

Tilt

Tilburg Institute
for Law, Technology,
and Society

TILT Annual Report 2018

TILT

**Annual
Report
2018**

MISSION, VISION

The Tilburg Institute for Law, Technology, and Society (TILT) researches and teaches regulation of technologies and technology-related societal innovation.

National and International

Established in 1994, TILT has built a serious reputation in research, enabling the development of a leading LLM program in Law & Technology. TILT is a prominent player on the national as well as the international level when it comes to research and education in this particular area. TILT's expertise covers a wide range of topics related to law, regulation, technology and their normative implications.

Multidisciplinarity

TILT is a multidisciplinary research institute, combining law, philosophy, social sciences, public administration and management sciences. This enables us to look at research topics from multiple perspectives and deliver valuable contributions to the existing knowledge in the field of law, technology, and society. TILT's collaborative and open environment stimulates social and intellectual interchange. Feel free to become more familiar with our organization through our website, or look directly for possibilities to get involved!

Mission

TILT's mission is to explore and understand the interplay between technology, regulation and fundamental values/human rights; to study emerging technologies, their impact on the individual and society; and to assess the need for regulation of technologies.

Academic climate

TILT is located at the 7th floor of the Montesquieu Building at the Tilburg University Campus. We have a fairly unique composition in being large (around 50 researchers), truly interdisciplinary (combining disciplines such as law, STS, political science, sociology, and economics) and international (with researchers originating from more than 25 countries). The academic environment is very lively, with much interaction and collaboration between researchers, sharing of ideas and constructive commenting on each other's ideas and work. We take our open-door policy seriously, fostering collaboration and camaraderie. Tuesdays hold particular importance as this is the day when reading groups, work in progress discussions, seminars and other meetings are planned, but you will often run into spontaneous discussions and brainstorm-sessions at other times. This congenial atmosphere stimulates social and intellectual interchange.

Topics

TILT's expertise covers a wide range of fields related to developments in ICT, robotics, AI and related fields enabled by ICT, such as neuroscience, health, and energy. Topics include e-government, e-commerce, e-health, data science, AI, machine decision making, legal analytics, trust, technology adoption and legitimacy, privacy, identity management, liability, cybercrime, public security, intellectual property rights, networks and innovation, and governance.

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Transition seems to be the theme for 2018 for TILT.

Transition came about as the theme for the TILTing 2019 conference to mark the fact that we are at the forefront (or in the middle, who knows?) of large scale societal transitions. It is, for instance, clear that climate change requires a rapid move from fossil fuels to sustainable energy sources. This will require significant changes in things we have long taken for granted, from the way we travel, heat our houses, to where and how we work and play. Technology will inevitably play a role in this transition and regulation in the broad sense will be an instrument to promote (the right) technologies, limit harmful effects and achieve the required behavioral change necessary to make the transition.

Also in other domains we are at the verge of major transitions. Robots and AI develop at a tremendous pace. See YouTube for the current state of (semi-) humanoid robots developed by Boston Dynamics (Atlas, SpotMini) and Agility Robotics (Cassie) and you will realize that the issues around autonomous locomotion in robots have largely been tackled. Really practical applications may still be years away, but robots carrying out real tasks in ‘the wild’ are certainly no longer the realm of science fiction. You may even already have spotted the first (semi-) autonomous vehicles on public roads. All car manufacturers, but also non-obvious developers (Google, now Waymo; Apple) race to change the way we travel public roads. These, again are fields where technology solves problems, introduces new challenges and requires regulation to help guide innovation and prevent or limit adverse effects.

And let us not forget that we’re still in the middle of the large transitions induced by the Internet, where privacy, cyber security, intellectual property and other topics never seem to be addressed for good. Big Data and Data Science as relatively new kids on the block furthering ethical, legal and concerns that require the attention of regulatory and legal scholars, social scientists and ethicists. TILT closely follows these major developments and constantly adapts to new questions and challenges related to social-technical innovation.

2018 marks the first year of what may be a series of transitional years for TILT. First of all, the team has grown significantly, partially to be able to also address the grand challenges outlined above: energy and the environment, AI and robotics. Partially also because of extending the ‘social’ part of Law, Technology, and **Society**, which we primarily see as bringing in insights from Science and Technology Studies (STS). TILT after all belongs to the ‘Law in Context’ family within Tilburg Law School.

TILT also grew because of the start up of projects funded by the large Starting Grants provided by the European Research Council (ERC) to Linnet Taylor and Nadya Purtova.

We also have projects winding down. Eleni Kosta was wrapping up her Veni project, and the Horizon 2020 Micromole project and art 42/43 GDPR certification project commissioned by the European Commission were in their final stages, meaning that some people will move on to new projects and new roles.

Thirdly, we have been gearing up for our 25th anniversary (<https://tilt25.com/>), the celebration of which we have taken very seriously. We have built a program packed with events, ranging from academic reading groups, visiting scholars from all over the world, and keynote lectures, to movie screenings and public lectures. For the latter two we have teamed up respectively with PopUp Cinema and the Tilburg Public Library which hosts the lectures in the marvelously removed LocHal. The calendar contains ten themed months that group the activities around prominent TILT areas of research. On top of this busy schedule, we host our sixth international TILTING Perspectives conference in May 2019. We aim to top the highly successful 2017 edition with some 150 speakers and hopefully around 300 participants coming together for three days of presentations and social gathering.

Whereas TILT started as a very Dutch institute in the late 1990s, that has changed. We now have some 25 nationalities and have become a hub for visiting scholars from around a globe, and our members fly out over the world as well for shorter and longer research and teaching visits.

Also in terms of teaching we are still in a transformation. From an institute focused on research, we are becoming a more balanced department. Our Law & Technology Master’s program is growing and now accommodates some 130 students a year. At the same time our stake in other programs, such as in the various Data Science curricula at TiU, TU/e and the Jheronimus Academy of Data Science (JADS) and the Global Law Bachelor grew, and so did the number of students.

Then, of course, the department itself has started a significant transition. On 1 December 2018, we formally merged with the Tilburg Law and Economics Center (TILEC) to form the new department of Law, Technology, Markets, and Society (LTMS). Although formally this merger was inspired by the significant redesign of the entire Tilburg Law School to a leaner design, TILT and TILEC had been in talks for quite some time about intensifying collaboration. We have had Martin Husovec and Inge Graef as successful linking pins between the two groups for a couple of years already and TILEC’s focus on innovation and innovativeness and TILT’s focus on law and technology are highly complementary making us wonder why we had not merged before. In any case, with full enthusiasm we move forward to craft a global player in research and education at the intersection of our domains: Law, Technology, Markets, and Society. LTMS not only covers our major themes, but also reflects our understanding of regulation (covering Lessig’s four modalities of regulation).

All TILEC and TILT members will relocate to new offices on the seventh floor of the Montesquieu building in early 2019 which will facilitate collaboration and real integration of the new team. The new department hosts some 60 researchers, a VENI and a VICI grant (both funded by the Dutch Science Foundation, NWO), two ERC Starting Grants and an ERC Consolidator grant (funded by the European Research Council) and several new NWO and ERC applications are in the pipeline. That seems a promising starting point for achieving our new ambition.

This annual report bears witness to the integration between TILT and TILEC. It contains the annual reports of both groups. Likely next year's report will be more integrated as new research lines and projects emerge. In the following pages you will find a high level overview of TILT's research and educational activities as well as a more detailed overview of research output and metrics.

We extend an open invitation to you to engage with us on the exciting venture in understanding and guiding technology developments in view of the values we foster as society. This report should provide you with a good overview of what we stand for and what we do. Please feel free to contact us and get engaged with us.

Ronald Leenes
TILT director

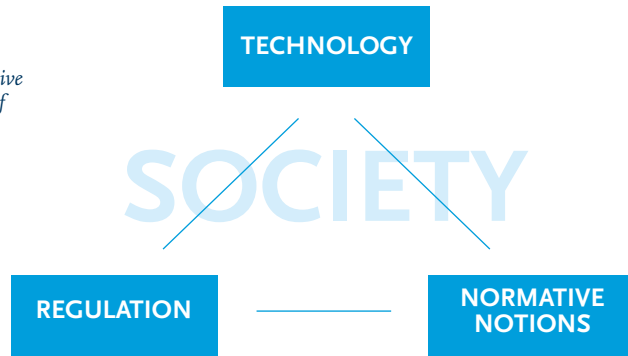


1

Research

RESEARCH

Figure 1. The interplay between regulation, technology, and normative notions in the context of society



1.1 Research output and key results

TILT’s research in 2018 took place in the context of its six-year research program, ‘Understanding the Mutual Shaping of Regulation, Technology, and Normative Notions’ (2014-2019). The basis of this program is the recognition that technology, regulation, and normative notions interact, i.e., they continuously adapt to new technological, regulatory, and/or normative environments, and in this process, they mutually shape one another. The ‘TILT triangle’ of technology, regulation, and normative notions is studied against the background of society, to incorporate insights into human and organizational behavior, social mechanisms and norms, and the context-specificity of certain sectors in society, such as health, commerce, public administration, or law enforcement. Through our research, we hope to better understand the mutual shaping—or co-construction—of technology, regulation, norms, and society.

It goes almost without saying that TILT’s research is multidisciplinary. Regulation consists of different modalities – law, social norms, market, and architecture – which are grounded in different disciplines: law, social sciences, economics, and science & technology studies. TILT’s researchers incorporate these disciplines and collaborate with scholars in other disciplines too, including the technical sciences.

TILT projects

Besides the VENI/VICI/ERC projects showcased in text-boxes below, TILT worked on the following projects in 2018:

- MicroMole: sewage monitoring for tracking synthetic drugs laboratories (EU/H2020)
- Study on certification ex art. 42/43 GDPR (DG Justice & Consumers)
- BotLeg: Public-private actions against botnets: establishing the legal boundaries (NWO/Cybersecurity)
- Judiciary oversight of Big Data decisions by government (WODC)
- Blockchain and the law (WODC)
- DomJur: domain name disputes website (SIDN)
- Data portability (TLS and Signify)

Table 1 offers a quantitative overview of TILT’s research output in 2018. A full overview of TILT publications is provided in Appendix 2.

Academic publications	95
Journal articles	38
Book chapters	33
Monographs and edited books	8
PhD dissertations	4
Other academic publications	12
Professional publications	35

Table 1: Overview of research output by TILT members

To showcase the achievements of TILT research in 2018, we provide a qualitative overview of highlights of TILT research, grouped in six thematic clusters. For more details of the mentioned publications, see Appendix 2.

1.1.1 Regulation and Governance of Technologies

The role of intermediaries continues to be one of the key challenges in internet regulation.

This topic was studied by **Lulu Wei** in the context of Chinese internet regulation; she showed how the Chinese internet landscape involves complex practices of both state-mandated and intermediary-induced content regulation, offering a nuanced picture that refutes simplistic narratives of censorship. She defended her PhD thesis *Legitimacy challenges of intermediary gatekeeping in the Chinese internet regulatory system* on 26 February 2018. **Martin Husovec**'s 2017 book *Injunctions against Intermediaries in the European Union: Accountable But Not Liable?*, published with Cambridge UP, was enthusiastically reviewed by Justice Richard Arnold from the High Court of Justice of England and Wales, who called Martin's book '[e]ssential reading on intermediary accountability'. The topic was also addressed in a **TILT clinic**, involving three Tilburg students who, under auspices of TILT lecturers, prepared a third-party intervention before the European Court of Human Rights in *OOO Flavus against Russia*, a case that will define important limits for the safeguards against state over-blocking online.

Linnet Taylor started her ERC-funded *Data Justice* project (2018-2023) by bringing together a multidisciplinary team of researchers, including Shazade Jameson, Aaron Martin, and Helen Mukiri-Smith. The project seeks to develop an inclusive framing of informational rights and freedoms in a global context in the era of big data. Besides preparing and executing the first fieldwork and conceptualizing data justice, first results included Linnet Taylor's 'On the presumption of innocence in data-driven government: Are we asking the right question?' and 'What can "disruptive urban technologies" tell us about power, visibility and the right to the city?'

Global perspectives on regulation and (so-called) smart technologies were central in the Data Justice project (see box) and in **Anna Berti Suman**'s research on Citizen Sensing for environmental and public-health risk governance, with analyses of the Schiphol Airport noise-monitoring case and the 'AnalyzeBasilicata' initiative, suggesting that 'the South' can occur in the Northern as much as in the Southern hemisphere. Anna's earlier Master Thesis on the human right to water in Latin America won the "Research Perspectives in International Water Law" Prize and was published by Brill.

The environment also featured in **Leonie Reins**'s work on energy regulation, discussing the changing role of energy consumers and its implications for the European legal framework. She combined academic and policy agenda-setting work with commentaries on four provisions in the German Renewable Energy Act. For Dutch policy-makers, professionals, and academics, **Corien Prins** continued her important agenda-setting work in her Editorials for the *Nederlands Juristenblad*, discussing the legal and policy implications e.g., *drones, digitization of administrative law, and sex robots*.

*TILT's broad understanding of regulation and governance was visible in **Kees Stuurman**'s work on technical standards, analyzing Directive 2015/1535/EU on information provision in the field of technical regulations. **Esther Keymolen** continued to study the role of 'Trust in the networked era', analyzing from a philosophy of technology perspective what happens 'when phones become hotel keys'. A similar emphasis on the importance of social norms in regulation featured in **Bert-Jaap Koops**'s analysis of 'Privacy Spaces', which showed that in many settings, privacy often is protected by other people's discretion at least as much as by law or self-determined access restriction. Meanwhile, **Merel Noorman** updated her lemma on 'Computing and moral responsibility' in the *Stanford Encyclopedia of Philosophy*.*

1.1.2 Regulation, Innovation, and Competition

Technology regulation is also studied through the particular lenses of innovation and competition, in close cooperation with TILEC (the Tilburg Law and Economics Center). **Inge Graef** authored several publications on price discrimination, and on the need to combine competition law and consumer protection in a coherent framework to regulate market power in the data economy. Together with **Martin Husovec**, she also studied data portability, with an existing and a newly won grant from Tilburg Law School's Data Science fund.

Competition law is also a key element in telecommunications regulation. **Dmitriy Trubnikov** used Hayek's contrast between a competitive order (making competition work) and ordered competition (restricting competition's effectiveness) to question how and why the telecom market is regulated, taking into account the sector's inherent characteristics. He defended his PhD thesis "*The competitive order for the new economy: Lessons from the telecommunications experience*" on 29 January 2018.

TILTies made several contributions to the TILEC Discussion Paper Series, with **Sebastian Dengler** (with TILEC's Jens Prüfer) writing about 'Consumers' Privacy Choices in the Era of Big Data', and **Martin Husovec** (with TILEC's Lenka Fiala) using experiment-based evidence to propose a better system for Notice and Takedown Procedures, suggesting that an independent ADR mechanism significantly reduces unjustified takedowns. **Inge Graef, Raphaël Gellert** and **Martin Husovec** deconstructed the European proposal for a Regulation on Non-Personal Data, showing that the data economy is better served by a holistic regulatory approach of (all) data than by two frameworks revolving around an unmanageable distinction between non-personal and personal data.

1.1.3 Artificial Intelligence and Robotics

Perhaps the most prominent development in our field today is the continuously increasing importance of AI, robotics, and automated decision-making. TILT researched this development from many perspectives and in various application spaces. For instance, **Emre Bayamlioglu** and **Ronald Leenes** offered a techno-regulatory perspective on 'The rule of law implications of data-driven decision-making'. With Mireille Hildebrandt and colleagues, Emre also edited the book *Being profiled: Cogitas ergo sum—10 years of Profiling the European Citizen*. Two prize-winning papers analyzed the crucial role of transparency in automated decision-making: Emre Bayamlioglu's 'Contesting automated decisions: A view of transparency implications' (awarded the EDPL Young Scholar Award at CPDP 2019) and **Sascha van Schendel**'s 'Risk profiling by law enforcement agencies in the Big Data era: Is there a need for transparency and a right to explanation?' (was awarded the IFIP 2018 summer school best paper award). **Tetyana Krupiy** examined the social impact of the employment of AI decision-making systems. She focused on identifying under what circumstances and in what contexts the decision-making task should be reserved for human beings.

Corien Prins researched how AI influences the judiciary system, highlighting that this involves not only threats but also opportunities. **Maurice Schellekens** looked at the role of liability law in the

transport sector, showing that liability does not have to hamper the development of self-driving cars, because functions traditionally performed by liability schemes could be taken over by so-called no-fault-compensation schemes. Self-driving cars also featured in another TILT clinic, with Crossyn Automotive, in which students researched intellectual property law in the era of connected cars.

Robots enter not only our roads but also our homes. **Silvia de Conca** discussed the implications of intelligent home assistant robots for the private sphere and how the law can protect that sphere in a connected age. Similarly, the role of privacy in healthcare robots was analyzed by a collection of authors, including Silvia and TILT colleagues **Robin Pierce** and **Aviva de Groot**: 'Nothing comes between my robot and me'.

Meanwhile, the 2017 paper 'Regulatory challenges of robotics' by **Ronald Leenes** and colleagues from TILT and SSSA Pisa continued to be the most-read article in *Law, Innovation and Technology*, reaching the 10,000 download mark.

1.1.4 Privacy and Data Protection

Privacy and data protection have always been key pillars of TILT research and continue to be widely studied, including in VICI and ERC projects (see boxes). Landmarks included the publication with Amsterdam UP of *The handbook of privacy studies: An interdisciplinary introduction*, edited by **Aviva de Groot** and **Bart van der Sloot**, and *Data protection and privacy: The internet of bodies*, edited by **Ronald Leenes, Paul de Hert** and colleagues from VUB, already the 11th volume in the treasure-trove of the Computers, Privacy and Data Protection series.

Of course, much attention was paid to the [General Data Protection Regulation \(GDPR\)](#), which entered into force in May 2018. The GDPR's risk-based approach was studied by **Raphaël Gellert** ('Understanding the notion of risk in the GDPR') and **Claudia Quelle**, who together with 28 other Dutch PhD students formed the *Faces of Science* of the Royal Netherlands Academy of Arts and Sciences, disseminating her research among high school students and a wider audience. The GDPR's new requirement of data protection by design and by default was critically analyzed by **Irene Kamara** and colleagues, including Tilburg Law & Technology alumna Lina Jasmontaite and former TILT visiting fellow Gabrielea Zafir Fortuna.

Their paper was the second most-read article of the European Data Protection Law Review in 2018.

The role of certification in data protection was also illuminated by **Irene Kamara** together with **Paul de Hert** ('Data protection certification in the EU'), as well as by **Eric Lachaud** ('The rise of certification as a regulatory instrument'). **Lorenzo Dalla Corte** analyzed data protection in relation to open data, while **Bo Zhao** discussed Chinese experiences with open government and privacy ('Sex, wealth and transparency in China'). **Robin Pierce** and **Anna Berti Suman** investigated conceivable challenges for Citizen Science and the EU Open Science agenda under the GDPR.

Nadya Purtova and her team, including Sebastian Dengler, Raphaël Gellert, and Mara Păun, organized an expert workshop in November 2018 on the future of data protection law for her ERC-funded [INFO-LEG project](#) (2017-2022), which seeks to improve legal protection of people against harms associated with automated processing of information. The workshop consolidated the findings of the project's first, conceptualizing stage. **Raphaël Gellert** analyzed the concepts of data and information in 'Comparing the definitions of data and information in data protection law and machine learning'. In 'The law of everything', Nadya Purtova expounded and elaborated the main thesis underlying her project, namely that data protection law is becoming over-comprehensive due to an extremely broad concept of personal data, so that new organizing notions are required to meaningfully structure data protection law. **Evelyn Wan** joined the Info-Leg team in late 2018.

While many TILT researchers were busy writing commentaries on provisions in the GDPR that will see publication in 2019, **Bart van der Sloot** usefully explained the GDPR in 'plain language' to the Dutch public, in *De Algemene Verordening Gegevensbescherming in gewonemensentaal*. Another major dissemination effort was made by **Bo Zhao**, **Magda Brewczykńska** and **Weiquan Chen** to present the GDPR to a Chinese audience in the brochure *GDPR and China: what do we need to know?* (《欧盟一般数据保护条例》与中国：我们应当了解什么？).

Bert-Jaap Koops and his team, comprising Maša Galič, Jaap-Henk Hoepman, Bryce Newell, Robin Pierce, Ivan Škorvánek, and Bo Zhao, moved to the final stage of his NWO-funded [VICL project](#) (2014-2019) on privacy in the 21st century, which aims to finding new concepts ('boundary-marking notions') to protect privacy in the age of ubiquitous data. Besides launching a second edited volume on privacy in public, *Surveillance, Privacy, and Public Space* (Routledge), the team conducted comparative legal analyses of the protection in criminal law against being visually observed ('The reasonableness of remaining unobserved') and of location tracking by police. The latter showed that law-makers are starting to adopt new conceptual frameworks, such as the mosaic theory, to regulate privacy. In late 2018, Esther Keymolen joined the project to research information fiduciaries as a boundary-marking concept.

Dusan Pavlovic presented a fresh perspective on data protection by arguing that in the context of gambling regulation, legal protection of gamblers is in some respects better fostered by data maximisation and data linkage than by data minimisation and data separation. He defended his PhD thesis *Online gambling in the EU: From data protection to gambler protection* on 26 June 2018. While TILT generally avoided the blockchain hype, **Lokke Moerel** helpfully explained to believers in blockchain applications that blockchain and data protection are not on a collision course.

Meanwhile, in parallel to all the data protection-related research, TILT also focused on new approaches to achieving privacy protection beyond informational privacy, in the VICI project (see box) and in a theoretical analysis by **Bart van der Sloot** how the European Court of Human Rights embraced the non-domination principle.

1.1.5 Cybercrime, Surveillance, and Cybersecurity

In June 2018, the Committee on modernising criminal investigation in the digital age chaired by **Bert-Jaap Koops** (hence also known as the Commissie-Koops) presented their report *Regulering van opsporingsbevoegdheden in een digitale omgeving* [Regulation of Investigation Powers in a Digital Environment] to the Dutch Minister of Justice & Security. The report's recommendations for improving the regulation of digital investigations are being used to adapt the draft law for the upcoming modernized Dutch Code of Criminal Procedure. **Sascha van Schendel** summarized the report's findings in EDPL: 'Challenges of new technologies for criminal investigations'. Together with Jan-Jaap Oerlemans (Leiden), **Bert-Jaap Koops** also updated his Dutch handbook on criminal law and ICT (*Strafrecht & ICT*) to its third edition, incorporating the new Computer Crime III Act.

Also in the law enforcement context, data protection is a prominent issue, with the new Directive that complements the GDPR for the police and justice sector. **Nadya Purtova** analyzed the complex interplay 'Between the GDPR and the police directive', particularly in the context of information sharing in public-private partnerships. **Paul de Hert** continued his collaboration with Vagelis Papakonstantinou in this area ('Data protection policies in EU Justice and home affairs: A multi-layered and yet unexplored territory for legal research') and discussed the role of the data protection authorities in supervising police and criminal justice authorities processing personal data. The opportunities of data processing and automation in policing were highlighted by **Floris Bex** in 'Argumentation-driven information extraction for online crime reports'.

Eleni Kosta finalized her NWO-funded VENI project (2014-2018) on privacy and surveillance in the context of national security and law enforcement ('Back to the Typewriters?'). She published a new analysis of data retention in Europe and the UK and, together with Bert-Jaap Koops, policy options for law enforcement against "going dark", based on an historical analysis of the first and second "Crypto Wars". At the closing expert workshop in November 2018, she took stock of the project's findings and looked ahead at the many remaining challenges in regulating mass surveillance.

1.1.6 Health

Besides healthcare robots (see above), also automated decision-making and artificial intelligence are affecting the health sector. **Robin Pierce** analysed machine learning for diagnosis and treatment and how this provides 'Gymnastics for the GDPR'. Taking up another technological development, that of personalized medicine and its implications for the common good, Robin Pierce also researched challenges for collective approaches to Alzheimer's Disease ('When there is no cure'). **Tineke Broer**, with Ross and colleagues, analyzed online sources to study how people experience being genetically "at risk" and which role the act of blogging plays in their experiences ('Identity, community and care in online accounts of hereditary colorectal cancer syndrome').

Although the notion of informational self-determination has a long tradition in data protection, also in the medical field, **Theo Hooghiemstra** showed how this notion and its practices are changing through new smartphone-based health apps, personal health records and 'personal health environments'. In his PhD thesis *Informationele zelfbeschikking in de zorg*, defended on 2 July 2018, he addressed the legal and policy implications of these new data management applications, for instance in relation to medical secrecy, security, and privacy by design.

Samantha Adams, who passed away in December 2017, was remembered in a Festschrift in *Applied Clinical Informatics*, one of her many fields of expertise. **Robin Pierce** and TILT colleagues contributed to this special issue with ‘The dot at the end of the funnel—TILT remembers Samantha Adams’. Besides her work on health governance beyond the clinic, Samantha’s wisdom still strongly resonates within TILT: nothing is as simple as it seems, but we can always arrive at a better understanding of anything if we simply start from the basics – solid concepts, explicit assumptions, theoretical grounding, and rigorous method.

1.2 PERSONAL GRANTS

1.2.1 The Global Data Justice project began (ERC Linnet Taylor)

The Global Data Justice project began in 2018 and will be active for the next five years. The project’s aim is to understand the different perspectives worldwide on what constitutes just treatment through data technologies, and it will incorporate an ethnographic perspective on data governance, focusing on different fieldwork sites. Work has begun on the Singapore and Kenya case studies, focusing on issues that include fintech (financial technologies), biometrics and different models for data protection. A third subproject looks at how the humanitarian sector is developing governance practices and principles for its increasing use of big data and biometrics. One case we are following is the recent announcement that the World Food Program will contract with data analytics firm Palantir, which has been under fire recently for partnerships that raise human rights questions.

The project has also begun a subproject on global web tracking: building on work done in media studies and computer science, it will involve seeking collaborators in 197 countries worldwide to test how many trackers load on their country’s domestic websites. It will then be possible to conduct the first global analysis of different ecosystems within the larger data market, and to draw the dimensions and describe that market more accurately than has been done before. The results of the study will be released as open data for the research community, and will offer new methodologies and ideas for how to study under-researched aspects of the data market.

Anna Berti Suman

“Under environmental stressors or shocks, institutional risk governance may fail: by researching the policy impact of Citizen Sensing, I question how grassroots-driven environmental monitoring practices can contribute to risk governance”



You only need to walk by the TILT Tables to grasp the lively, diverse and exciting workspace that TILT represents. In my work experience at TILT, I have learned that there is no meaningless encounter in the corridor because TILT is populated with extremely interesting and smart researchers, no boring outing as TILT always surprises us with unexpected activities and no TILT event that is not worth attending. I would describe my years at TILT in a word as ‘eclectic’: I am an environmental lawyer by training, with a drive towards political science and sociology, interested in understanding the contribution of grassroots-driven monitoring initiatives based on sensor technology on the governance of environmental health risk. With such a multifaceted profile, I found at TILT a great academic environment, where researchers from law, economics, social and political studies, STS and much more gather to debate together shared dilemmas. In addition, I could meet and exchange ideas with experts of social sciences’ methods, thus learning how to strengthen my empirical research abilities. Beyond being a superb academic home, TILT is a ‘warm’ workplace, where you can always find somebody to have a chat with over a coffee, have a walk through the forest and give a hand whenever you need it.

1.2.2 INFO-LEG (ERC Nadezhda Purtova)

INFO-LEG is a research project looking to improve legal protection of people against harms associated with automated processing of information ('information-induced harms'). We aim to achieve this by studying information and how it relates to people from the perspectives of law, economics, and information studies.

In 2018, the team worked on the 1st phase of the project, which was about conceptualization of the problem that the project aims to solve, which has legal and societal aspects. The core of the legal aspect of the problem is an all-inclusive concept of personal data which is a key concept defining material scope of the data protection law in the EU, making it 'the law of everything.' The outcome of this line of research has been published in N Purtova 2018 'The law of everything. Broad concept of personal data and future of EU data protection law' *Law, Innovation and Technology* 10(1) [open access, published] <https://doi.org/10.1080/17579961.2018.1452176> (2nd most read article of the journal). The societal aspect of the problem was studied from the perspectives of economics (internal project report confirming economic incentives driving towards all data becoming personal data) and information studies (internal report outlining the current and possible future capacities of machine learning that substantiate the legal aspect of the problem). The outcomes of this line of research have resulted in the following academic papers: R Gellert, "Data protection, algorithmic regulation, and notions of information: a conceptual exploration," under review with *Regulation and Governance*, and Inge Graef, Raphael Geller and Martin Husovec, *Towards a Holistic Regulatory Approach for the European Data Economy: Why the Illusive Notion of Non-Personal Data is Counterproductive to Data Innovation* (September 27, 2018). TILEC Discussion Paper No. 2018-029. Available at SSRN: <https://ssrn.com/abstract=3256189> or <http://dx.doi.org/10.2139/ssrn.3256189> (also under review with an academic journal). Based on literature review, an internal project report inventorized and classified harms associated with automated data processing.

Selected findings of the 1st project phase have been included in the reaction to public consultations on the Commission's Proposal on a Framework for the Free Flow of Non-Personal Data (Inge Graef, Raphael Gellert, Nadezhda Purtova and Martin Husovec, *Feedback to the Commission's Proposal on a Framework for the Free Flow of Non-Personal Data* (January 22, 2018). Available at SSRN: <https://ssrn.com/abstract=3106791> or <http://dx.doi.org/10.2139/ssrn.3106791>

In 2018 the project team gave 6 conference and workshop presentations (including one at the "The future of the Data Economy in the EU" invitation-only expert workshop organized by the Commission, 22 October 2018, Brussels) and organized 2 academic meetings:

- 'Personal data: still relevant to trigger legal protection in a data-driven society?' a panel at CPDP2018 conference, 24 January 2018, Brussels;
- 2-day expert workshop which took place on 20-21 November 2018, in Tilburg where the problem statement of the project was validated by a group of experts from the fields of data protection law, economics and machine learning.

In 2018 the project website went live: www.infolegproject.net

1.2.3 Informational Self-determination and Mass Surveillance (VENI Eleni Kosta)

In November 2018, the VENI project of Eleni Kosta, "Back to the typewriters? – Rethinking informational self-determination in the era of mass state surveillance" came to an end. During the closing workshop, Eleni discussed the main findings of the project to a small group of experts, covering the main four areas of research carried out during the project: The regulatory choices to keep two data protection regimes in Europe: GDPR and the Police Directive, the use of transparency reports by companies as a tool for transparency, the developments in the checks and balances applied by the ECtHR and the CJEU in cases of mass surveillance and the legal developments in the United Kingdom on retention of data and surveillance via the adoption of the Investigatory Powers Act 2016. In particular as regards the existing checks and balances relating to mass state surveillance, the case law of the Luxembourg and the Strasbourg courts are developing in a way that wishes to cover the challenges raised by technology and its surveillance potential. However, crucial issues, such as the effective oversight especially when AI is employed for mass state surveillance or the respect of the (double) necessity test require a swift change in the way how we think of safeguards when regulating mass state surveillance.

1.2.4 Privacy Protection in the 21st Century (VICI - Bert-Jaap Koops)

The right to the inviolability of the home is the cornerstone of privacy protection. However, now that people are continuously carrying their private lives with them (in their smartphones or in the cloud) and can be followed everywhere in the public space (e.g., through cameras, drones, facial recognition, Google Glass), privacy must be reinvented. An NWO Vici grant has allowed Bert-Jaap Koops and his research team to do just that.

The research aims at finding new paradigms to legally protect citizens in the age of ubiquitous data, without linking the protection to a specific place. Ideas that are explored are a “Right to Inviolability of Home 2.0”; special protection for certain categories of (“core”) personal data or of combinations (“mosaics”) of data from various sources; or strict limitations on investigation services to only collect data relevant to the context of the specific investigation. The project is not merely aimed at protection through legal rules, but also at possibilities to enforce legal protection through technology itself.

1.3 PHD DISSERTATIONS

1.3.1 Dmitrii Trubnikov, 29 January 2018, Tilburg University, TILT



Figure 2: PhD defense Dmitrii Trubnikov

Title: “The Competitive Order for the New Economy: Lessons from the Telecommunications Experience”

Supervisors: Prof. R.E. Leenes, Prof. P. Larouche, Prof. M. Kiškis.

Dmitrii’s thesis focuses on the development of the telecommunications market, comparing Russia with the EU. On the basis of the analysis, the thesis argues that the market economy can serve general social needs only if market mechanisms work for everyone, provide opportunities for entrepreneurial discovery for a great number of small and medium sized enterprises within institutional arrangements that do not create any privileges and mitigate government imperfections that lead to concentration of economic power. Such a system obviously represents an example of market economy, but it is also as far from the existing economic order where production is directed by the market and means of production are owned by private entities as from a state controlled economic system where means of production are owned by the state. The existing economy, despite its market nature, is based on regulation of economic activity, redistribution of incomes, expropriation of commons, complex mechanisms of privileges and state subsidization, and all this makes it totally different from the genuine competitive order where such measures simply have no sense.

1.3.2 Lulu Wei, 27 February 2018, Tilburg University, TILT



Title: “Legitimacy challenges of online gatekeeping in the Chinese social media platform.”

Supervisors: Prof. E.J. Koops, Prof. dr. M.E.A. Goodwin

Figure 3: PhD defense Lulu Wei

The focus of the PhD project is the content regulation and discipline on the Chinese internet. As is well-known that China has very strict top-down content censorship in the Chinese online social media platform, but increasingly, the government relies on private actors to implement formal laws and regulations. Private gatekeepers, such as ICT companies who provide internet service, or voluntary end user groups, participate into the regulatory process, and gain regulatory or disciplinary power in different ways. For end users who are consumers as well as the regulated, the participation of the multiple-layered private actors actually renders the whole information

regulatory process more contestable from the consideration of legitimacy and acceptance. This research answers the question “what are the legitimacy challenges of the online gatekeeping regime in the Chinese internet regulation system and what are the possible ways to address these challenges?” This thesis is about internet regulation and regulatory legitimacy, more specifically, about exploring the boundary markers for a legitimate internet regulation process in the Chinese context.

1.3.3 Dusan Pavlovic, 26 June 2018, Tilburg University, TILT



Title: “Online gambling in the EU: From data protection to gambler protection”

Supervisors: Prof. E.J. Koops,
Dr. C.M.K.C. Cuijpers

Figure 4: PhD defense Dusan Pavlovic

Dusan’s thesis explores the regulation of online gambling to protect gamblers from becoming addicts. The processing of online gamblers’ personal data for identification and commercial communication purposes affects the data protection of online gamblers. The large-scale processing of online gamblers’ data creates more room for an effective implementation of responsible gambling measures. However, processing more data may increase the adverse effects of gambling-related commercial communication. Processing less data reduces the risks related to the provocation of problem gambling, but also hampers recognizing gamblers at risk. In this respect privacy-preserving approaches do not contribute to responsible gambling. A way forward may be to design privacy protective structures that incorporate both the need to protect online gamblers and a responsible gambling approach.

1.3.4 Theo Hooghiemstra, 2 July 2018, Tilburg University, TILT



Title: “Informatieele zelfbeschikking in de zorg”

Supervisors: Prof. Mr. J.E.J.
Prins and Prof. Mr. P. Ippel

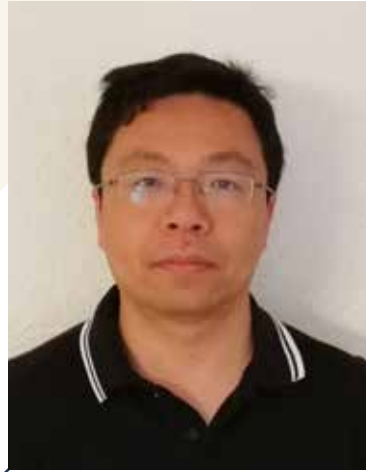
Figure 5: PhD defense Theo Hooghiemstra

Theo’s thesis (in Dutch) addresses informational self-determination in health-care. It discusses the move from being a defensive concept to one empowering patients to really take control over their ‘own data’. The analysis, based on the GDPR and relevant regulation in the healthcare domain, includes whether the duty of professional confidentiality can still play its protective role, whether differences in people’s ability to take control should be taken into account in realizing patient control, what role supervisory authorities should play and what role Privacy by Design could play in this context.

1.4 Events and dissemination of research

TILT in 2018 has intensified its academic activities. Tuesdays are reserved for presentations and discussions. These include reading groups where the aim is to read and discuss books and or papers that lie slightly outside of ones core expertise to lower the barrier of picking up these works and learn from each other’s perspectives. The work in progress meetings are set out to have ones work commented and discussed by other TILTies. These meetings help improve our scholarly work before submitting it to journals and publishers and helps keeping colleagues up to date with TILT’s research. Visiting scholars and guests provide guest lectures and seminars which are open to students and others. In 2018 we have seen a growth in attendance by students and ‘outsiders’. A full overview of the events organized by TILT in 2018 can be found in appendix 3.

Since my joining TILT in Oct. 2017, I have realized soon the many benefits of working at TILT. I very much appreciate the independence, equality, mutual cooperation, transparency and flexibility that TILT has created for all TILTies to develop and prosper. I in particular enjoy the constant and continuous dialogues and exchange of knowledge with many colleagues and friends at TILT on various academic issues, and beyond. TILT is not only a unique place stimulating new thoughts for good research, but also a place challenging yourself to achieve more.



Bo Zhao

“TILT, a unique place facilitating independence, hatching profound thoughts and promoting cooperation”



2

Education

EDUCATION

2.1 Introduction

Even though TILT is historically a research institute, education is a very important pillar of TILT. The cornerstone of TILT's education program is its Master's program in Law and Technology. This LL.M. program started in September 2005. Since 2015 TILT is also extensively engaged with education in the new Data Science programs of JADS. Alongside these major involvements, many TILT staff members are active in one or more other programs, including the TLS Global Law Bachelor program, the bachelor Liberal Arts, the TLS master Rechtsgeleerdheid, TIAS and other Post Academic Programs.

2.2 Master L&T

While the master program started out as a small-scale niche program with only few students a year, the trend is now that the program is attracting over 100 students per year from all over the world. The intake is spread over two periods: September (ca 80 students) and January (ca 35 students). The program takes regulation of and by technology as a starting point and includes explorations into legal domains such as privacy and data protection, intellectual property and IT-law, next to more society-oriented topics from the perspective of technological change such as climate law, environmental law and health law.

Students are trained in assessing the mutual shaping between regulation, technologies and society, through developing a profound interdisciplinary understanding of technology, law, and society. In individual courses extra attention is paid to typical requirements of legal practice. Even though internships are not a mandatory component of the Law & Technology Program, students are encouraged to engage in internships and other extracurricular activities. Practice is involved in the Law & Technology Program by way of guest lectures and extracurricular activities such as seminars and so-called TILT Clinics - assignments commissioned by practice executed by small groups of students – which are highly valued by both students and practice.

2.3 Involvement in other TLS programs: Master Rechtsgeleerdheid, Bachelor's Programs in Global Law and Liberal Arts

TILT offers various courses in other TLS programs. In the Master Program Rechtsgeleerdheid an elective course on privacy and data protection is offered. Students learn about the differences and similarities in privacy and data protection, they get acquainted with the notions of a harm-based and risk-based approach and explore the GDPR in theory and in practice, on the basis of real-life cases. In the Global Law Bachelor, TILT staff teaches a course on Law, Technology, and Society. The aim of this course is to develop students' knowledge of important trends in technological developments to the degree that these developments are relevant for regulation, legislation, and enforcement. In the Liberal Arts program, TILT hosts a distance course on Liability and the Internet, focusing on the implications of online environments for the applicability and enforceability of traditional legal frameworks. Liability in relation to Internet Service Providers and jurisdictional issues regarding online defamation are used as illustrations of how dematerialization and internationalization pose regulatory challenges.

2.4 JADS

Tilburg University is one of the founding partners of the Jheronimus Academy of Data Science (JADS), located in former convent Mariënburg in Den Bosch. TILT lecturers are involved in both the Joint Bachelor's degree Program in Data Science and the Master's degree programs that fall under JADS. The courses taught by TILT staff aim to provide data science students with a strong legal and ethical foundation that will stay with them throughout the rest of their careers.

The majority of JADS students do not have a legal background. However, over the course of their careers, they will inevitably face circumstances in which they will benefit from an understanding of the legal and ethical frameworks that come into play when one deals with (big) data.

The following courses were taught by TILT lecturers as part of JADS:

- **Joint Bachelor's in Data Science:** (Tilburg + Eindhoven)
 - Law and Data Science
 - Perspectives on Data Science
 - Data Science Ethics
 - Data challenge
- **Joint Master's: Data Science and Entrepreneurship** (Den Bosch)
 - IP and Privacy
 - Law, Ethics and Entrepreneurship
- **Master's in Data Science: Business and Governance** (Tilburg)
 - Mandatory: Data Science Regulation and Law
 - Elective: Data Science: Sustainability, Privacy and Security

The primary aim of the courses TILT provides is to ensure that data scientists of the future are aware of the legal and ethical duties that come with the great potential of (big) data. The legal courses provide insight into both legal and ethical considerations and frameworks relevant to data science. Besides a general introduction into law and ethics, students get basic knowledge of relevant legal domains for data science, such as privacy and data protection and intellectual property law, aiming to make students aware of challenges, risks and opportunities that may derive from these legal frameworks. Students are challenged to reflect upon moral and ethical factors which may influence a decision not to analyze or publish certain information, even in cases where the (personal) data are already publicly available.

JADS also offers some Professional Education Programs in which TILT has a role. In the Data expert program and the KPMG program legal and ethical courses are taught by TILT staff.

2.5 TIAS and PAO

One of TILT's successful programs is an Executive Specialization Course in the field of Privacy and Data Protection. During 4 days (all Fridays), the participants gain a foundational understanding of the General Data Protection Regulation (GDPR) and learn how to work with this complex legal framework in practice by handling data protection issues via case studies. Special attention is given to issues prominent in an international setting of data use, including the scope of application of

the Regulation and compliance with the EU data transfer rules. Another PAO program in which TILT participates concerns Big Data. In this program, a full spectrum on the emerging field of both the law on big data as well as the use of big data in the law is offered. The participants get a comprehensive view on the latest developments in Big Data and Artificial Intelligence (AI) related to the law and legal practice. A wide range of topics is covered, including the GDPR, ethical issues of big data and AI, contractual protection of data and IP-rights.

Besides these stand-alone PAO courses, TILT is also active in Post Academic Programs offered by TIAS School for Business and Society. TILT is involved in courses on Privacy and Data Protection, Ethics, ICT-contracts and Intellectual Property in a variety of programs such as the Executive Master of IT-Auditing and the short programs 'Waardecreeatie met Big Data Analytics' and 'Transformeer naar een data gedreven organisatie'. For the Executive Master of IT-auditing TILT on occasion is involved in graduation trajectories providing supervision to small groups of students.

2.6 TILT clinics

TILT Clinics are short term projects (5 days typically) in which a few (3-6) Law and Technology students work on a commissioned study under supervision of TILT senior staff and the project commissioner.

2.6.1 TILT Clinic: Intervention in Flavus case to support safeguards against over-blocking

(November 2017 – January 2018)

Three students of Tilburg University (Law and Technology students Bojana Kostić, Martin Borgioli and Human Rights student Monika Hanych), under auspices of TILT senior staff (assist. prof. Martin Husovec and lecturer John Waterson), prepared a third-party intervention before the European Court of Human Rights in the OOO Flavus against Russia and 4 other applications. The decision of the Court will set important limits for the safeguards against state over-blocking online. Therefore, the intervention concerns mostly due process requirements, and the availability of effective safeguards against collateral over-blocking.

The brief suggests that the Court recognizes that states are not completely at liberty to design blocking schemes and that each delegation of enforcement has to be accompanied by a number of due process and remedial safeguards. Also, the legal framework shall respect the quality of law when a blocking order is issued and emphasizes that any blocking provision should be clearly prescribed by law.

Moreover, the intervention reiterates that states should not absolve themselves of an obligation to provide for an effective remedy against over-blocking by simply delegating the implementation of its measures to private parties. Finally, the owner of the blocked content should have right to have access to the court, procedural equality of arms and efficient legal remedies available.



TILT clinic: Intervention in Flavus case to support safeguards against over-blocking

2.6.2 TILT IP clinic with Crossyn Automotive

(March – May 2018)

On 4 May 2018, the students participating in the TILT IP clinic with Crossyn Automotive presented the results of their 2-months long research on intellectual property law in the era of connected cars.

Crossyn is a Tilburg-based startup that developed an advanced analytics platform that collects, analyses, and enriches vehicle sensor data. The insights from these data can be used to create personalised data driven mobility services, while making sure the driver remains in control of their data.

The automotive industry is currently facing disruptive changes posed by big data and connectivity, summed up as smart mobility, which is at the core of Crossyn's business. In such competitive and innovative environment having a comprehensive intellectual property (IP) portfolio is paramount, especially for a startup. To help Crossyn cope with these challenges, the students of the TILT clinic were tasked with advising Crossyn on an appropriate IP framework that could be applied to their products and services.

To do this the students, under supervision of their mentors from Tilburg University and Crossyn, conducted a fact-finding exercise and several interviews with Crossyn staff, in order to understand Crossyn's business objectives and potential IP assets, and performed normative research on applicable legislation and relevant case-law.

Based on that they first identified Crossyn's products and services that could benefit from IP protection and then proposed to Crossyn the areas of IP law that are pertinent to their IP assets, including database rights, patents, copyright, trademarks, trade secrets, and license agreements, and addressed possible courses Crossyn could follow with their IP strategy.



TILT IP clinic with Crossyn Automotive

2.6.3 TILT participated in a Summer School with Ottawa University and Haifa University

(May 2018)

In the beginning of May 2018 TILT participated in a Summer School initiative together with University of Haifa (prof. Tal Zarsky) and the University of Ottawa (prof. Michael Geist). From TILT, Colette Cuijpers joined three students from the Law and Technology program to participate in a very interesting and diverse program, covering themes like the GDPR, Geoblocking and IP. Besides lectures at The Center for Cyber Law and Policy at University of Haifa, TILT was engaged in several very interesting events, such as a visit to Maitar law firm, attending a Conference on Internet Law in Herzliya and visiting the city of Jerusalem. Besides the scientific contents of the program, the trip was especially rewarding in view of exploring intercultural relations and experiencing beautiful Israel and in particular Israeli hospitality.



Summer School with Ottawa University and Haifa University

Inge Graef

“Competition law’s key challenge will be to find its proper role in a society impacted by tech giants”



Its breadth of research topics and diversity of disciplines make TILT a most inspiring academic environment where the development of novel ideas and out-of-the-box thinking is encouraged. In my own work, I combine insights from law and technology with law and economics to explore the application of competition law to digital markets. Technological developments give rise to novel commercial practices that increasingly raise issues at the intersection of competition law with human

rights and other fundamental values like autonomy and democracy. TILT provides me with ample opportunity to look at my research from different angles and continuously challenges me to adjust the lens through which I view key societal issues beyond my own field. Cross-fertilisation between the various research areas is stimulated through regular seminars and work-in-progress meetings, creating an open and collaborative atmosphere in which innovative research can thrive.

3 Finances

TILT is funded through a mix of internal funds provided by the Tilburg Law School (30%), as well as external funds (70%). Large international projects are funded by the European Commission (EU) and by the Netherlands Organization for Scientific Research (NWO), public authorities and private firms.

Tilburg Law School:

For research into how data portability in big data affects individuals, innovation and competition

European Commission (EU):

European Research Council, for the project *Understanding information for legal protection of people against information-induced harms (INFO-LEG)*

European Research Council, for the project *A framework for Data Justice on the global level.*

Directorate-General for Justice and Consumer, for a study on *certification ex art. 42/43 GDPR*, under the frame-work contract N° JUST/2014/DATA/FW/0038.

Directorate-General Migration and Home affairs for the project *Public-Private Partnerships on Terrorism Financing (ParTFin)*

European Horizon 2020 scheme, for the project *MicroMole: Sewage monitoring system for tracking synthetic drug laboratories.*

Netherlands Organization for Scientific Research (NWO):

VENI grant – **Eleni Kosta** *Back to the typewriters? - Rethinking informational self-determination in the era of mass state surveillance*

VICI grant – **Bert Jaap Koops** *Privacy Protection in the 21st Century*

BotLeg project for research on the legal boundaries of public-private actions against botnets

Public authorities and Private firms:

Ministry of Justice and Security, the Netherlands – *Rechterlijke toetsing van Big Data-toepassingen*

Ministry of Justice and Security, the Netherlands – *Blockchain en de wet*

SIDN - *DomJur* project – builds and maintains the largest online database of case law about domain name disputes concerning .nl domain names and about responsibility of internet intermediaries.

Rechtbank Oost-Brabant, chair of Data Science in the Judiciary

VNSU program ‘Digitale Samenleving’, *DiSa Responsible Data Science at Tilburg University*



Raphaël Gellert

“As a post-doc working on a cutting-edge project on the regulation of artificial intelligence, being part of TILT enables me to carry out genuine interdisciplinary research”

TILT is an excellent work environment that takes its commitment to studying law, technology, and society very seriously. I particularly enjoy the high and varied expertise of my colleagues as well as their collegiality. This creates a highly stimulating academic work environment that nurtures meaningful and ongoing discussions and reflections. This is also possible thanks to the numerous events organised (regular seminars, bi-annual conference, frequent guest-scholars et cetera). In sum, TILT is an excellent place for the better understanding of technology –and society.

4

Visitors
and
others

VISITORS AND OTHERS *(fully or partially staying at TILT in 2018)*

TILT Fellowships

- Janet Chan (University of New South Wales, Sydney, Australia)
- Jorge Contreras (University of Utah, U.S.) in cooperation with the Tilburg Law and Economics Center (TILEC)
- Sharon Haleva-Amir (Bar Ilan University, Ramat Gan, Israel)

Witteveen Memorial Fellow

- Vicky Breemen (Institute for Information Law, University of Amsterdam)

Research visitors

- G.H. Baek (Republic of Korea)
- Oscar Borgogno (University of Turin, Turin, Italy)
- Helen Eenmaa-Dimitrieva (University of Tartu, Tartu, Estonia)
- Miho Kamitsukue (Sapporo University, Sapporo, Japan)
- Maria Macocinschi (University of Turku, Turku, Finland)

Visiting Scholar

- Monika Hanych (Faculty of Law, Masaryk University, Brno, Czech Republic)

EMJD Students

- Oleksii Konashevych
- Urbano Reviglio della Venaria
- Roger Alunge Nnangsope
- Daniel Zavaleta Salinas

Guest Lectures

- Tineke Egyedi (Delft Institute for Research on Standardization, Delft)
- Hans Graux (Timelex, Law Offices, Brussels, Belgium)

- Walter van Holst (PBQL, The Hague)
- Louis Jonker (Van Doorne, Amsterdam)
- Peter van Schelven (BIJ PETER – Wet & Recht, Oudewater)
- Frank Vogt (Koninklijke Wegener, Apeldoorn)
- Marjolein Viersma (Dutch Police)
- Reinoud Westerdijk (Kennedy Van der Laan, Amsterdam)
- Mark Wijnhoven (Philips, Eindhoven)
- Alex van der Wolk (Morrison and Foerster, Brussels, Belgium)
- Alja Poler - De Zwart (Morrison and Foerster, Brussels, Belgium)

Research associates

- Angela Daly (Queensland University of Technology, Queensland, Australia)
- Heleen Janssen (Ministry of the Interior and Kingdom Relations, The Hague / Cambridge University, Cambridge, UK)
- Eric Lachaud (Tilburg Institute for Law, Technology, and Society, Tilburg)
- Federica Lucivero (King's College London, UK)
- E. (Eliza) Mik (Singapore Management University, Singapore)
- Stefania Milan (University of Amsterdam, Amsterdam)
- B.C. (Bryce) Newell (University of Kentucky, Lexington, US)
- Dmitrii Trubnikov (Russia)
- Eric Verhelst (Advocatenkantoor Verhelst, Markelo)
- Nicolo Zingales (Sussex Law School, University of Sussex, UK)

External PhD candidates

- K. (Katia) Bodard
- C. (Claudia) Boekestein
- H. (Hans) Buitelaar
- P. (Paulan) Korenhof
- E. (Eric) Lachaud
- M. (Manuella) van der Put
- A. (Arnout) Terpstra
- C. (Clemens) Willemsen

Interns

- Julia Misztal
- Leo Nobile
- Sarah de Heer

Student assistants

- Deveny Blom
- Magda Brewczynska
- Dane Carlson
- Weiquan Chen
- Lisette Gotink
- Anne de Laat
- Eva Neggens
- Tjasa Petrochik
- Mirell Piir
- Femmie Schets
- Taisei Tatsumi

Esther Keymolen

“People do not interact with companies or with intangible data, they interact with data-driven devices. These devices are increasingly designed to invoke trust, regardless of whether that trust is justified or not.”



My research focuses on trust and privacy in the networked and data-driven era. With a background in philosophy of technology and data ethics, I analyze the way in which technologies mediate our interactions with ourselves, other people, and the world around us.

My research greatly benefits from the thriving academic atmosphere at TILT, with its strong focus on cutting-edge research. On a weekly-basis, there are meetings and presentations organized to discuss work in progress, host international speakers, and brainstorm on new projects. It is an inspiring and inclusive environment with a lot of support to reach academic goals.

Appendix

APPENDIX 1 – MEMBERS PER 31 DECEMBER 2018

Senior

Senior members		P & DP	DS	H	CS	R & AI	IP	FTE
Floris Bex	Full Professor		*					0,2
Tineke Broer	Assistant Professor			*				1,0
Colette Cuijpers	Associate Professor	*	*					0,4
Sebastian Dengler	Researcher	*						1,0
Raphael Gellert	Researcher	*						1,0
Inge Graef	Assistant Professor	*	*					1,0
Paul de Hert	Associate Professor	*						0,2
Jaap-Henk Hoepman	Researcher	*						1,0
Martin Husovec	Assistant Professor	*	*				*	1,0
Esther Keymolen	Assistant Professor		*					1,0
Bert-Jaap Koops	Full Professor	*			*			1,0
Eleni Kosta	Full Professor	*						1,0
Tetyana Krupiy	Researcher		*					1,0

Senior members		P & DP	DS	H	CS	R & AI	IP	FTE
Ronald Leenes	Full Professor, Director TILT	*	*			*		1,0
Aaron Martin	Researcher				*			1,0
Lokke Moerel	Full Professor	*	*			*		0,2
Merel Noorman	Assistant Professor					*		0,8
Robin Pierce	Associate Professor			*				1,0
Corien Prins	Full Professor	*	*					0,2
Nadezhda Purtova	Associate Professor	*	*					1,0
Leonie Reins	Associate Professor	*						1,0
Maurice Schellekens	Assistant Professor		*			*	*	1,0
Bart van der Sloot	Assistant Professor	*	*					1,0
Kees Stuurman	Full Professor	*					*	0,4
Linnet Taylor	Assistant Professor		*					0,8
Bo Zhao	Senior Research Fellow				*			1,0

P & DP: Privacy and Data Protection
 DS: Data Science
 H: Health
 CS: Cybercrime and Cybersecurity
 R & AI: Robotics and Artificial Intelligence
 IP: Intellectual Property

Junior

Junior members		P & DP	DS	H	CS	R & AI	IP	FTE
Emre Bayamlioglu	PhD Researcher	*				*	*	1,0
Anna Berti Suman	PhD Researcher	*		*				1,0
Magda Brewczynska	Junior Researcher	*						1,0
Tom Chokrevski	PhD Researcher	*		*		*		1,0
Silvia De Conca	PhD Researcher	*				*		1,0
Lorenzo Dalla Corte	PhD Researcher	*						0,5
Lisa van Dongen	Lecturer						*	1,0
Maša Galič	PhD Researcher	*			*			1,0
Aviva de Groot	PhD Researcher	*	*			*		1,0
Shazade Jameson	Junior Researcher		*					1,0
Irene Kamara	PhD Researcher	*						1,0
Jingze Li	PhD Researcher						*	1,0
Hellen Mukiri-Smith	PhD Researcher	*	*					1,0

Junior members		P & DP	DS	H	CS	R & AI	IP	FTE
Mara Paun	PhD Researcher	*						1,0
Claudia Quelle	PhD Researcher	*						1,0
Sascha van Schendel	PhD Researcher		*		*			1,0
Ivan Škorvánek	PhD Researcher	*			*			1,0
John Waterson	Lecturer		*				*	1,0

P & DP: Privacy and Data Protection
 DS: Data Science
 H: Health
 CS: Cybercrime and Cybersecurity
 R & AI: Robotics and Artificial Intelligence
 IP: Intellectual Property

Support staff

- Leonie de Jong, Managing Director
- Femke Abousalama, PA to Ronald Leenes, Secretary
- Ghislaine van den Maagdenberg, Secretary

APPENDIX 2 – PUBLICATIONS

Academic publications - Journal articles

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APPENDIX 3 – ACTIVITIES 2018

TILT seminars

TILT invites people working in the domain of law, technology, and society to give guest seminars on a regular basis.

27 February 2018

Gianclaudio Malgieri is a Doctoral Researcher at LSTS, VUB

“R.I.P.: Rest in Privacy or Rest in (Quasi-) Property? The protection of data of deceased data subjects between Data Protection Law and National solutions”

20 March 2018

Jens Prüfer is an economist at Tilburg University’s Department of Economics and a member of the Tilburg Law and Economics Center (TILEC).

“Competing with Big Data”

27 March 2018

Sean McDonald is the CEO of FrontlineSMS and a fellow at Stanford’s Digital Civil Society Lab.

“He presents an analysis of the most commonly suggested/pursued legal approaches to data and digital governance.”

17 April 2018

Maja Brkan is Assistant Professor of European Union Law at Maastricht University since 2013 where she is responsible for coordinating the core course on EU institutions and for supervising students researching on data privacy aspects of Big Data and Artificial Intelligence.

“Do Algorithms Rule the World? Algorithmic Decision-Making and the Right to Explanation in the GDPR”

15 May 2018

Prof. Jorge L. Contreras is a Professor from the University of Utah.

“Property Rules, Liability Rules and Genetic Information”

30 May 2018

Ugo Pagallo is a former lawyer and current Professor of Jurisprudence at the Department of Law, University of Turin, Italy. He is Faculty Fellow at the Center for Transnational Legal Studies in London, UK and NEXA Fellow at the Center for Internet & Society at the Politecnico of Turin.

“The Hard Cases of AI, Robotics, and their Legal Governance”?

19 June 2018

Esther Keymolen (1982) is Assistant Professor and director of education at eLaw, the Center for Law and Digital Technologies at Leiden University.

“Trust and Technology: The evolution of a hotel key.”

25 September 2018

Eliza Mik is Assistant Professor at the Singapore Management University.

“Does AI Require New Laws? An (incomplete) Private Law Perspective”

16 October 2018

Izabela Skoczen obtained her PhD from the Faculty of Law and Administration at the Jagiellonian University in Krakow, Poland. In 2017 she took up employment with the Krakow Faculty of Law and Administration

“Trust an “Implicatures in legal contexts”

13 November 2018

Laurens Naudts is a Doctoral Researcher and Researcher in Law at the KU Leuven Centre for IT & IP Law, Belgium.

“The Articulation of Fairness in Machine Learning: Justice, Equality and Data Protection.”

23 November 2018

Patrick A. Parenteau is Professor of Law and Senior Counsel in the Environmental and Natural Resources Law Clinic (ENRLC) at Vermont Law School.

“Comparing Climate Litigation Strategies in the US and the Netherlands”

27 November 2018

Dr. Wei ZHUANG is Counsel with Praximondo, a Geneva-based firm.

“Intellectual Property Rights and Climate Change: Interpreting the TRIPS Agreement for Environmentally Sound Technologies”

6 December 2018

Dr. Miho Kamitsukue, Professor of Sapporo University in Hokkaido, Japan.

“Privacy Law in Japan - From Torts View”

11 December 2018

Mireille van Eeoud is Professor of Information Law at the University of Amsterdam, IViR

“The limits of lawmaking: Why a new intellectual property right won't save the media”

Other events**18 April 2018 - Stakeholder Workshop for the Certification study in Brussels**

On 18 April, TILT organized in Brussels a Stakeholder Workshop for the certification study, during which preliminary results of the study were presented to a group of stakeholders from data protection authorities, certification bodies, accreditation authorities, industry, and others. The head of the Data Protection Unit of DG JUST gave the welcome speech and Ronald Leenes presented an overview of the study. The audience was then divided into working groups on data transfers, standards, certification & accreditation with Irene Kamara, Ronald Leenes, Kees Stuurman, Eric Lachaud (TILT) and Marc van Lieshout (TNO) stirring the discussion. The feedback will be implemented by the research team and presented in the final version of the study.

24 May 2018 - Seminar Data Access in the European Digital Single Market in Brussels

On 24 May, Inge Graef and Martin Husovec organized a seminar in Brussels entitled ‘Seminar Data Access in the European Digital Single Market’ with a number of policymakers, industry representatives and experts.

24 May 2018 - Seminar Data science as social science: an interdisciplinary discussion on Cambridge Analytica

On May 24 TILT hosted an interdisciplinary discussion on the recent events involving Cambridge Analytica. It incorporated perspectives from across a range of disciplines, including those currently peripheral to data scientific research but for whom the topic raises issues of central importance.

28–31 May 2018 - Lorentz-NIAS workshop on Data Sharing for Law Enforcement

On 28-31 May Eleni Kosta co-organized a Lorentz-NIAS workshop on Data Sharing for Law Enforcement, with Bibi van den Berg, Bart Preneel and Daniel Trottier. The workshop aimed to identify the challenges that arise in data sharing with law enforcement authorities present workable technical, legal and societal suggestions in the form of a white paper with best practices and recommendations, which can be implemented in the short to medium term. 25 scientists from various disciplines spent four days having fruitful discussions and coming up with concrete recommendations.

1 June 2018 - Prof. Ugo Pagallo Workshop

On June 1st, Prof. Ugo Pagallo from the Department of Law at the University of Turin, joined us for a very productive and inspiring seminar on the legal status of AI technologies. Besides TILT members interested in Artificial Intelligence (AI) technologies, there were also a few external guests participating in the seminar

14 June 2018 - International PhD colloquium

The Tilburg Institute for Law, Technology and Society (‘TILT’) organized a PhD Colloquium, which took place at Tilburg University on 14 June 2018. The organizers invited PhD researchers working on any of the themes covered by this Call for Papers (‘CfP’) to submit an abstract. The general theme of the PhD Colloquium was “Regulating new technologies in uncertain times”.

19 June 2018 - PI.lab roundtable

On 19 June, the VICI team together with PI.lab organized a roundtable workshop on “Envisioning Home 2.0: Concept, Feasibility, and Configuration” in Utrecht. Around 25 legal and technical experts discussed whether, to what extent and how “home 2.0” and the “digital home” could be fruitful concepts for protecting privacy in the 21st century.

14 November 2018 - VENI workshop

In 2014 Eleni was awarded a personal research grant (VENI) by the Netherlands Organization for Scientific Research (NWO). The project was entitled “Back to the typewriters? – Rethinking informational self-determination in the era of mass state surveillance”. On 14 November, Eleni Kosta organized the closing workshop of this project. The workshop focused on the regulation of data protection in Europe and the choice of the European regulator to have two legal instruments on data protection (GDPR and LEA Directive) relying on different legal bases, on the use of transparency reports by companies as tools for accountability and transparency and on the checks and balances that are applied by the ECtHR (and the CJEU) in case of mass surveillance.

20-21 November 2018 - INFO-LEG workshop

On 20-21 November, the INFO-LEG team conducted a closed interdisciplinary expert workshop: ‘Future of data protection law; Towards the law of everything?’ The aims of the workshop were - based on the insights from economics, law, computer science and media studies - to validate the hypothesis of the project, i.e. that as the current law stands, and in view of the dawning hyperconnected world characterized by “datafication” of our environment through ubiquitous sensors and the Internet of Things, everything will soon be or contain personal data, data protection law will become the law of everything and will collapse.

We also used the workshop to start a discussion about possible alternative options for a suitable threshold for legal protection against information-induced harms.

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What does TILEC's annual report do in this booklet you may wonder? TILT and LTMS a game changer in producing world-class research and education surrounding technology-related societal challenges. In the two parts of this booklet you will witness that 2018 was once again a very successful year for

TILT

LTMS

The fact that you open the annual report this way means you know, or know about, TILEC. What does TILT's annual report do in this booklet you may wonder? TILEC and TILT have merged into the new Department of Law, Technology, Markets, and Society (LTMS). We aim to make class research and education surrounding technology-related societal challenges a very successful year for

TILEC

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