

ICOHTEC Summer School 2022

Sun 15 May to Mon 16 May 2022

TIME: GMT/WET

Sunday, May 15.

9:00- 9:30	Opening Chair: Maria Elvira Callapez & Maria Gago,
9:30-11:00	Lecture 1 (Prof Aristotle Tympas) and discussion
11:00-11:15	Coffee Break
11:15-12:45	Session 1, one group (2 Students) , discussion of students' papers
12:45-13:45	Lunch
13:45-15:15	Session 2, one group (2 Students) , students' papers
15:15-15:30	Coffee Break
15:30-17:00	Lecture 2 (Sofia Alexia Papazafeiropoulou) and discussion

Monday, May 16.

9:00-10:30	Lecture 3 (Karena Kalmbach) and discussion
10:30-10:45	Juice Break
10:45-12:15	Session 3, one group (2 Students) , students' papers.
12:15-13:15	Lunch
13:15-14:45	Final discussion
14:45-15:30	Meet for a chat about any topic or just for fun

Sessions

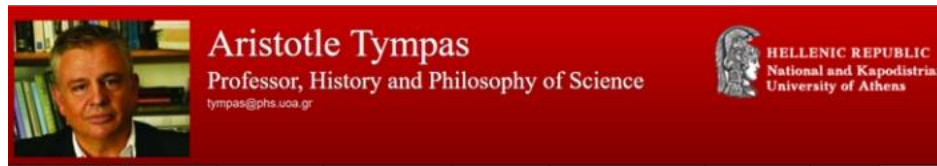
Session 1 (11:15-12:45) – 15 th May	Session 2 (13:45-15:15) – 15 th May	Session 3 (10:45-12:15) – 16 th May
<p>Chair: Callapez, Maria Elvira Facilitator: Kunzhang Guo</p> <p>Konstantinos Konstantis -Emergence, development, and crystallization of the field of engineering ethics</p>	<p>Chair: Åberg, Anna, Facilitator: Rebecca Mossop</p> <p>Kornilia Papanastasiou - Assisted Reproductive Technologies (ART), focusing on in vitro practices</p>	<p>Chair: Lajus, Julia, Facilitator: Tijana Rucpic</p> <p>Thomas Hoppenheit - From shoemaker to cobbler: Luxembourg's shoemaking trade through the ages</p>
<p>Chair: Ward, Jacob, Facilitator: Konstantinos Konstanti</p> <p>Kunzhang Guo - Technofossils in the Hydrosphere In East Asia In the Anthropocene – Canalization and Damming</p>	<p>Chair: Pereira, Hugo, Facilitator: Kornilia Papanastasiou</p> <p>Rebecca Mossop - Infrastructures of repair: maintaining the telephone system in Luxembourg</p>	<p>Chair: Gago, Maria, Facilitator: Thomas Hoppenheit</p> <p>Tijana Rucpic - How the Balkans developed their electrical grid outside of the established blocs between 1945 and 1975</p>

LECTURERS

The programme of the Summer School is composed of lectures, seminars dealing with students' papers, and plenary discussions. The following three lecturers, who are recognised researchers in their fields, will deliver introductions to the key themes of the school (See their bios and abstracts via hyperlinks below).

1. ARISTOTLE TYMPAS

Professor of the History of Technology in Modernity, Department of History and Philosophy of Science,
National and Kapodistrian University of Athens



Lecture Title: Technology-based and Technology-generated decisions: A perspective from the historiography of Algorithms, Big Data and Artificial Intelligence

Abstract: We will start by introducing to a critical synthesis of a rapidly expanding literature on big data, algorithms and artificial intelligence, focusing on contributions from the social sciences and the humanities, especially from History of Science, History of Technology, and Science and Technology Studies. Based on this synthesis, we will move on to sketch a historiographical context for elaborating on technology-based and technology-generated decisions. The emphasis will be placed on understanding the drive for algorithmic decision-making, connected as this is to, on the input side, feeding algorithms with big data, and, on the output side, presenting the outcome as being objective, due to some artificial intelligence. We will introduce to studies that sought to open-up the black-box that makes invisible the subjectivities (and biases) of algorithmic-based/generated decisions, focusing on representative cases from the integration of AI into engineering and the sciences (from environmental to biomedical science and technology), and, further, into business and government initiatives that rely on technology-based/generated recognizing, profiling, and predicting.

Biographical Note: Aristotle Tympas, a specialist in the study of technology from the humanities and the social sciences, works as professor at the Department of History and Philosophy of Science, School of Science, National and Kapodistrian University of Athens. His studies combined engineering (MSc, Aristotelio University, 1989), technology and science policy (MSc, Georgia Tech, 1995) and history-sociology of technology (PhD, Georgia Tech, 2001). In addition to teaching courses at his university (at his home department and at the Department of Informatics and Telecommunications), he has helped to introduce and teach courses in the digital, environmental and medical humanities at several other universities, in Greece and abroad. Former chair (2017-2019) of the management committee of the 'Tensions of Europe: Research Network on History, Technology and Europe', Tympas currently serves as vice president of the International Master's Programme on Society, Science and Technology (ESST), as director of the Interdepartmental Graduate Program 'Science, Technology, Society—Science and Technology Studies' and as chair of the Department of History and Philosophy of Science. He has been a visiting scholar in the US (MIT Program in Science, Technology and Society), Germany (Viadrina Center B/Orders in Motion) and Sweden (Swedish Institute for Disability Research). With support from a series of

fellowships and grants, he has published on a range of issues and technologies (Theory / Historiography, Computing / Communication / Automation, Environment / Energy / Sustainability, Biotech / Biomed / Med / Disability, Labor / Gender / Migration, Greece). He is the author of *Calculation and Computation in the Pre-electronic Era* (Springer, 2017) and *Analog Labor, Digital Capital* (Angelus Novus, 2018, In Greek).

2. ALEXIA SOFIA PAPAZAFEIROPOULOU

(National Technical University of Athens (Department of Humanities, Social Sciences and Law)



Lecture Title: Technology-generated decisions. A new paradigm?

Abstract: The development of new sociotechnical networks has triggered a debate about the “new era” of techno-human interaction. On the one hand, new technologies, such as the artificial intelligence, are often celebrated as a factor of objectivity concerning the decision making about critical issues in society. At the same time, the so-called dehumanization of this process along with the emergence of critical issues, such as new forms of inequalities, or the climate change, promote dystopian representations of technology. These representations are usually connected with a discourse about the emergence of the “post-truth” age, as it has been termed in the Oxford Dictionary in 2016.

However, such views are usually based on a dualistic perception of humans and technologies which can mislead us from understanding their interaction; hence, they prohibit a critical examination of sociotechnical networks along with their political implications. Therefore, this lecture discusses questions concerning issues, such as: How can we define “humanness” when it comes to decision making with the use of new technologies? Can we draw a line between technology-based and technology-generated decisions? Does the use of artificial intelligence create a brand-new condition when compared with older technologies, such as maps or statistical charts? Are we confronted with a new paradigm? If so, what are the hermeneutic tools we should develop to understand this paradigm?

Questions like the above could potentially challenge central theses of the Science and Technology Studies, such as the idea that the examination of the human and technology interaction should exceed Manicheism dilemmas which demonize technology and presuppose a diachronic concept of humanness as independent of certain sociotechnical contexts. Hence, the discussion of such issues aims to show whether and how we can develop new methodological approaches, which deal with the ethical dilemmas concerning the new conditions of techno-human interaction, without, at the same time, imposing moralistic views. The lecture aims to contribute to the discussion of a theoretical context so as to better understand the sociotechnical networks of new technologies and address methodological problems that could further enrich our empirical research.

Biographical Note: Alexia Sofia Papazafeiropoulou is a research fellow and teaching assistant of History and Sociology of Technology at the National Technical University of Athens (Department of Humanities, Social Sciences and Law). Her current research includes the theoretic implications of Mobilities with the concepts of identities and space-time contexts, as well as the equities and inequities created within sociotechnical networks, through the case of remote working during the COVID-19 period. She has also conducted research within the context of research projects on Mobilities, emphasizing on automobility in relation with tourism and the (re)construction of geographic space as well as the definition of peripheries. Her research interests also include the interaction of technology and users' identities, focusing on subjects such as consumption, gender, and tinkering. She has participated in international research projects and scholars' networks (Tensions of Europe) and she has published articles in both Greek and international academic journals and collective volumes. She has been a member of ICOHTEC since 2012.

3. **Karena Kalmbach** (Futurium Berlin)



Lecture Title: Staging, Exhibiting and Discussing Possible Futures: Framings of „Innovation“ at the Futurium Berlin

Abstract: The Futurium in Berlin is a „House of Futures“. Here, everything revolves around the question: how do we want to live? In the exhibition, visitors can discover many possible futures; in the Forum, they can take part in open discussions; and, in the Futurium Lab, they can try out their own ideas. Staging, exhibiting and discussing possible futures highly relies on stories about “innovation”. It is therefore important to inquire what kinds of innovation and what kinds of drivers of innovation are brought to the fore in these storylines: social, cultural, scientific, or technical ones – or any kind of specific hybrids? What is presented as obstacles? And what factors, processes and dynamics are presented as accounting for good and desirable innovation? Analysing these storylines in the context of the Futurium is particularly interesting as there is certainly not one specific framing of innovation which is applied “a priori” to all of Futurium’s activities: The team of the Futurium is an interdisciplinary melting pot – which already makes for a wide variety of understandings of innovation. To this mashup, third parties involved in the setting-up of the exhibition and the execution of workshops add even more perspectives. Thus: what kind of framings of innovation does a visitor actually encounter when she explores this “House of Futures”? And is it possible for her to add her own framing of innovation to the already existing storylines? Ultimately, this presentation wants to find out whether we might indeed need permeable framings of innovation if we aim at open dialogues about possible, desirable futures.

Biographical Note: Karena Kalmbach is Head of Department “Strategy and Content” of the Futurium in Berlin. Before taking up this position, she was a tenured assistant professor at Eindhoven University of Technology (TU/e). Her areas of expertise include social and cultural history of technology and the environment (with a particular focus on nuclear history), politics of memory, and social studies of science and technology. She has done extensive research on the question of how national and international nuclear politics have influenced the debate on the health effects of the Chernobyl accident in France and the UK. Furthermore, she researched how the commemoration of the accident has been used to underpin political arguments in various European countries. Her latest book on this topic, “The Meanings of a Disaster. Chernobyl and its Afterlives in Britain and France”, was published in 2021 with Berghahn Books. At TU/e, Karena Kalmbach set up an interdisciplinary research group with her TU/e colleagues Andreas Spahn (Philosophy) and Ginevra Sanvitale (Anthropology) in which they investigated the interrelation of fear and technology, focusing on the question: How does fear drive technological innovation?

Participants

Name	Country
Konstantinos Konstantis	Greece
Kornilia Papanastasiou	Greece
Kunzhang GUO	France
Rebecca MOSSOP	Luxembourg
Thomas Hoppenheit	Luxembourg
Tijana Rupcic	Austria

Tutors

1. Åberg, Anna, Chalmers University of Technology
2. Callapez, Maria Elvira, CIUHCT-FCUL, Portugal & CSTMS-UC Berkeley,
3. Gago, Maria, New University of Lisbon, European University Institute, Italy
4. Lajus, Julia, National Research University Higher School of Economics, St. Petersburg
5. Pereira, Hugo, (CIUHCT, NOVA School of Science and Technology), Portugal
6. Ward, Jacob, Maastricht University.