



THE INSTITUTE FOR
THE STUDY OF SCIENCE
TECHNOLOGY AND INNOVATION

newsletter

no. 18 April 2011

We are delighted to be able to announce two exciting new awards in this first ISSTI newsletter of 2011. David Castle, Joyce Tait and Ann Bruce (Innogen) will carry out a Pilot Study for the Department Environment, Food and Rural Affairs on how to develop integrated policies that balance business, environmental and policy objectives. The Ove Arup Foundation have made a major investment to tackle the obdurate problems surrounding fire safety. Working with Edinburgh Fire Safety Engineers and Architects, ISSTI will explore how to ensure the effective adoption of technical advances in the built environment.

These awards highlight the strength of ISSTI's interdisciplinary engagements in research addressing the complex policy challenges in today's world. Findings from earlier research are reported in an array of books and policy reports reviewed inside.

Ove Arup Foundation supports groundbreaking Fire Safety Initiative



Sir Duncan Michael
Ove Arup Foundation Trustee

The Ove Arup Foundation has agreed to invest £200,000 over the next 5 years in a major interdisciplinary research and knowledge transfer initiative aimed at Integrating Technical and Social Aspects of Fire Safety Engineering Expertise (ITSAFE).

'We are excited to explore new approaches to reducing risks from fire, which still kills too many people,' explained **Sir Duncan Michael**, Ove Arup Foundation trustee and former chairman, "while there have been significant technical advances in fire safety, further progress will be limited without changes in policy and regulation and in the practices and responses of professions and organisations involved and the wider public."

Continues on page 2

CONTENTS

Research news	2
ISSTI community	5
Events	7
Publications	9

Implanted smart technologies

Roundtables convened through 2011 will discuss what counts as "normal" in the 21st century

New postgraduate funding in STIS

QUEST for interdisciplinarity completed

A report from the project identifies key elements of success in producing interdisciplinary knowledge

Welcome to new members of staff

New books and reports

Biofuels, e-Infrastructure, precautionary principle amongst the topics of several new publications

What are the barriers to adopting the latest improvements in Fire Safety Engineering? Do existing fire safety regulations and systems inhibit the adoption of new and safer materials and techniques? Can we integrate fire safety with other goals such as building aesthetics, security and environmental sustainability? These and other pressing issues will be addressed by the ITSAFE project, which builds on an earlier Arup Foundation award which has helped to establish a world-class Centre for Fire Safety Engineering at the University of Edinburgh.



The ITSAFE team - comprising **Robin Williams**, **Stewart Russell**, **Donald MacKenzie**, **Steve Yearley**, **Luke Bisby** and **Jose Torero** from the BRE Centre for Fire Safety Engineering, and **Remo Pedreschi** and **Liam Ross** from the Edinburgh School of Architecture and Landscape Architecture - will examine how changes in policy and professional practice can improve current fire safety.

ISSTI Director Robin Williams welcomed the Ove Arup Foundation's generous support. "This reflects our success in putting together an interdisciplinary consortium, bringing together social science, fire safety engineering and architectural design, equipped to examine these complex questions".

In the coming year ITSAFE will be recruiting an ambitious scholar to lead this research programme and



a PhD student to build expertise in this area. Anyone interested should contact Robin Williams at R.Williams@ed.ac.uk.

Implanted Technologies and Normality

Shawn Harmon, **Robin Williams**, **Abel Wiebke** and director of SCRIPT (Edinburgh's Centre for Research in Intellectual Property and Technology Law) **Graeme Laurie** will conduct a series of roundtables, retreats and symposiums entitled *Implanted Smart Technologies (IST): What Counts as 'Normal' in the 21st Century?*

Jointly funded by the SCRIPTed Conference Committee, SCRIPT, the School of Law, and Innogen, the project aims to explore and advance academic thinking around the techno- and socio-legal aspects of

ISTs and their implication for concepts of normality. It will bring together a collection of international experts from various fields, to stimulate new thinking and approaches to current legal frameworks. The group will survey the present and future of implantable smart technologies, reflecting on their relationships with both the human person and the law. They will explore concepts of 'normalness' and how they are captured and entrenched in law, and how new technologies such as these are forcing a re-evaluation of concepts such as enhancement and human identity. The IST Project will run from January to December 2011, but aims to continue its activity by encouraging the formation of cross-disciplinary networks and one or more multi-centre collaborative projects.

For further details see

<http://www.law.ed.ac.uk/ahrc/research/implanted-smart-technologies>, or write to: shawn.harmon@ed.ac.uk



Shawn Harmon



Research

Integrated Advice for the Rural Economy and the Environment



David Castle

David Castle, Joyce Tait and Ann Bruce have been awarded £100,000 to contribute to a Pilot Study on how to develop policies that balance business, environmental and regulation objectives for DEFRA - the Department for Environment, Food and Rural Affairs.

The 12 month study will involve a consortium that brings together experts from Edinburgh University ESRC Innogen Centre, ADAS, AHDB, and RAND Europe, with the aim to help implement DEFRA's Structural Reform Priorities. In particular, the project will help to:

1. *Support and develop British farming and encourage sustainable food production.* Help to enhance the competitiveness and resilience of the whole food chain, including farms and the fish industry, to help ensure a secure, environmentally sustainable and healthy supply of food with improved standards of animal welfare.
2. *Help to enhance the environment and biodiversity to improve quality of life.* Enhance and protect the natural environment, including biodiversity and the marine environment, by reducing pollution, mitigating greenhouse gas emissions, and preventing habitat loss and degradation.

3. *Support a strong and sustainable green economy, resilient to climate change.* Help to create the conditions in which businesses can innovate, invest and grow; encourage businesses, people and communities to manage and use natural resources sustainably and to reduce waste; work to ensure that the UK economy is resilient to climate change; and enhance rural communities.

To achieve these goals the new pilot study will be to develop a novel, farmer-focused approach to delivery of flexible, integrated advice that balances farm business objectives with those of DEFRA, and integrates measures in such a way that multiple wins are achieved relevant to DEFRA policy objectives in the areas of: climate change mitigation; climate change adaptation; nutrient management; water quality; soil quality; air quality; bio-diversity; farming competitiveness, performance and resilience; and environmental stewardship.



ISSTI secures PhD studentships

through successful application for ESRC Scottish Doctoral Training Centre

The Economic and Social Research Council (ESRC) has funded the Scottish Doctoral Training Centre, based at the University of Edinburgh

We have been awarded at least two studentships available from 2011/2 under the ESRC in the area of Science, Technology and Innovation Studies. The awards are available to UK and EU studentships and cover fees and living costs (the latter only for those with UK residence).

Additional MSc and PhD awards in STIS are available (see page 11), and funding for additional studentships and awards will be available shortly.

We invite applications from candidates with a strong first degree or Masters degree. The deadline for applications (including a full research proposal) is 21 April 2011. However, potential applicants should contact us as soon as possible to discuss their research topic and potential supervision. Further enquiries may be directed to Dr Ivan Crozier on ivan.crozier@ed.ac.uk

Research

Quest for Interdisciplinarity



Catherine Lyall

Catherine Lyall, Ann Bruce, Wendy Marsden and Laura Meagher have recently completed the year-long study for NERC with a report entitled *Identifying Key Success Factors in the Quest for Interdisciplinary Knowledge*. This project examined four RCUK funded, interdisciplinary initiatives: QUEST - Quantifying and Understanding the Earth System, the Rural Economy and Land Use Programme (Relu), the Climate Change Research Programme at the Tyndall Centre, and the UK Energy Research Centre (UKERC) and identified a series of transferable lessons relevant to the success of future, large-scale interdisciplinary investments. As part of this project, the team ran a further *Interdisciplinary Masterclass on Leadership Training for Interdisciplinary Environmental Initiatives* in Edinburgh in January. This two-day, residential workshop offered practical guidance regarding ways in which research leaders can make the most of interdisciplinary initiatives. The workshop was open to individuals at principal investigator level and above and attracted 20 participants with a variety of interests and senior roles in different research programmes and networks from fifteen institutions across the UK.

Further dissemination from the project will include another three 'short guides to interdisciplinarity' covering funding, evaluation and leadership issues

(see www.tinyurl.com/idwiki for current guides in the series) and a meeting with NERC and other RCUK officials to report back on findings.

Contact: c.lyall@ed.ac.uk

Agri-food and Innovation

Joyce Tait with **Joanna Chataway** and RAND Europe are supporting innovation in the agri-food industry by improving the ways in which research outcomes are translated into new and improved services and products.

The development of methodology and application of knowledge exchange and translational research in agriculture and food to a specific product supply chain was commissioned by the BBSRC and Defra on behalf of the Government Office of Science Food Research Partnership. Innogen funds total £91,000. Contacts: etait@ed.ac.uk, Joanna_Chataway@rand.org



EUROPE



Joyce Tait

Heather Lowrie



Risk and Decisions at Lloyds

Heather Lowrie concluded her three-month ESRC internship with Lloyds of London, which allowed her to investigate how decisions are made in property and casualty underwriting. Heather secured support for a follow-on collaborative project with Lloyds and several market participants to advance understanding of knowledge and governance of emerging risks in the insurance industry. For more on Heather's work visit: <http://bit.ly/eefGD8>, or contact Heather: h.e.lowrie@sms.ed.ac.uk

Community



Jim Jackson
1947-2011

We are very sad to report the unexpected death of our friend and colleague, Jim Jackson OBE on Wednesday 12 January 2011. Jim began his studies at the University of Edinburgh in 2007, successfully completing the online postgraduate Masters programme in Translational Medicine, a multidisciplinary course based in the School of Medicine and Veterinary Medicine. With a long and extremely successful career as Chief Executive of Alzheimer Scotland (1994-1998), as well as his important work for Alzheimer Europe and Alzheimer's Disease International, Jim returned to education with a desire to learn more about the new science and technology underlying contemporary clinical practice. Jim was an outstanding student on both an academic and personal level. He consistently received some of the highest marks in his year, and always demonstrated a high level of analytical reasoning and originality. He made many friends with the academic staff and his fellow distance learning students on the programme; adapting well to the technology of distance learning and contributing fully to the social and academic discussion boards. He will be sadly missed by his friends and colleagues at the university and all those who had the pleasure to work with him. Our deepest sympathies to his wife, Jennie, and the rest of his family.

Welcome to three new members of staff



Gian Marco Campagnolo is lecturer in *Social Shaping of Information and Communication Technologies* and *Internet and Society*. He has been post-doctoral fellow at the University of Trento, where he studied Organisational Information Systems.
G.Campagnolo@ed.ac.uk



Philip Inglesant is senior research fellow on ISSTI's EU-funded *MyFIRE Future Internet* research project. He has been research fellow at UCL in Professor Angela Sasse's Human Centred Systems Group, investigating human aspects of information security.
P.Inglesant@ed.ac.uk



Chris Lawless, is teaching fellow in *Technology in Society* and *Politics of Science and Technology*. He has been postdoctoral fellow at the Centre for Analysis of Risk and Regulation (CARR) at the London School of Economics.
Christopher.Lawless@ed.ac.uk

Awards/Recognitions

Joyce Tait Prize



Michael Barany

The Joyce Tait Prize in Science, Technology and Innovation Studies - an annual award for the best master's dissertation - was awarded to **Michael Barany**, who recently obtained the degree of MSc Science and Technology Studies (By Research) with distinction.

The highlights of Michael's thesis will be published in a chapter to be co-authored with **Donald MacKenzie** in the second volume of Representation in Scientific Practice, a follow-up of Lynch and Woolgar's successful volume of the same title.

Michael is currently in Princeton, where he aims to study the history of mathematical rigour in modern Europe and USA.

He can be reached at: M.Barany@sms.ed.ac.uk

The paper *Not "human" enough to be human but not "animal" enough to be animal - the case of the HFEA, cybrids and xenotransplantation in the UK* by **Gill Haddow, Ann Bruce, Jane Calvert, Shawn Harmon, and Wendy Marsden**, was the sixth most downloaded article of 2010 in the New Genetics and Society. The article was made available online free of charge until the end of February.



Gill Haddow

Congratulations to **Catherine Lyall**, who was appointed Associate Dean Research Careers for the College of Humanities and Social Science, at the University of Edinburgh. She can be contacted at: C.Lyall@ed.ac.uk

Congratulations also to **Shawn Harmon** who has been appointed joint-editor of the journal Medical Law International, commencing in the summer.

Contact: Shawn.Harmon@ed.ac.uk

Genomics Poetry Competition Results

Winners of the ESRC Genomics Forum Poetry Competition were announced during a reception held on Saturday 29 January 2011 at the Scottish Poetry Library. Hosted in partnership with the Scottish Poetry Library, the competition received over 200 entries from across the globe including America, New Zealand, the Cook Islands, Uganda and India. The first prize went to Sophie Cooke, a poet and novelist based in Edinburgh, for her DNA-shaped poem "Forward Deck". Further information: <http://www.genomicsnetwork.ac.uk/forum/news/title,24368,en.html>



Recent events

Jane Calvert and **Emma Frow** were ESRC/SSRC Visiting Fellows at the Centre for Nanotechnology and Society at Arizona State University in October-November 2010. They were hosted by Matt Harsh (Innogen alumnus) and Jamey Wetmore. The aim of the visit was to compare social scientific involvement in nanotechnology and synthetic biology, and to lay the groundwork for future collaborations.

Together with **Pablo Schyfter** (Innogen affiliate, currently at Stanford University), Jane also gave a talk in November, at the MIT Media Lab, for the seminar "Exploring Collaborations between Synthetic Biology, Art & Design". The event was organized within the Synthetic Aesthetics project, run by the University of Edinburgh and Stanford University, which brings together synthetic biologists, designers, artists and social scientists to explore collaborations between synthetic biology, art and design.

To contact Jane and Emma: Jane.Calvert@ed.ac.uk,
Emma.Frow@ed.ac.uk



Jane Calvert

The Emerging Importance of Knowledge Brokers

Christine Knight (Genomics Forum) and **Claire Lightowler** (Scottish Centre for Crime & Justice Research) were invited to give a talk at the Changing Academic & Professional Identities in Higher Education symposium, part of the Society for Research into Higher Education Conference, Newport, Wales, in December 2010. They presented their work examining an emerging species in the world of social sciences - the knowledge broker. Knowledge brokers can be people or organisations - like the Genomics Forum - which help construct a bridge between the research and policy communities.

The University of Edinburgh's Moray Endowment Fund is now supporting a pilot study interviewing knowledge brokers in the College of Humanities and Social Science at the university.

For more information: christine.knight@ed.ac.uk



GLOBELICS International Conference

Innogen proudly sponsored GLOBELICS (Global Network for Economics of Learning, Innovation, and Competence Building Systems) 8th International Conference *Making Innovation Work for Society: Linking, Leveraging and Learning* in Kuala Lumpur, Malaysia. Innogen contributed 8 papers and a plenary talk. The conference was attended by approximately 250 people, which included academics, policy makers, industry representatives and think tanks members.

Recent events

Catherine Lyall was invited to speak at the *SPRU/Royal Society Workshop on Challenges in Policy Relevant Interdisciplinary Research*, on the 7th of March. Catherine gave a talk on barriers to interdisciplinary research, drawing on results from her extensive work on interdisciplinarity (see page 3). More information at <http://www.interdisciplinaryscience.net>

Daniele Fanelli was invited to speak at the Committee on Publication Ethics (COPE) 2011 Seminar, on the 18th of March. His talk, entitled *The 'bulk' of the iceberg, and what journals can do about it*, over-viewed the problems of bias and misconduct in science, and the role journal editors can play in preventing and correcting them. Daniele can be reached at: dfanelli@staffmail.ed.ac.uk



Daniele Fanelli

Upcoming events

ISSTI/Innogen Seminars

11 April 2011. Prof **Erica Haimes**, PEALS, University of Newcastle: *Socio-ethical aspects of the IVF-stem cell interface: the case of 'egg sharing' for somatic cell nuclear transfer research*. Time: 15.30 - 17.00 Location: Seminar room 1.06, Old Surgeons' Hall, High School Yards
For further information and abstract, see <http://www.genomicsnetwork.ac.uk/innogen/events/title,24205,en.html>

23 May 2011. Dr **Andy Phippen**, Business School, University of Plymouth: *Young People's 'Disruptive' Use of Technology and the Responsibility of the ICT Sector*. Time: 15.30 - 17.00 Location: Seminar room 1.06, Old Surgeons' Hall, High School Yards. Further details available at: <http://www.issti.ed.ac.uk/events>

6 June 2011. Dr **Fern Wickson**, GenØk Centre for Biosafety in Tromsø, Norway: *Ecological Governance of Nanotechnologies: Risk, Ethics & The Role of Public Engagement*.

For information about accessibility contact Angela McEwan on 0131 650 9113 or Angela.McEwan@ed.ac.uk

Publications

Reports

Ethical Biofuels

The UK Nuffield Council on Bioethics will publish (due 13th of April), the *report from the Working Party on biofuels*, which was chaired by **Joyce Tait**.

Increasing concerns about climate change, energy security and economic development are driving the production of liquid biofuels for transport. Current biofuel production, which mainly uses food crops, has led to deforestation and disputes over rising food prices and land use. New approaches to biofuels, such as those using non-food crops and algae, are being developed with the aim of meeting our energy demands whilst avoiding the problems of the past.

The Working Party worked over the last 18 months to explore the ethical and social issues raised by current and new types of biofuels. The report will make recommendations for biofuels policy in areas including human rights, environmental sustainability and climate change.

A launch seminar will be held on the day of release, 13th of April, from 1 to 5 pm at the Wellcome Collection Conference Centre, 183 Euston Road, London NW1 2BE, UK. Joyce and other members of the Working Party will present and discuss their findings in a series of talks and breakout sessions. To book your place, please contact Sarah Bougourd: sbougourd@nuffieldbioethics.org, tel: +44 (0)20 7681 9619. More information at: www.nuffieldbioethics.org/biofuels

James Stewart and **Robin Williams** conducted a survey of the experiences of key stakeholders in electronic infrastructure provision in the UK and internationally. The findings have just been published by the Researcher Information Network who led this project, in the report *E-infrastructure - Taking Forward the Strategy: Synthesis of Interviews with Expert Stakeholders*. This report contributed to the recent government review 'Delivering the UK's e-infrastructure for research and innovation', conducted by The Department of Business, Innovation and Skills (BIS) and Research Councils UK.

The review is available on-line at <http://www.rin.ac.uk/our-work/data-management-and-curation/e-infrastructure-taking-forward-strategy>, and the report can be downloaded from

www.rcuk.ac.uk/cmsweb/downloads/rcuk/research/esci/e-Infrastructurereviewreport.pdf

Contacts: j.k.stewart@ed.ac.uk, Robin.Williams@ed.ac.uk



James Stewart

Books

Biofuels And The Globalisation Of Risk, by James Smith (Zed Books Ltd, November 2010), analyzes the politics and policies behind the story of biofuels. Starting with a brief history of bioenergy policy, this book examines a series of interlinked case studies, to explore the evolution of biofuels as a policy narrative, as a development ideal and as a socio-technical system.

Interdisciplinary Research Journeys: Practical Strategies for Capturing Creativity

by Catherine Lyall, Ann Bruce, Joyce Tait and Laura Meagher and published by Bloomsbury Academic, is a practical guide for developing interdisciplinary research strategies at a personal, institutional and multi-institutional level. "Interdisciplinarity" has become a rallying cry among funders and leaders of research. Yet, while the creative potential of interdisciplinary research is great, it poses many challenges. This book provides practical help to build interdisciplinary skills and mobilise a new and growing research community.

Publications

Risk Governance of Synthetic Biology

Heather Lowrie and **Joyce Tait** contributed to the development of a *Concept Note on the Risk Governance of Synthetic Biology* for the International Risk Governance Council (IRGC) that has recently been used as background reading by the US Presidential Commission for the Study of Bioethical Issues (PCSB). The PCSB is preparing recommendations for the President concerning synthetic biology, to be published by the end of the year. Based on her work with the IRGC, Heather recently wrote an article on how the field of synthetic biology challenges the way we see our world. Published by the American Institute of Biological Science, *Balancing Benefits and Risks of Synthetic Biology* suggests the need to consider the ethical and safety concerns of this new technology 'sooner than later' and questions which approach is best to globally develop and manage this science safely. For further details write to: h.e.lowrie@sms.ed.ac.uk

Assessing the Precautionary Principle



Joanna Chataway



EUROPE

Joyce Tait and **Joanna Chataway**, director of Europe's Innovation and Technology team of RAND Corporation, published in November the policy brief *Pros and Cons of the Precautionary Principle (PP)*:

European Experience with the regulation of GM Crops, part of the briefing series "Appropriate governance of the Life Sciences".

The paper raises the question of whether the uncritical adoption of the precautionary principle and 'upstream engagement' has diminished the innovativeness and competitiveness of a major European industry sector, and is challenging the future innovation in life sciences.

Further information:
Joyce.Tait@ed.ac.uk



Other publications

Neil Pollock and Robin Williams (2011). E-infrastructures: How do we know and understand them? Strategic ethnography and the biography of artefacts. Computer Supported Cooperative Work, 19(6): 521-56

Rob Procter, Robin Williams, James Stewart, Poschen Meik, Snee Helene, Alex Voss and Marzieh Asgari-Targhi (2010). Adoption and use of Web 2.0 in scholarly communications. Philosophical Transactions of the Royal Society A, 368: 4039-56. doi : 10.1098/rsta.2010.0155

Graham Spinardi (2010). The rise and fall of Safeguard: Anti-ballistic missile technology and the Nixon Administration. History and Technology, 26(4):313-34

Christine Knight and Claire Lightowler (2010). Reflections of "knowledge exchange professionals" in the social sciences: emerging opportunities and challenges for university-based knowledge brokers,' Evidence & Policy vol. 6(4): 543-56.

Christopher Lawless (2010) Policing markets: the contested shaping of neoliberal forensic science. British Journal of Criminology, in press.

Post-graduate opportunities in Science, Technology and Innovation Studies

Closing date: 21 April 2011.

Science, Technology and Innovation Studies in the School of Social and Political Science at the University of Edinburgh is pleased to announce a number of post-graduate funding opportunities at both MSc and PhD level.

MSc Awards

David Edge studentship

Named after the late founder of the Science Studies Unit, the David Edge studentship provides support for a full-time student in either the MSc Science and Technology Policy and Management or the MSc Science and Technology Studies at the University of Edinburgh. The studentship covers the costs of the University UK/EU fees for the one-year full-time course plus £450 for research expenses.

Applications are welcome from within or outside the European Union, but the studentship does not cover the full costs of fees for non-EU students. More details at www.ed.ac.uk/schools-departments/student-funding/postgraduate/international/humanities/social-political-science/david-edge

Innogen Master's Scholarship for the MSc in STID

Supported by the ESRC Innogen Centre and specific to the MSc in Science, Technology and International Development (STID), the Innogen Masters Scholarship provides support for a full-time student in 2011-12 in the MSc STID. The scholarship will contribute £2000 towards student fees for the one-year full-time programme plus £450 for research expenses.

Students must undertake to follow course options that focus on the life sciences and biotechnology and complete a thesis on a related topic, supervised by an Innogen staff member. For details or applications please contact Lawrence Dritsas: l.dritsas@ed.ac.uk.

More information at www.ed.ac.uk/schools-departments/student-funding/postgraduate/uk-eu/humanities/social-political-science/innogen

PhD Awards

ESRC Scottish Doctoral Training Centre Awards

STIS has been awarded at least two studentships in Science, Technology and Innovation Studies. Further related awards may be available under other pathways (for example Environment, Climate Change & Energy). Students with a strong first degree or Master's degree working on relevant topics should contact Ivan Crozier at ivan.crozier@ed.ac.uk, to discuss their research topic and potential supervision. Details on how to apply for an ESRC award on the Graduate School website: www.sps.ed.ac.uk/gradschool/funding/esrc_awards

The deadline for applications (including a full research proposal that has been worked on with the allocated supervisor and is ready for submission) is 21 April 2011.

For any further information on these awards, or on the STIS PG programme in general, please contact Dr Ivan Crozier on ivan.crozier@ed.ac.uk. For further information about research activities at STIS, including links to the Science Studies Unit, Innogen, and the Genomics Forum, see www.stis.ed.ac.uk/. For specific information on our programmes of study, see www.stis.ed.ac.uk/studying_science_and_technology#taughtPG