

ISSTI

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

newsletter

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Two Major Awards

Welcome to the summer edition of the ISSTI Newsletter.
We are delighted to share information on two major research awards (fuller details on p. 2):
Professor Donald MacKenzie, ESRC, *Online Advertising: Data, Materiality, Systematicity and Power*
Professor Jane Calvert, NSF/UKRI, *Future Organisms: Synthetic Genomics and Responsible Research and Innovation in the UK, USA and Japan*
We may not have been able to do much fieldwork, or even get together during the lockdown, but ISSTI members have been exceptionally busy in writing up earlier findings. We are excited to share with you details of a swathe of books from the ISSTI stable (more details on p. 4)

Major New Grants	2
Expanding Our Research	3
Books, Books, Books.....	4
New Results and Recognitions	5
Tackling Climate Change.....	6
Community News.....	7
ISSTI Alumni Network.....	8

WANT MORE NEWS?!

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[@UoE_STIS](https://twitter.com/UoE_STIS)

Professor Donald MacKenzie secures major ESRC award



Economic
and Social
Research Council

Donald MacKenzie, Charlotte Rommerskirchen and Koray Çalışkan, 'Online Advertising: Data, Materiality, Systematicity and Power', UK Economic and Social Research Council, April 2022 to March 2026, £513,282.

The study will examine how online advertising has developed from the simple 'renting' of space on websites to today's 'real-time bidding'. Many millions of times a day, the momentary opportunity to display an advertisement to a specific individual user triggers an instantaneous automated auction, with the bidding algorithms being provided with, eg, details of the user's device, the user's location, and - crucially - perhaps a 'cookie' (a text file previously deposited in the user's browser) or other identifier, which can be linked to other data such as the user's age band, gender, interests and browsing history (including uncompleted purchases and perhaps even mouse 'hovers').

The team will research how data is generated and processed to 'target' ads, inform automated bidding, and measure advertising's success. They will examine how and why advertising technology takes the material forms that it does, including the effects of constraints such as the need to bid in online auctions within around a tenth of a second. They will conceptualise and examine the manifold forms of power and politics around online advertising, including the 'market power' of giants such as Google and Facebook, the impact of the politics and law of privacy (eg the EU's General Data Protection Regulation or GDPR), the 'material politics' of the choices among ways of configuring crucial technical systems, and the migration of the techniques of digital advertising into electoral politics and political campaigning.

Professor Jane Calvert and Dr Rob Smith awarded UKRI Grant

3-year US NSF/UKRI grant 'Future Organisms: Synthetic Genomics and Responsible Research and Innovation in the UK, USA and Japan', which also involves our former colleagues Koichi Mikami and Erika Szymanski as Co-Investigators.

Synthetic genomics is an emerging scientific field that makes it possible for scientists to design and build larger stretches of DNA than ever before, at the scale of chromosomes and even whole genomes. It could potentially bring new types of organism into the world.



**Future
Organisms**

Professor Jane Calvert and Dr Rob Smith, along with former STIS colleagues Dr Erika Szymanski (now at Colorado State University) and Dr Koichi Mikami (now at Keio University) have been awarded a three-year research grant called 'Future Organisms: Synthetic Genomics and Responsible Research and Innovation in the UK, the USA and Japan', jointly funded by UKRI-ESRC and the US National Science Foundation. Its aim is two-fold: to carry out a social scientific investigation into synthetic genomics and to develop new approaches to responsible research and innovation through this investigation.

Their research into synthetic genomics crosses three countries and is organised into three workstreams: *Countries*, *Creatures* and *Capacities*. The *Countries* workstream examines national and international policy and funding strategies for synthetic genomics and the narratives and expectations embedded within them. *Creatures* explores the ways in which synthetic genomics alters human relationships with other organisms by positioning humans as designers of other species. *Capacities* aims to seed an international network of social scientists attached to emerging scientific fields and build a foundation for future work.

Expanding Our Research

Update on The Culture and Communities Mapping Project

[The Culture and Communities Mapping Project](#), led by Dr Morgan Currie (Principal Investigator), received a grant from the **DDI BEACON Build Back Better Open Call for COVID-19 Response & Accelerating Economic and Social Recovery in Edinburgh & South East Scotland**. The funding supports a web map, designed in partnership with the Edinburgh Festival Fringe Society and Festivals Edinburgh, to encourage efforts in cultural dispersal. The map shows ticket purchased data per neighbourhood, where festival venues and events take place, locations of festival outreach activities and locations of Just Eat Cycle bikes. Covid-19 has created an opportunity for festivals to rethink traditional relationships with communities; this project aims to empower local organisations and citizens to make a case for support for more festival programming and cultural infrastructure in areas outside the city centre.

The Culture and Communities Mapping Project also received an **ESRC Impact Acceleration Grant** to host cultural mapping workshops with six Edinburgh-based community hubs – cultural organisations that provide core social infrastructure – on the themes of cultural dispersal and redistribution. Festivals are committed to see outreach and events become more geographically distributed across the city, and they are interested in working in neighbourhoods that have historically had less cultural infrastructure year-round and less engagement with their events. The mapping workshops will reach around 70 people and result in six community-based cultural maps and reports to argue for a more equitable spread of resources, both cultural and economic, across the city.



THE CULTURE AND
COMMUNITIES
MAPPING PROJECT

New Real Programme Launches AWEN Experience Poised to Examine Cultural Sector Resilience and Critical Literacies

Having successfully launched the AWEN experience as part of the Edinburgh Science Festival, the New Real Team is starting work on a UKRI-funded project exploring new AI-powered cultural production and digital service design with Edinburgh Festivals.

AWEN: A Walk Encountering Nature is the result of an 8-month long collaboration within the SFC-funded *Experience in the New Real* project. An interdisciplinary group of artists, designers, scientists and engineers built a web-based mobile application which uses poetic symbolism and playfulness to connect global datasets and models about environment and climate (change) with every-day human perspectives and activities. You can experience the pilot version of the walk at www.awen.earth. The team is also now working on further developments to be released in time for the COP26 conference in the Autumn. This next iteration of the AWEN experience will be analysed as part of the UKRI-funded follow-up project *Resilience in the New Real*, studying critical data/AI literacy.



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.

Books, Books, Books



Trading at the Speed of Light: How Ultrafast Algorithms Are Transforming Financial Markets, Donald MacKenzie

"A remarkable look at how the growth, technology, and politics of high-frequency trading have altered global financial markets"

*"In today's financial markets, trading floors on which brokers buy and sell shares face-to-face have increasingly been replaced by lightning-fast electronic systems that use algorithms to execute astounding volumes of transactions. **Trading at the Speed of Light** tells the story of this epic transformation."*

For more information please click [here](#).

Everyday cyborgs: Technologies that alter subjectivity, Gill Haddow

"Your organs are failing and require replacement. If you had the choice, would you prefer organs from other humans or non-human animals, or would you choose a 'cybernetic' medical implant?"

Using a range of social science methods and drawing on the sociology of the body and embodiment, biomedicine and technology, this book asks what happens to who we are (our identity) when we change what we are (our bodies)?"

For more information please click [here](#). Please note that this book is open access and a digital copy will also be made available [here](#) shortly.

Gender, Embodiment, and the History of the Scholarly Persona, Michael Barany

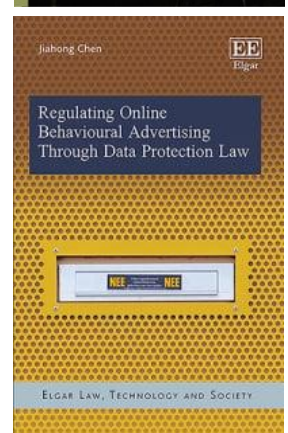
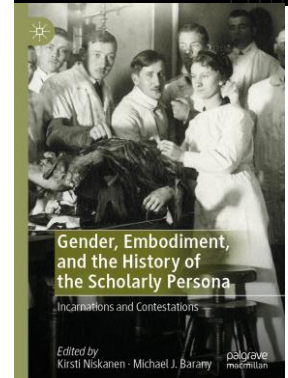
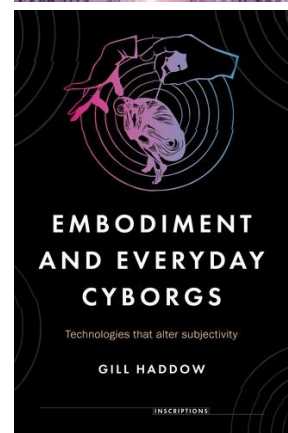
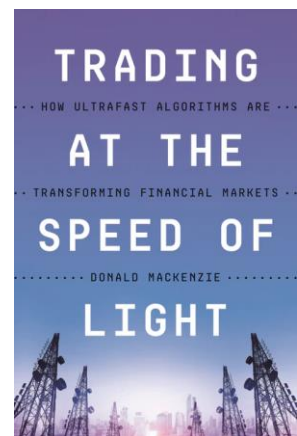
"This book investigates the historical construction of scholarly personae by integrating a spectrum of recent perspectives from the history and cultural studies of knowledge and institutions. Focusing on gender and embodiment, the contributors analyse the situated performance of scholarly identity and its social and intellectual contexts and consequences."

For more information please click [here](#).

Regulating Online Behavioural Advertising Through Data Protection Law, Jiahong Chen

"This insightful book provides a timely review of the potential threats of advertising technologies, or adtech. It highlights the need to protect internet users not only from privacy risks, but also as consumers and citizens online dealing with a highly complex technological setting."

For more information please click [here](#).



New Results and Recognitions



Edinburgh Academics work on EU Funded SHAPE-ID Project

Professor Catherine Lyall and Dr Isabel Fletcher are working on the [SHAPE-ID EU project](#) and led the work package that has just launched the final online toolkit.

Researchers, funders and societal partners are sometimes at a loss for best practice on how to collaborate and work across disciplinary boundaries. Dr Isabel Fletcher and Professor Catherine Lyall are part of the **EU-funded [SHAPE-ID project](#)** led by Trinity College Dublin which has been working with European partners to address this challenge, with a particular focus on how to strengthen the integration of the Arts, Humanities and Social Sciences (AHSS) in inter-and transdisciplinary research with Science, Technology, Engineering, and Mathematics (STEM) disciplines and societal partners. Catherine and Isabel led the work package to produce the project's final output, [the SHAPE-ID toolkit](#), which offers practical tools and resources to help researchers, research organisations, funders, policymakers, and societal partners make informed decisions about developing and supporting inter-and transdisciplinary research.

The toolkit was launched on 11 June at an event joined by over 250 people from across Europe and beyond and opened by Mr Harald Hartung, Head of Unit, Fair Societies & Cultural Heritage,

Directorate-General for Research and Innovation, European Commission. The easily accessible online toolkit features tailored resources designed to help individuals, research performing organisations and funders to consider the most important issues when developing, designing, evaluating, funding or collaborating on an interdisciplinary or transdisciplinary project. It also offers inspiration for researchers in the form of case studies and short interviews with experts as well as a series of downloadable guides and reflexive tools.

SHAPE-ID

Shaping interdisciplinary practices in Europe

Dr Matjaz Vidmar Wins AsSIST-UK PhD Prize

The UK Association for Studies of Innovation, Science, and Technology (AsSIST-UK) awards an annual prize for a PhD thesis that demonstrates outstanding quality in the STS/Innovation Studies field.

This year the winner was our own Dr Matjaz Vidmar for his thesis on: ***The Scottish Space Sector and Innovation; A PERIpatetic study of an emerging innovation system and the roles of innovation intermediaries***



The awards committee made the following observations:

The thesis' objective was to determine how and where STS and IS can be brought together. It does so through building its conceptual argument over a series of chapters focused around the Scottish space sector. The thesis offers a novel problem-driven strategy for doing this based on the concept of the 'PERIpatetic Approach' and a multi-level perspective from macro to micro levels, and the role of innovation intermediaries/networks therein. The thesis has led to a number of published papers and a book. The thesis has involved close engagement with those scientists/technologists in the field itself not simply as data sources but as co-producers of some of the ideas and their application not least through the ongoing Social Dimensions of Outer Space Network. The policy impact is very strong at University, regional, and national levels.

For more information please click [here](#).

Tackling Climate Change

The UK will host the 26th UN Climate Change Conference of the Parties COP26 in Glasgow on 1 – 12 November 2021. The COP26 summit will bring parties together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. In the run-up to this key event, researchers have been contributing to important discussions, engaging with policy and raising awareness.

Professor Jan Webb Discusses COP26 with Government and Business Officials

On the 25th of March 2021, the UK Energy and Research Centre (UKERC) ran an event entitled “COP26: The stepping stones to success for Government and Business?”. Discussions focused on what is required of government and business to make COP26 a success.

Professor Jan Webb joined Lord Callanan, Minister for Business, Energy & Corporate Responsibility and Keith Anderson, Chief Executive of Scottish Power for a discussion and Q&A chaired by Professor Charles Hendry, President of the British Institute of Energy Economics. A [write up of the event can be found here](#), and a [video from the webinar can be accessed here](#).

On the 27th of May 2021, Professor Jan Webb also gave a keynote address on Social Studies of UK Local Energy Systems for 'Webinar Décimas Jornadas de Economía de la Energía', Pontificia Universidad Católica de Chile. A video of her address: “Local Energy in the UK: Social Science Perspectives” can be found [here](#).

UKERC
UK Energy Research Centre

Local Energy in the UK: Social Science Perspectives

Janette Webb MBE FEI
University of Edinburgh

@UKERCHQ



Dr Kirsten Jenkins Interviewed by The Royal Society of Edinburgh on COP26 and “Working Towards a Fairer Future”

The Royal Society of Edinburgh, Scottish Science Advisory Council and Scottish Alliance for Geoscience, Environment and Society are collaborating to highlight Scottish research and science and its contribution to understanding and tackling climate change. A broad range of researchers and practitioners in Scotland whose work relates to the Earth's climate are being interviewed in the lead up to COP26. Dr Kirsten Jenkins was interviewed as part of a series designed to allow people to “meet some of Scotland's leading climate researchers talking about their work in the lead up to the UN Climate Change Conference COP26”. For further information, and to watch Kirsten's video interview, please click [here](#).



We are delighted to welcome a new colleague.

Dr Katherine Sugar

Dr Katherine Sugar joined The University of Edinburgh in early April to complete the research evaluation of the Energy Efficient Scotland Transition Programme.

Dr Sugar's work includes the social evaluation of recent local authority-led energy efficiency pilot projects in Scotland. For more information, please click [here](#).



Alumni Dr Javier Guerrero Appointed Editor of STS Journal Trilogía

Dr Javier Guerrero alumni, has recently been appointed as editor of the Colombian STS journal [Trilogía](#). The journal is indexed in several leading directories and bibliographic databases, such as SSRN and EBSCO, and currently under consideration by Scopus. Trilogía is a double-blind peer-reviewed journal and publishes contributions both in Spanish and English. If you wish to widen the public for your research and publish in Trilogía, you can [submit](#) via the journal or contact Javier at javierguerrero@itm.edu.co for ideas and proposals.



Congratulations to Professor Martyn Pickersgill, Personal Chair in the Sociology of Medicine, who was elected earlier this year to the Academy of Social Sciences!

Dr Jarita Holbrook presents at Communicating Astronomy to the Public (CAP21) conference

Dr Holbrook presented a poster at the Communicating Astronomy to the Public 2021 conference (CAP2021) on public engagement activities featuring cultural astronomy and how to effectively assess the audience depending on the engagement goals.

In addition her ideas on infusing science into roadtripping with kids were quoted in a recent article in National Geographic magazine.

Yazmin Morlet Corti Advises Senior Citizens on Privacy

On the 30th of April 2021, Yazmin Morlet Corti gave a talk at Musselburgh Computer Club on privacy recommendations for Scottish Seniors Computer Club.

PhD Successes

We are delighted to record the success of another strong cohort of students of Science Technology and Innovation Studies who will receive their PhDs in the summer 2021 graduations.

Melissa Namchu	"Understanding Health Practices of the Lepcha Community: An Anthropological Inquiry"
Mason Robbins	"The Money League, Elite Men's Football and Rankings: An Interpretive Narrative"
Rosalind Attenborough	"Finding virtue in open science? Biological scientists' constructions of openness in historical, advocacy and policy contexts"

Through the ISSTI Newsletter and other channels the *Institute for the Study of Science, Technology and Innovation* has been reaching out to former postgraduate students and colleagues. This seems particularly important during the current Covid-19 pandemic when so many channels for meeting face to face have been locked down. We invited our alumni to suggest ways of strengthening our engagements. We also asked them to let us know how they have been getting on since leaving Edinburgh.

Here are some of the updates they provided.

Dr Alin Ake-Kob

I was very fortunate to be a postgraduate student 2012-2013 at ISSTI Master Degree by Research in Science and Technology Studies. I am currently a PhD Candidate in Sociology at Nord University. I research AAL technologies, particularly the use and development of a movement sensor with audio-video affordances implemented in Norwegian Care Facilities, as well as in private houses. The Research Council of Norway appointed me in 2020 as representative of the country for the COST Action 19121, and I am currently visiting researcher in the Norwegian University of Science and Technology (NTNU). For more information, please see my profile [here](#).



Helen Carmichael

I studied for the MSc in Science and Technology Studies in 1996-7, and graduated in 1998. Although my time at Edinburgh was brief, what I learned there was very useful in writing about science, the business of innovation, and science policy over the years. Having a postgraduate qualification also allowed me to lecture and lead a postgrad course (briefly, as a maternity cover) - in science writing at the University of the West of England.

After 20+ years as a science writer and editor, I changed career and now make video games. For more information please see my LinkedIn profile [here](#).



Dr Yves Bourgeois (MSc STS 1998-99)

I undertook my MSc in STS between 1998-99 and am currently Dean of studies, Université de Moncton, Campus de Shippagan. Previously, I was Director of the Urban and community studies institute, University of New Brunswick, and undertook my PhD in Urban studies (regional and international development) at UCLA.

As Dean of studies, I oversee all academic programs, teaching staff, students, research, library services. Change management, particularly technological change, are topics I explored back in STS and that I use daily, whether implanting distance teaching platforms and technologies, accelerating digital resources and pedagogy in our library/information services,



implementing virtual reality and augmented reality, reimagining the classroom, and more. I've also specialized in smart cities, in integrating IT in the planning and provision of municipal services, and I am currently leading an initiative that is rolling out a hybrid community transportation initiative that integrates scheduled- with on-demand services, using technologies to study and plan demand, to integrate multi-modal services, to communicate and to nudge travel behaviours. In addition to my research on the economic and labour market impacts of technological changes, such as renewable energy and local districting, STS has long helped deepen my appreciation of societal challenges linked to differentiated access to technology, disenfranchising of voters, etc. Pound for pound, STS was my most formative year in academia.

Dr Gethin Rees

I took my MSc by Research in 2004-2005 and PhD 2005-2009. I am now a Lecturer in Sociology at Newcastle University. I am interested in the intersections between healthcare and criminal justice, for instance the provision of medical expert testimony for the courtroom and healthcare within criminal justice contexts such as police stations or prisons. I am presently a Co-Investigator on a Social Science and Humanities Research Council Connections Grant, developing networks between rural providers of forensic medical interventions following rape and sexual assault in Ontario and Scotland. In addition, following a Wellcome Trust Seed Award (2017) that explored the introduction of nursing staff into police custody environments, I am seeking funding for more wide-ranging research on the delivery of healthcare in police custody, focusing on multiagency collaboration, professional-detainee relationships and risk assessment practices. I had the privilege of being invited to provide one of the two keynotes for the forthcoming Wellcome Trust funded symposium on *Sexual Violence, Medicine and Psychiatry*, in May 2021. Building on expertise in forensic interventions in sexual offences, my lecture addressed my recent work on the alcohol-induced sleepwalking defence controversy that erupted within sleep science, and in particular the ways the closure of said controversy impacted upon an Ontario-based trial. For more information please see Gethin's profile [here](#).



Dr Luis Soares

I am still working as a social researcher at the University of Edinburgh Institute for Design Informatics at the University of Edinburgh where I have been for the last two years, drawing upon my background in Communication Sciences and Media and Communication, and strong links to Creative Industries where I worked as a professional for several years.

Building on my experience in the field of ICT4D and recently in the area of HCI4D my research focus spans the role of technology in society, particularly in low-income countries, contextualising innovation and development from the grassroots perspective. I am currently working on autonomous systems and blockchain applications, seeking to understand social interactions in the domains where these technologies are applied. My profile can be found [here](#).



We plan to make these a regular feature of the ISSTI Newsletter – so feel free to submit your news. And if you know any colleagues who have somehow fallen off the list can you ask them to email us via Robin.Williams@ed.ac.uk