

# STOA Newsletter

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European Parliament

## PANEL FOR THE FUTURE OF SCIENCE AND TECHNOLOGY

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### News | **New STOA Panel chooses its leadership**

On 24 October 2019, during the plenary session in Strasbourg, MEPs appointed to the STOA Panel held their first meeting, during which they elected a Chair and two Vice-Chairs for the first half of the 9th parliamentary term. [Eva Kaili](#), Greek MEP and member of the Progressive Alliance of Socialists and Democrats (S&D) Group, will continue as Chair, carrying on from the last parliamentary term. She will work alongside [Christian Ehler](#), a German MEP and member of the European People's Party (EPP) Group, who was elected as First Vice-Chair of STOA, and [Ivars Ijabs](#), Latvian MEP and member of the Renew Europe Group, who will serve as Second Vice-Chair. The meeting was chaired by [Ewa Kopacz](#), Polish MEP, EPP member and European Parliament Vice-President responsible for STOA.

The four MEPs, as members of the STOA Bureau, will work together with the other 21 [STOA Panel members](#) to implement STOA's mission: comprehensive monitoring and analysis of scientific and technological opportunities and challenges that are relevant for individual and societal progress and wellbeing. They will also continue to oversee the work of the [European Science-Media Hub](#) (ESMH), which is establishing itself as a platform for direct interaction and exchange among policy-makers, researchers and journalists as well as other science communicators; the ESMH promotes evidence-based practices for high-quality and trustworthy science communication through knowledge dissemination, networking and training.

### Retrospective | **8th parliamentary term in numbers**

During the 8th parliamentary term (2014-2019), STOA completed 30 technology assessment studies on topics such as [disinformation](#), [artificial intelligence](#), [cybersecurity](#), [e-democracy](#), [Galileo satellite navigation](#), [harmful internet use](#) and [circular economy](#), and four scientific foresight studies on [robotics](#), [precision agriculture](#), [assistive technologies for people with disabilities](#) and [3D bio-printing](#) respectively. More than 100 other documents were published, namely policy option briefs and publications about risks and opportunities of new technological trends.

In the course of five years, STOA organised 71 workshops and five annual lectures, and welcomed over 8,500 external participants in events. 80 MEP-Scientist pairs collaborated closely with each other in the framework of STOA's [MEP-Scientist Pairing Scheme](#). Over the same period, STOA's online presence has been reinforced with a revamped [website](#) and own Twitter account ([@EP\\_ScienceTech](#)), as well as with the publication of 195 [blog posts](#) and 68 [video clips](#) and [podcasts](#).

One of the highlights has undoubtedly been the launch of the ESMH. In the one year of its existence, the Hub held two workshops, two journalist trainings and one summer school, and published on its own [website](#) 26 [articles](#) with expert interviews and 19 [press reviews](#) on scientific and technological topics.

The 8th parliamentary term also saw the increase of Panel membership from 15 to 25 members, representing 9 different committees (previously 6), and the name change to 'Panel for the Future of Science and Technology (STOA)' to better reflect STOA's forward-looking approach. For a comprehensive overview of what STOA did over this period, check the STOA [Activity Report \(2014-2019\)](#).

## Study | **GDPR and blockchain: a relationship of tensions**

Blockchain is a much-discussed instrument that, according to some, promises to inaugurate a new era of data storage and code execution, which could, in turn, stimulate new business models and markets. On the other hand, as the precise impact of the technology is hard to anticipate with certainty, many remain sceptical of blockchain's potential implications.

A recent STOA [study](#) applied the new European data protection framework to blockchain technologies and documented the main regulatory tensions between blockchain and the General Data Protection Regulation (GDPR), such as whether data typically stored on a distributed ledger qualifies as personal data. One of the main findings of the study is that the lack of legal certainty pertaining to numerous concepts of the GDPR makes it hard to determine how the latter should apply to this technology. Through a deeper exploration of a number of ongoing pilot projects in the domain of blockchain, the study concluded that blockchain may help further some of the GDPR's objectives, including the detection of data breaches and fraud.

The study put forward three [policy options](#) to respond to the identified tensions: (1) the need for regulatory guidance regarding how specific concepts ought to be applied that may include the updating of some of the opinions of the Article 29 Working Party, such as the one on anonymisation techniques; (2) supporting codes of conduct and certification mechanisms to apply the GDPR's overarching principles to concrete contexts, where personal data is processed; and (3) using research funding as a means of devising both technical and governance remedies and experiments with blockchain protocols that could be compliant by design.

The study was published in July 2019 and was presented to the STOA Panel on 19 December 2019. The Lead Panel Member was STOA Chair [Eva Kaili](#) (S&D,EL).

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*It is impossible to say whether blockchains are, as a whole, compliant or not with the GDPR.*

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## Study | **How the GDPR changes the rules for researchers**

This [study](#) investigated the promises and challenges associated with the implementation of the GDPR in the scientific domain, with a special focus on the impact of the new rights and obligations enshrined in the GDPR on the design and conduct of scientific research. Furthermore, the study examined the adequacy of the GDPR's derogations for scientific research in terms of safeguarding scientific freedom and technological progress.

Through a scoping review of the peer-reviewed scientific literature, a doctrinal analysis of the legal literature, a media content analysis and a case study analysis, the study found that the GDPR will likely enhance a number of aspects of scientific research, including data security, regulatory clarity regarding processor responsibilities and the transfer of data, research collaborations within the EU, and the autonomy and trust of data subjects. A main finding of the study is that significant regulatory ambiguities surround the application of the GDPR to research and hamper the efficient implementation of its research provisions.

Based on this mixed study design, a set of [policy options](#) is proposed to maximise the positive impact of the GDPR on scientific research while minimising unintended adverse effects. These include suggestions as to how the scientific community can prepare for GDPR compliance, with a focus on delineating regulatory, procedural and educational solutions, including the need for the development of harmonised guidelines across research institutions and research societies in the European Union.

The study was published in July 2019 and was presented to the STOA Panel on 19 December 2019. The Lead Panel Member was STOA Chair [Eva Kaili](#) (S&D,EL).

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*GDPR is expected to have divergent or even contrasting impacts depending on the domain of science and the type of scientific activity.*

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## Event | [First ESMH summer school for young journalists](#)



Some 80 enthusiastic young journalists from all over the EU met in Strasbourg from 4 to 7 June 2019 for the first edition of the European Youth Science and Media Days - the [summer school on 'Artificial intelligence and journalism'](#), organised by the European Science-Media Hub (ESMH) in cooperation with the European Youth Press network of media-makers (EYP).

Ten artificial intelligence (AI) experts (researchers, policy-makers, journalists and media representatives) shared their experience and reflections on key aspects of the intersection between AI and journalism:

- What does the rise of automation mean for media-makers?
- How does AI affect journalism?
- What role can algorithms play in this changing context and what are the possible ethical implications?
- How will AI and humans combine in the journalism of the future?

The programme was dense and diverse, ranging from thematic panels, hands-on training and case study presentations (including an EU-funded AI tool demo), to workshops and a virtual reality experience. [Paul Rübzig](#) (EPP, AT), first STOA Vice-Chair at the time, greeted the participants from Brussels via video link.

The event was the first of its kind for STOA and the ESMH, and it proved a success in terms of participant engagement and feedback received. The idea is to turn it into a regular forum, offering young media-makers the opportunity to learn about the latest technology tools and practice using them for their work. The results of the satisfaction survey distributed to participants helped the ESMH to collect suggestions and remarks, which it will take on board for the next edition. Stay tuned!

## Study | [Strong international collaboration of EU researchers](#)

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*The EU has a higher share of internationally co-authored research papers than the US and China.*

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International collaboration in today's research society is increasingly held in high regard and becoming a core promoted value. This recognition is a welcome development as it encourages the sharing and transfer of knowledge, skills, techniques and experiences. It fosters the beneficial exchange and critique of ideas, intellectual companionship and the expansion of networks with the goal of improving and increasing research output. In general, multiple-institution authored articles are more highly cited than single-institution ones, and, similarly, international co-authors are also more highly cited.

While the world seems to collaborate in research mostly on a nation-by-nation basis, Europe is exceptional in its long-term, large-scale, intra-regional research collaborations, including collaborations funded by consecutive EU framework programmes for research. A [STOA study](#) published in July 2019 demonstrates that, in 2017, the share of internationally co-authored papers was 44% for the EU, 40% for the USA and 22% for China. While no flagship universities in EU-13 countries (which joined the EU in 2004 or later) exceeded 60% of international collaboration, five flagship universities in EU-15 (which joined the EU before 2004) exceeded this level.

Barriers to international collaboration identified in the study include macro-level (geopolitics, history, language, cultural traditions, country research propensity, geographical distance), institutional (reputation, resources) and individual barriers (predilections, intellectual or financial attractiveness). The policy options for overcoming such barriers include, amongst others, placing internationalisation at the centre of national research policies, providing large-scale funding for international collaboration and focusing on a bottom-up approach by giving individual scientists a primary role in internationalisation agendas.

The study was presented to the STOA Panel on 14 February 2019. The Lead Panel Member was STOA First Vice-Chair [Christian Ehler](#) (EPP, DE).

STOA (Panel for the Future of Science and Technology), an integral part of the European Parliament's structure, is tasked with carrying out expert, independent assessments of the impact of new technologies and identifying long-term, strategic policy options useful to the Parliament's committees in their policy-making role.

## Panel for the Future of Science and Technology (STOA)

The STOA Panel is composed of 25 Members of the European Parliament, including the EP Vice-President responsible for STOA and 24 MEPs appointed by nine parliamentary committees. With the input of committees and individual Members, the STOA Panel, on the recommendation of its Bureau, decides on projects and other activities in the field of science and technology. Each STOA project is overseen by one or more Panel members.

### STOA Panel

The STOA Panel includes Members from the following committees:

- Industry, Research and Energy (ITRE):** six Members
- Agriculture and Rural Development (AGRI):** three Members
- Employment and Social Affairs (EMPL):** three Members
- Environment, Public Health & Food Safety (ENVI):** three Members
- Internal Market and Consumer Protection (IMCO):** three Members
- Transport and Tourism (TRAN):** three Members
- Culture and Education (CULT):** one Member
- Legal Affairs (JURI):** one Member
- Civil Liberties, Justice and Home Affairs (LIBE):** one Member

### STOA Bureau

**Ewa Kopacz**, EP Vice-President responsible for STOA

**Eva Kaili**, STOA Chair

**Christian Ehler**, STOA First Vice-Chair

**Ivars Ijabs**, STOA Second Vice-Chair

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