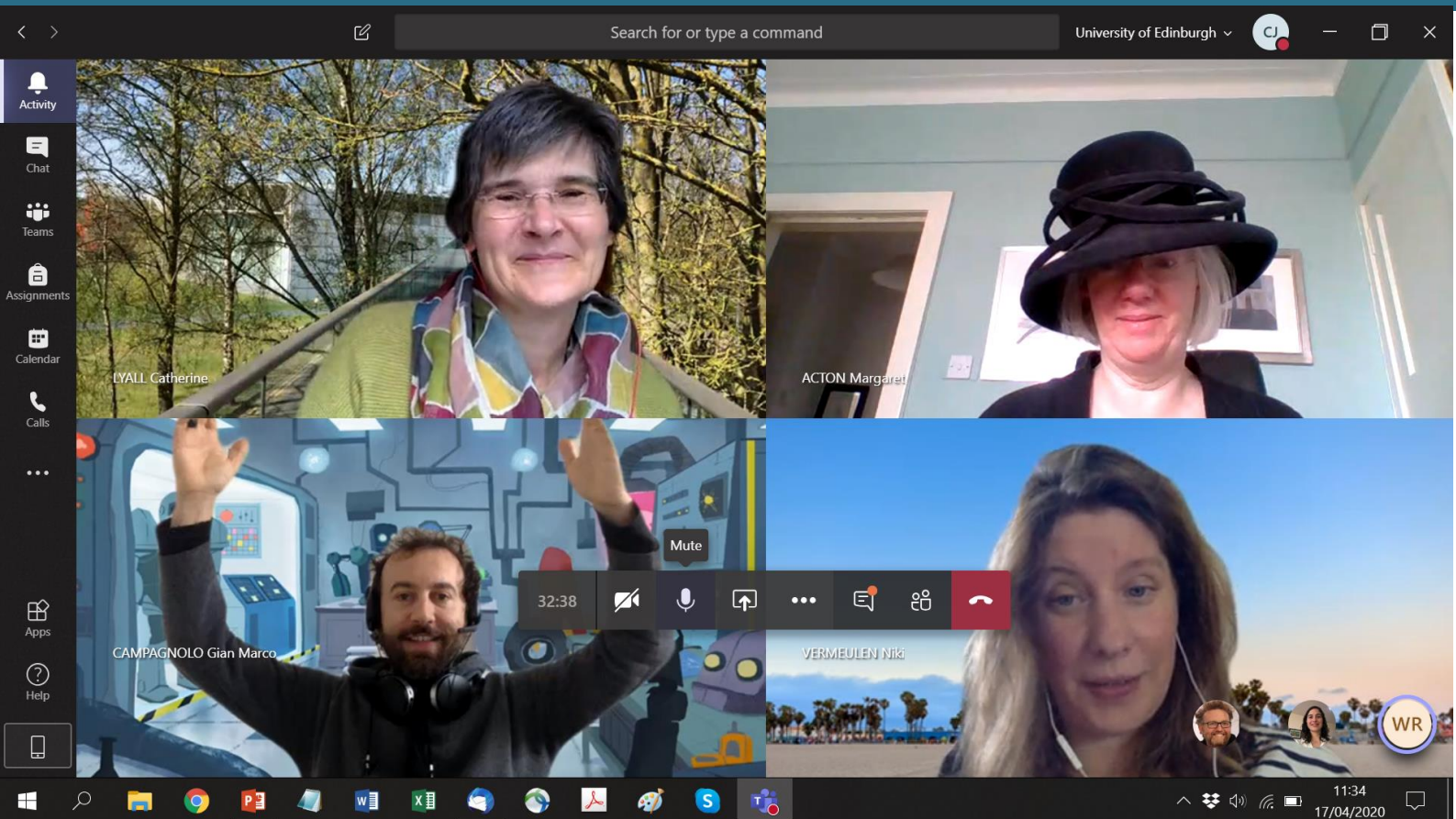


ISSTI

THE INSTITUTE FOR THE
STUDY OF SCIENCE
TECHNOLOGY AND INNOVATION
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newsletter

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This (delayed) issue of ISSTI Newsletter, the first in 2020, comes amid a difficult time for many colleagues. Due to the Covid-19 pandemic, research projects are being paused or redeveloped and our own annual ISSTI Retreat has been cancelled. Nonetheless, our community remains strong and buoyant. And as this screenshot shows, we are learning how to sustain networks using new online media. New avenues of enquiry and cross-institutional partnerships are emerging around critical concerns. We also celebrate the extensive publication output of 2019.

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WANT MORE NEWS?!

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Twitter accounts at:
[@UoE_ISSTI](https://twitter.com/UoE_ISSTI) & [@UoE_STIS](https://twitter.com/UoE_STIS)

Responding to Covid-19



Data-driven Innovation (DDI) Funding to Tackle Impact of Covid-19

Two grants secured by Morgan Currie (STIS) and Alessandro Rosiello (Entrepreneurship and Innovation, UEBIS) to examine the impact of Covid-19 and support the recovery process.

Dr Currie leads a project on **Art in & out of Lockdown**, in partnership with LeithLate to build a virtual tour of their successful walking tours of the Leith area's murals and open studios. This project also links existing data to bus and bike routes to create curated tours that encourage residents and tourists to explore Edinburgh's cultural assets beyond the city centre.

Dr Roseillo, and research fellow Dr Matjaz Vidmar, are examining the **Impact of Covid-19 on High-Growth Businesses in Edinburgh City Region and Beyond**. The project aims to develop a comprehensive body of evidence to show how businesses are coping with Covid-19 and associated measures and propose further interventions that are most likely to be effective in combating the economic impact of the pandemic, informing the local (and national) government, support agencies and managers. Preliminary findings from this project were presented as part of a special DDI webinar: <https://ddi.ac.uk/ddi-launch-new-webinar-series/> on 1st July.

ISSTI Director Chairs AsSIST-UK's First Covid-19 Webinar

To develop a STIS-wide discourse about the challenges and research opportunities of Covid-19, the UK Association for the Study of Science, Innovation and Technology (AsSIST-UK) held its first-ever webinar with distinguished guests.



The webinar on June 18 was organised by Barbara Ribeiro, Andrew Webster, Matjaz Vidmar and Robin Williams, and attended by over 80 colleagues from around the world. The panellists, Eva Giraud, Michael Schillmeier, Annie Wilkinson, Reiner Grundmann and Andy Stirling, raised a wide range of issues which need to be addressed within the field, and showed how they are exploring these in their current work. Colleagues within the AsSIST-UK network were also invited to submit a brief summary of their Covid-19-related research, which we hope will encourage collaboration across projects. The full report is available on the website at <https://assist-uk.com/report-on-the-assist-uk-webinar/> and a recording can be viewed at https://bit.ly/AsSIST-UK_Webinar-June20.

The Association also drew on the outcome of the Webinar to send a submission to the Government Office currently seeking proposals for near-term research (<https://www.gov.uk/government/collections/areas-of-research-interest>) relating to Covid-19. A key issue missing from the current list on the GO paper is that one of the challenges of the contemporary pandemic are changes in life necessary to cope with the virus, and going beyond of how we live, but how we wish to live. The line taken in the government document in the section on 'Trust' is solely about prevention, eradication etc.

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.

Responding to Covid-19

Lessons of Covid-19 Digital Health Apps in China

As the UK and other Western countries are re-opening their economies there may be important lessons from China's earlier experiences. Dr Xiaobai Shen (Business School) has written two papers exploring how China was able to take advantage of an advanced digital infrastructure and inherited local governance infrastructures to put into place bottom-up governance of contagion risk.



- [The digital health app got China back in business within six weeks after Covid-19 lockdown - food for thought for the UK?](#)
- [Grass-roots management of Covid-19 in China: behind the digital health apps](#)

Research News

ISSTI Part of New £20m Advanced Care Research Centre

ISSTI members, Robin Williams, Kathrin Cresswell and James Stewart, are part of the team that has secured £20 Million funding from Legal and General to establish a ground-breaking research centre: The Advanced Care Research Centre (ACRC). Led by Bruce Guthrie, Professor of General Practice at the University of Edinburgh's Usher Institute, the ACRC is a seven-year multi-disciplinary research programme, bringing together medicine and other care professions, life sciences, engineering, informatics, data and social sciences to improve understanding of care in later life and revolutionise how it is delivered. Our work will focus on new technologies and models of care.

More info about the Centre: <https://www.ed.ac.uk/news/2020/collaboration-to-improve-life-for-ageing-population>

International Workshop on History and Sociology of Mathematics

In early January STIS hosted a two-day international workshop organised by Dr Michael Barany on the theme of "Universals' Locales: The International and Global History and Sociology of Modern Theoretical and Mathematical Sciences."

The workshop was funded by a British Academy Rising Star Engagement Award, with two participants' travel additionally subsidised by the University's Low and Middle Income Countries Travel and Partnerships Fund. Twenty-seven researchers from around the world—including three professors from Austria, Brazil, and France serving as workshop mentors—examined the distinctive challenges of studying supposedly universal theoretical knowledge on a global scale where specific locations and their connections matter integrally. The workshop consisted of eight semi-structured peer-moderated discussions alternating with convivial meals and coffee breaks, and visiting participants were delighted to explore a dark midwinter Edinburgh after hours. Workshop conversations have since moved online to the website <https://commons.mathsworlds.org/>, which Dr Barany has recently set up as a home for global explorations of historical and contemporary mathematical and theoretical sciences.

Francesca Bray is the Winner of 2019 Leonardo da Vinci Medal

Unfortunately, we have made a grave editorial error in our last edition of the Newsletter (November 2019) and have accidentally written that the 2019 Leonardo da Vinci medal from the Society for the History of Technology was awarded to Prof Jan Webb instead of its actual recipient, Prof Francesca Bray. This has been updated in the on-line repository (<https://bit.ly/ISSTI-News-Nov19>) to reflect the correct recipient. We sincerely apologise to Prof Bray and Prof Webb for this unfortunate mix-up and congratulate Prof Bray on this remarkable achievement!

SHAPE-ID Workshop Hosted in Edinburgh

The second SHAPE-ID workshop on Environmental Humanities was organised by Prof Catherine Lyall and Dr Isabel Fletcher.

Environmental Humanities scholars, policy makers and funders, spent two days in January 2020 exploring what specific contributions the humanities can, and do, make to societal challenges research related to environmental concerns in the context of inter- and transdisciplinary research. The workshop began with three fascinating scene-setting presentations from Environmental Humanities researchers who spoke about their experience working in inter- and transdisciplinary projects and teams.



Dr Anna Antonova (Rachel Carson Centre for Environment and Society, LMU Munich, Germany) spoke eloquently of her experiences as an interdisciplinary Early Career Researcher, highlighting the rewards and pleasure of working across disciplinary and sectoral boundaries while facing the challenge of negotiating the very traditional disciplinary structures of the University.

Professor Naomi Sykes (University of Exeter, UK) offered insights from a number of highly interdisciplinary projects centred around animals. Discussing examples of two projects focusing, respectively, on chicken and fallow deer, Professor Sykes showed how these were used as a lens to explore human-animal interactions and our relationships with the natural world from a variety of cultural and scientific perspectives, revealing how relationships with and to animals feeds directly into policy.

Professor Dolly Jørgensen (University of Stavanger, Norway) presented on her experience leading the *In the Clouds* project, an ArtScience workshop funded by the Research Council of Norway. The project brought together scholars with photographers, filmmakers, painters, poets and performance artists, to collaborate with a museum on developing an exhibition on clouds, examined from this diversity of perspectives. Professor Jørgensen reminded us that excellent interdisciplinary research can occur within the broader Arts and Humanities community and does not necessarily require collaboration with STEMM (Science, Technology, Engineering, Mathematics and Medicine) disciplines.

After the presentations the group split into smaller working groups to engage in co-design activities around the development of research projects and funding calls. In the first exercise, each group worked to outline an inter- or transdisciplinary research project based on a short text on environmental challenges. On the second morning of the workshop, participants worked in groups again, this time to critique and redesign existing funding calls dealing with environmental issues so that they might better include some of the priorities of Arts and Humanities researchers and encourage the participation of these researchers to address the challenges outlined. Keep an eye out on the SHAPE-ID blog where we'll share some preliminary insights (you can follow us on [Twitter](#) and [Facebook](#)) and do sign up for our mailing list at <https://www.shapeid.eu/contact/> if you'd like to receive the SHAPE-ID newsletter (April 2020 issue: <https://mailchi.mp/shapeid.eu/shape-id-newsletter-april-2020>).

Prof Raab Appointed to Biometric and Forensics Ethics Group

The remit of this Home Office group includes consideration of the ethical impact on society, groups and individuals of the capture, retention and use of human samples and biometric identifiers for purposes which fall within the purview of the Home Office, including the differentiation between, or identification of, individuals. The group has a wide range of current policy-related interests, including live facial recognition in law enforcement, certain aspects of the government's measures to combat the coronavirus pandemic, DNA profiling, the development of data ethics guidelines, Data Protection Impact Assessment for uses of large and complex datasets, and genetic genealogy. The group carries out its tasks in working groups with overlapping membership, and is serviced by the Home Office Science Secretariat. It has external contacts with the Centre for Data Ethics and Innovation, the Office of the Biometrics Commissioner, and other bodies.



Responsible Research and Innovation



UK and European research policymakers have picked up the concept Responsible Research and Innovation (RRI) proposed by science and technology studies scholars to strengthen engagement between scientists/engineers and wider publics to ensure that innovation takes into account its potential consequences for the environment and society. ISSTI members have been contributing to the ongoing debate about RRI and how it might be achieved. Here we record our recent engagements in RRI research and training activities.

Research papers published

- Erika Szymanski, Tarsh Bates, Elise Cachat, Jane Calvert, Oron Catts, Lenny J. Nelson, Susan J. Rosser, Robert D. J. Smith and Ionat Zurr (2020) Crossing Kingdoms: How Can Art Open Up New Ways of Thinking About Science. *Frontiers in Bioengineering and Biotechnology*, 8, 715. <http://dx.doi.org/10.3389/fbioe.2020.00715>
- Smith, R, Scott, D, Kamwendo, Z and Calvert, J (2019) [*An Agenda for Responsible Research and Innovation in ERA CoBioTech*](#) Swindon, UK: Biotechnology and Biological Sciences Research Council
- Bruce, A. & Bruce, D. (2019) Genome Editing and Responsible Innovation, can they be reconciled? *Journal of Agricultural and Environmental Ethics* 32:769-788. <http://link.springer.com/article/10.1007/s10806-019-09789-w>

Massive Open Online Course (MOOC)

We contributed to a [Data Ethics, AI & Responsible Innovation](#) MOOC, with funding from The Data Lab, and hosted through the University of Edinburgh Bayes Centre's online programme on Data Science, Technology and Innovation. Over 3000 learners have registered for MOOC since this was launched in February 2020

Training Doctoral researchers in RRI

The Engineering and Physical Science Research Councils (and UK Research and Innovation UKRI more generally) recently required that students at their Centres for Doctoral Training (CDTs) receive research training in the area of Responsible Innovation. We are providing this to students on the UKRI Doctoral Training Centre in Biomedical Artificial Intelligence – and have begun to extend these offerings to other doctoral programmes in the College of Science and Engineering. This is a key locale for advancing interdisciplinary engagement between scientists and engineers and social scientists – but poses institutional and pedagogic challenges. To address these issues and develop best practice we teamed up with Jack Stilgoe (UCL) to run an online workshop. With support from the UK Association for Studies in Innovation, Science and Technology, we brought together 30 colleagues involved in delivering research training and supporting RRI in UKRI/EPSRC CDTs across 12 Higher Education Institutes. We are discussing within this group and with UKRI how to promote best practice in the field. A full report on this workshop is available here: <http://assist-uk.com/assist-uk-coordinates-training-in-responsible-research-and-innovation-rri/>

Bringing this work together at the University of Edinburgh

To share resources and provide a focus for this growing set of capabilities a network of researchers at The University of Edinburgh have established the [Edinburgh Hub for Responsible Innovation](#) (see <http://rri.ed.ac.uk>). This is an online platform which aims to pull together resources and develop critical insights about the place of science and technology in democratic societies and the contribution of RRI activities. The website is in its early stages and we are keen to represent expertise from across the University. For more information contact rri.contact@ed.ac.uk (which is monitored by Rob Smith).

Artificial Intelligence Ethics and Society Group Launched

Benedetta Catanzariti, Yazmin Morlet Corti, and Vassilis Galanos from STIS, in collaboration with the main organiser Sarah Bennett from ECA, have initiated the Edinburgh-based AI Ethics & Society group. After a successful round of events last year, the group has continued to organise reading groups, guest talks, and film screenings throughout the 2019-2020 year. The group's website is here: <http://ai-ethics.org/>

The group has organised a conference on AI ethics which will now take place on the 22nd-23rd October 2020. More information and registration link can be found here: <https://www.criticalperspectives-aies.com/>



Martyn Pickersgill has been awarded Personal Chair in the Sociology of Science and Medicine. Congratulations!

We are delighted to welcome a new colleague.

Dr Helen Poulter

Helen has joined us from the University of Exeter, where she was working with the Energy Policy Group based in Penryn, Cornwall as part of the EPG IGov2 project which researched the role of governance in enabling energy system change. Helen had previously studied renewable energy engineering at Exeter and, following this, studied for her PhD as part of the IGov2 project. Her PhD research concentrated on how the principles of adaptive governance from social-ecological literature could be adapted for energy system change, using a case study of decentralised energy in the National Energy Market in Australia. Helen has a particular interest in the future role of regulation in enabling energy system change. Helen is joining STIS as part of the UKERC 4.0 program.



Dr Jarita Holbrook

Jarita joins us as a Marie Skłodowska Curie Career Restart Fellow, they had a career hiatus first as an AAAS Science & Technology Policy Fellow at the USA NSF and then earning a certificate in Digital Media & Filmmaking Production. Holbrook



STIS PhD Student wins 2019 Sue Grant Award

Vassilis Galanos, STIS PhD Student, has won the 2019 Sue Grant Award for his "uniquely strong contribution to the SPS postgraduate community and to the University collective more generally", which has "garnered not only the support of fellow PhD students, but also of staff and has achieved recognition beyond the University."

is a Californian holding degrees from Californian institutions including a doctorate from the University of California, Santa Cruz. Their MSCA project for STIS is ASTROMOVES an interview-based project examining the career decision making of astrophysicists with attention to intersectional identity. Besides studying astrophysicists, Holbrook is an expert on African cultural astronomy and an award-winning filmmaker. Their articles are archived on Academia.edu. Twitter: [@astroholbrook](#) or [@science_tourist](#) YouTube: [The Cultural Astronomy Channel](#) or [Science Tourist Channel](#)

We are pleased to record details of successes of alumni and former colleagues.

Congratulations to our alumnus, Dr Abel Villa, for his position at Organic Research Centre.

After completing his PhD in Science, Technology and Innovation Studies at the University of Edinburgh in November 2018, Abel joined the research staff at The Organic Research Centre (ORC) as a Researcher in Agricultural Supply Chains in the department of Business and Markets. This follows the work he undertook in his PhD thesis, which examined the development of producer capabilities in Global Value Chains in the agricultural sector in Mexico. At ORC, Abel's examines how downstream and upstream value chains across Europe, its actors and stakeholders are impacted by diversification of cropping systems as well as the costs and benefits of the different methods for improving organic trade statistics.



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This volume introduces the notion of Thinking Infrastructures to explore a broad range of phenomena that structure attention, shape decision-making, and guide cognition: Thinking Infrastructures configure entities (via tracing, tagging), organise knowledge (via search engines), sort things out (via rankings and ratings), govern markets (via calculative practices, including algorithms), and configure preferences (via valuations such as recommender systems). Thus, Thinking Infrastructures, we collectively claim in this volume, inform and shape distributed and embodied cognition, including collective reasoning, structuring of attention and orchestration of decision-making.

THINKING INFRASTRUCTURES

Edited by Martin Kornberger,
Geoffrey C. Bowker, Julia Elyachar,
Andrea Mennicken, Peter Miller,
Joanne Randa Nucho and Neil Pollock

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From Spaceships to Submarines - Between Facts and Fiction

Over the past few months, our colleagues published several ground-breaking books. Following an Edinburgh Futures Institute funded project (reported on in the previous issues), Deborah Scott and Simon Malpas edited a collection of commissioned short stories and analytical essays entitled *Scotland in Space*, published by Shoreline of Infinity. The book features several members of the Social Dimensions of Outer Space network and foreword by acclaimed Scottish author Ken MacLeod (<https://www.shorelineofinfinity.com/product/scotland-in-space/>). Our PhD alumnus, Javier Guerrero, published critical contributions from his doctoral work examining technological innovation of Colombian drug smugglers and the Colombian Navy in *Narcosubmarines: Outlaw Innovation and Maritime Interdiction in the War on Drugs* (Palgrave, <https://www.palgrave.com/gp/book/9789811390227>). Finally, our recent alumnus, Rhodri Leng and his father, Gareth, discuss how biases, the desire for a good narrative, reliance on citation metrics, and other problems undermine confidence in modern science in *The Matter of Facts: Skepticism, Persuasion, and Evidence in Science* (MIT, <https://mitpress.mit.edu/books/matter-facts>). Congratulations!

