFT entrants and longer-established incumbents. The award is for £411,398 over four years (January 2018 - December 2021).

Wider recognition of our achievements

Joyce Tait Appointed to Government Council for Science and Technology

The Prime Minister has appointed Joyce Tait as one of the five new members of the Council for Science and Technology (CST).

The Council reports directly to the Prime Minister and works on cross-cutting issues of strategic importance, taking a medium to longer-term approach. In developing its advice, it takes into account the cultural, economic, environmental, ethical and social context of developments in STEM.

Joyce, who is heading our Innogen institute, has been appointed to the 20-strong council recognising her leadership role in understanding innovation governance.



Niki Vermeulen Awarded Prestigious Tam Dalyell Prize for Public Engagement

The prize is and was awarded to Niki Vermulen in recognition of her pioneering work in communicating History of Science with the Curious Edinburgh app.

In the roll call of this prestigious University award,

celebrating Excellence in Engaging the Public with Science, Niki is joining some of the most influential public engagement leaders. Niki will also deliver a honorary Tam Dalyell lecture in early 2018.



Dibner Award for NMS's New Science and Technology Galleries

The Society for the History of Technology (SHOT), has awarded the 2017 Dibner Award for Excellence in Museum Exhibits to the six new Science and Technology Galleries at the National Museum of Scotland (NMS) in Edinburgh. This work was led by our ISSTI member and STIS Honorary Fellow, NMS Principal Curator of Technology, Klaus Staubermann.



The award was established in 1985, through the generosity of Bern Dibner, to recognize excellence in museums and museum exhibits that interpret the history of technology, industry, and engineering to the general public. Winning exhibits, in addition to being well designed and produced, should raise pertinent historical issues.

Matjaz Vidmar Recognised as an Emerging Space Leader

Matjaz, who is a 3rd year PhD student at STIS, has received the prestigious Emerging Space Leaders Award from the International Astronautical Federation (IAF).

The award is given annually to 14 leading students and young professionals in the fields of Space Exploration, Science and Industry worldwide. This year's award was presented at the International Astronautical Congress in Adelaide, Australia. Matjaz has also recently been appointed the National Point of Contact for his home country, Slovenia, to the UN-backed Space Generation Advisory Council, as well becoming the Deputy Chief Executive Officer for Special Projects and Programmes for Europe at the Astrosociology Research Institute.

SSU50 Videos Released

We are very happy to announce that the SSU50 celebrations videos, including the proceedings of the SSU50 Gala and the "Practising the Reflexivity Tenet" SSU50 Workshop, have been released to our YouTube channel. They can be found in a dedicated playlist:

Workshop & Gala Videos: <http://bit.ly/SSU50-WorkshopVideos>

We are very grateful to the SSU50 Organising Committee for creating such a wonderful week of celebration and to all our staff, students and colleagues who took part in the events.

More info about last year's activities can (still) be found here: <http://www.stis.ed.ac.uk/ssu50>

SSU50

Science Studies Unit
50th Anniversary