

ISSTI

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

Newsletter

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Research Engagements	2
Community News	5

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This ISSTI Newsletter marks the start of the 2023/24 academic year. We are delighted to report on an array of outputs and engagements arising from some of our ongoing research projects encompassing such diverse areas as data and AI in healthcare, DATA and AI Ethics, Cultural Astronomy, Genomics, and much more. We are also delighted to announce a number of exciting new appointments in our community news.

Research Engagements



DATA and AI for People and Society

Congratulations to Claudia Pagliari for her manuscript with Aizhan Tursunbayeva on the *Ethics of People Analytics*, published in the journal *Personnel Review*, having been named “Outstanding Paper” in the Emerald 2023 literati awards.

In addition, Claudia led a major programme of work for the Scottish Government on Digital Ethics which ended last year. Part of this involved a series of public engagement activities with a ‘mini-public’ over the course of several months. Claudia also chaired the national expert group and developed the “Objects of Trust” framework that has been carried toward. See more on the framework [here](#).

As part of an AHRC collaborative grant on the Governance of data in public health emergencies, led by the Bingham Institute, Claudia was involved in the design and delivery of two citizens juries, coordinated by the [Ada Lovelace Institute](#). The event was built around Claudia’s conceptual framework of good governance in this context.



Dr Claudia Pagliari



Professor Jane Calvert

Jane Calvert presents Andrew Webster Memorial Lecture

Professor Jane Calvert gave a public lecture on 'Synthetic biology and the social sciences: making room for collaboration'. This annual lecture, organised by the University of York and its Science and Technology Studies Unit to commemorate the contribution of its founder, our friend and colleague Professor Andrew Webster, took place in National Centre for Early Music on 7th September 2023. Jane’s talk examined the close but contradictory relationships that Science, Technology and Innovation Studies scholars have with scientists, engineers, policymakers and diverse publics, around Synthetic Biology.

Jane used the metaphor of different rooms (laboratory, ivory tower, policy room) to examine the challenges of undertaking theoretically-informed critical research while engaging with interdisciplinary collaborative programmes and with public policy. These ideas form the basis of a book to be published by MIT Press next year.

Cultural Astronomy in film

Jarita presented a [David Elder Lecture](#) at the Glasgow Science Center entitled *Astronomy in Your Culture & Society* on September 28th at 19:00 GMT. For more information, see Jarita’s talk [here](#).

Jarita has also presented two films in the last year: On Thursday Sept 7, Jarita screened an ASTROMOVES film: *The emotional cost of a career in astrophysics* for the University of Manchester’s Jodrell Bank Centre for Astrophysics EquiTea series.

In August, Jarita presented her ASTROMOVES film: *Astrophysicists and COVID* at the Asian Pacific Regional International Astronomical Union Meeting (APRIM) in Koriyama, Japan. The screening was made possible by a travel grant from APRIM. Keep on the lookout for footage of Jarita’s trip to Koriyama in a Roll-Like-A-Scientist webisode.



Dr Jarita Holdbrook

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.

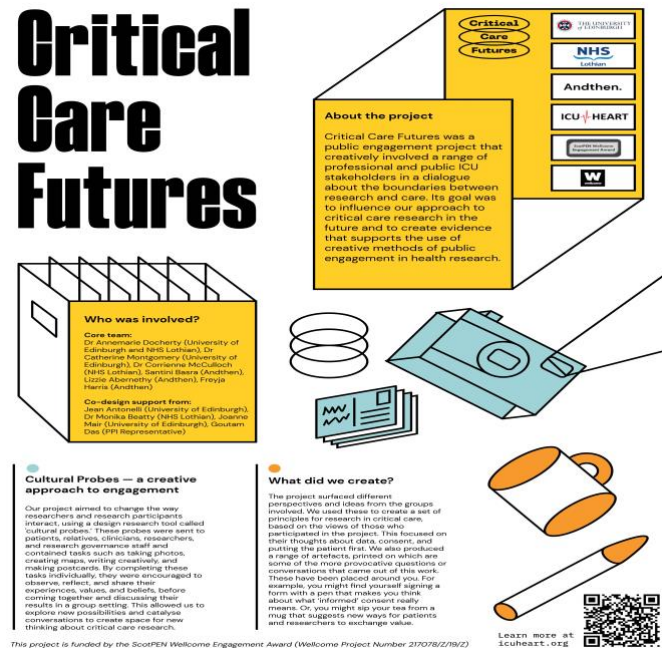
Science, Technology and Innovation Studies (STIS) Subject Group at the University of Edinburgh is internationally recognised as a leading centre of research, teaching and knowledge exchange in this important interdisciplinary field. With more than 40 staff, STIS enjoys outstanding ratings for its scholarly 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.

Critical Care Futures

Critical Care Futures is a public engagement project, funded by a ScotPEN Wellcome Engagement Award (217078/Z19/Z). The project brought together STS, design and critical care colleagues to catalyse dialogue amongst professional and public stakeholders on the boundaries between research and care in the data-enabled intensive care unit (ICU). Using cultural probes, the project engaged clinicians, researchers, ethics committee members, ICU survivors and relatives in discussion about the integration of routinely collected data and research, the meaning of care and the future of consent for adults with incapacity. The project culminated in a *Forum for the Future*, held on 25th August at the Royal Infirmary of Edinburgh, which brought together patients, clinicians, researchers, members of the Scottish Government working group for adults with incapacity and members of the Scottish A REC (Research Ethics Committee).

An account of the project, with free downloads to tools which were co-produced as part of this work, can be found [here](#).

The Critical Care Futures final report can be downloaded [here](#).



AI in Policing



Dr James Stewart

Ben Collier and James Stewart at the University of Edinburgh, as part of a collaborative project with Shane Horgan from Edinburgh Napier University, Lydia Wilson from Cambridge University, and Daniel Thomas from Strathclyde University, published the *Influence Policing* report on August 21st. This sets out an extensive study of the use of AI-delivered targeted digital influence campaigns in UK law enforcement and security services. Combining theoretical frameworks from marketing and behavioural psychology, practice frameworks developed in counter-terror and preventative policing, and the algorithmic infrastructures of the digital ad platforms, these campaigns represent a complex and potentially troubling new frontier in 'digital' policing.



Dr Ben Collier

The authors conducted in-depth research with Police Scotland's unit which specialises in these campaigns, analysis of detailed case studies, and exploratory analysis of the Meta (formerly Facebook) Ad Library, covering all campaigns by UK law enforcement and government departments. They also make a number of recommendations concerning emerging ethical issues.

Generative AI in the workplace, in robotics, and in our conceptualisation of truth

STS's Vasileios Galanos was interviewed for Edinburgh Impact alongside Dr Bronwyn Jones (ECA) and Prof Burkhard Schafer (Law) on the impact of Generative AI on our conceptualization of truth. Check out the promotional video [here](#).

Vasileios is also in an ongoing collaboration with the European Trade Union Institute (ETUI) in Brussels, alongside European Trade Union representatives, to learn about AI in the workplace through lectures, gamified scenarios, and a visit to a robotics centre of excellence. For more on Vasileios' thoughts on generate AI, see [here](#) and [here](#).

A book and a special issue offer new vistas on the history of genomics

Two new publications unveil previously overlooked aspects of the history of genomics and offer new methodological tools to undertake the study of this scientific field. They reflect the overall results of the project [Medical Translation in the History of Modern Genomics](#) (TRANSGENE), funded by the European Research Council and concluded in 2022 after five and a half years of investigations. The publications are a [special issue](#) of the journal *Historical Studies in the Natural Sciences* and a [research monograph](#) published in the series *Medicine and Biomedical Sciences in Modern History* by Palgrave Macmillan. They are both available open access and can thus be read without restrictions.



Dr James Lowe

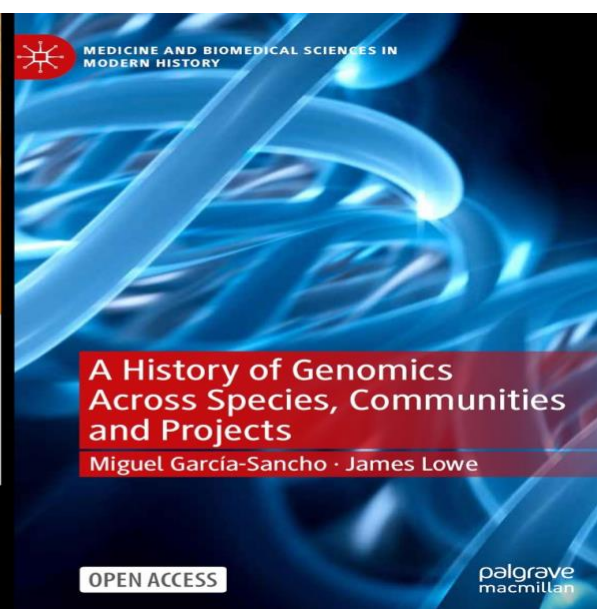
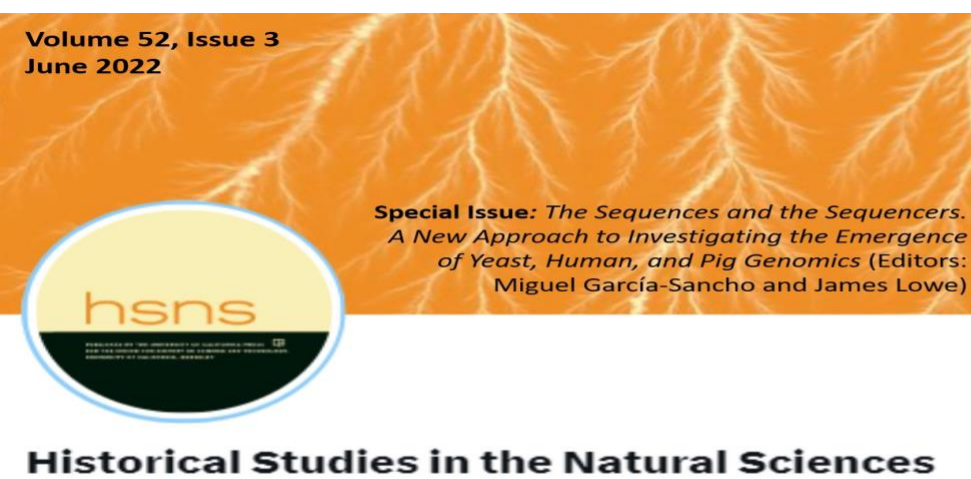
The special issue is formed of five peer-reviewed articles that explore human, yeast and pig genomics through a combination of oral history, archival research and the analysis of co-authorship network visualisations. Five members of the TRANSGENE team – including historians of science, scholars in science and technology studies, and experts in bibliometrics and social network analysis – were involved in their composition. The combination of qualitative methods and the analysis of a large quantitative dataset enabled them to uncover actors and institutions that had previously received little attention in the history of genomics.



Dr Miguel Garcia-Sancho

The monograph, entitled *A History of Genomics across Species, Communities and Projects*, offers an extensive chronological and analytical account of the development of this scientific field. It provides a detailed picture of the rise and consolidation of genomic research across three different species – yeast, human and pig – and over four decades, from the 1980s to the recent past.

The authors take an inclusive approach in order to capture not only the international initiatives to map and sequence the genomes of these three organisms, but also the work of smaller-scale institutions. In doing so, they expand the historiographical lens of genomics and argue that existing historical depictions are too closely associated with the activity of the large-scale sequencing centres that undertook the Human Genome Project.



Edinburgh successes in Andrew Webster Prize

Congratulations to **Rodrigo Liscovsky** whose thesis: “Internationalisation Dynamics in Contemporary South American Life Sciences: the Case of Zebrafish” was awarded the 2023 Andrew Webster Prize. This annual prize, awarded by the UK Association for Studies of Innovation, Science and Technology, in memory of its co-founder, Prof. Andrew Webster, is for a PhD thesis that demonstrates outstanding quality in the STS/Innovation Studies field. The judges agreed that Rodrigo’s thesis develops a novel critical perspective on academic discourse and practices of research internationalisation, bridging fields, methods and views from the Global North and South, with relevance both to academic discourse on the internationalisation of research and education and to science policy and practice, in the best traditions of Andrew Webster’s own work.

There was also a commendation for Andrey Elizondo Solano for his thesis: *Orchestration Spaces in Inter-Organizational Developments of Information Infrastructures: Early orchestration of a large-scale regional interoperability infrastructure in NHS England*.



Dr Rodrigo Liscovsky

Post-Market Surveillance of AI-Enabled Medical Devices



We need to monitor Diagnostic AI tools and other medical devices with embedded Machine Language components to check for unintended variations in performance due to changes in context and practice as well as validating planned changes. But how can this be done effectively without imposing costs that could delay potential benefits of ongoing algorithm upgrades?

To discuss these issues and more, Stuart Anderson and Robin Williams ran a Chatham House workshop with tool developers, regulators, and experts in the field at the historic Goodenough College London.

The event was organised in collaboration with Phoebe LI (Sussex) and Stephen Gilbert (Dresden) with assistance from Andrey Elizondo, Xiao Yang and Alec Ross (Edinburgh). This was the third in a series of Chatham House workshops on Medical AI supported by the [UKRI node on Governance and Regulation of Trustworthy Autonomous Systems](#).



UKRI
**Trustworthy
Autonomous
Systems Hub**

2023 ISSTI Retreat



This year's ISSTI Retreat was hosted at the historic Burgh Halls, located in beautiful downtown Linlithgow. We were pleased to be joined by many speakers, including Ben Collier, Rhodri Leng, Emma Frow, Cath Montgomery, Rob Smith, Hadewych Honne, Yuchen Lin, as well as James Stewart, Benedetta Catanzariti, and Lukas Engelmann. Thanks to all who were in attendance.

We were delighted to be joined by two international keynote presenters:

Kornelia Konrad, Associate Professor of Anticipation and Assessment of Emerging Technologies, University of Twente, delivered a talk entitled ***Modulating the governance of sociotechnical futures***.

Morgan Meyer, Director of Research at the Centre de Sociologie de l'Innovation, Ecole des Mines de Paris (Mines ParisTech), also presented her talk was entitled ***Editing life: promises, politics, controversies***.

As a special guest, we were joined by our esteemed colleague David Bloor (pictured) who delivered his talk ***Reflections on the History of Relativism***

Community News



A huge Welcome to new members of STS:

Dr Rob Smith

Lecturer in Responsible Research and Innovation

Rob Smith has been a senior research fellow at the University of Edinburgh, working on the politics of emerging biotechnologies (synthetic biology, gene drives), and responsible innovation in research funding organisations. He's just been appointed as a Lecturer in Responsible Research and Innovation in the department of Science, Technology and Innovation Studies to lead the university's work in the politics and governance of emerging technologies.



Dr Rob Smith

Dr Victoria Gorton

Lecturer in Data and Society

Dr Gorton is currently a Research Fellow in the School of Law with expertise in the sociology of knowledge; the role of data in decision making; and how quantitative methods are conceptualised and performed within in the social sciences. Prior to joining STIS, Vicky was a research fellow on the 'Policing the Pandemic' project at the Scottish Centre for Administrative Data Research (SCADR). This research examined the role of police enforcement during the COVID-19 pandemic in the UK. This included the statistical analysis of linked health and crime administrative data, with results being fed into the ongoing UK and Scottish COVID inquiries. In her new role, Vicky will be contributing to research and teaching examining the intersection between data and society, including the politics of data visualisation and data and decision-making. Vicky brings with her a passion for the learning-teaching of quantitative methods (which was the focus of her PhD), interdisciplinarity, and innovative research methods.



Dr Victoria Gorton

Dr Carolina Mayes

Postdoctoral Fellow Epidemy Lab

Carolina recently completed her PhD in Sociology and Science Studies at the University of California, San Diego, advised by Daniel Navon and Martha Lampland. Her work concerns the meaning and configuration of population concepts in human genetics, in the historical development of theoretical population genetics and genetic epidemiology, and in the contemporary translation of genomic research into genetic risk technologies. While at the Epidemy Lab, Carolina will be examining the intersections of genetic epidemiology and mainstream epidemiology more closely and exploring how genomic approaches to complex causality have influenced population health research. She is also interested in science communication, expertise, citizen science, and technoscientific expectations.



Dr Carolina Mayes



Dr Katie Adam

Dr Katie Adam

Lecturer in Innovation in the Life Sciences

Some will recall Dr Adam's time as a research fellow in STIS back in 2018-20. Katie's research interests lie in understanding the human factors that influence animal health, the impacts of disease outbreaks in society, and in the development and implementation of innovative strategies to prevent and control infectious disease in animal and human populations. Her diverse career has included clinical veterinary practice, population health research in livestock and aquaculture production, veterinary social science, and public health. She is a member of the Scottish Government's Centre of Expertise on Animal Disease Outbreaks (EPIC), where she works as part of an interdisciplinary team to develop and deliver scientific evidence to inform policy decisions around outbreak preparedness. Katie's post will be shared 50/50 with the Global Academy of Agriculture and Food Systems.

Dr Benedetta Catanzariti

British Academy Postdoctoral Fellow

Dr Catanzariti is a Postdoctoral Fellow in Science, Technology and Innovation Studies. Her research explores the social, ethical, and political dimensions of data-driven technologies, with a focus on machine learning and its related data practices. Her current project 'Technology in Translation', funded by a British Academy postdoctoral fellowship, investigates the multiple configurations of labour, expertise, power, and material tools that underpin the development of diagnostic AI. Read the full announcement from the British Academy [here](#). Prior to her fellowship, she was a Policy Fellow under the AHRC Bridging Responsible AI Divides (BRAID) programme, advising UK policy makers to promote responsible and accountable development of AI technologies.



Dr Benedetta Catanzariti