

LeADS Newsletter

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Get to know the LeADS researchers

In November 2021 the journey of the exceptional Early Stage Researchers (ESR) began. During the upcoming three years, they will work on specific research topics and collectively join their knowledge within the LeADS (Legality Attentive Data Scientists) project.

Coming from diverse cultural and academic backgrounds (computer science and law) they will conduct interdisciplinary research, based on legal, technical, empirical and normative analysis. They will relate abstract problems to real life, policy design and business needs. The goal: to develop a data science capable of maintaining its innovative solutions within the borders of law and helping expand the legal frontiers in line with innovation needs.

Followed by an intensive interdisciplinary training program in Pisa at Scuola Superiore Sant'Anna (described in Newsletter 2), they will now begin



their research journey in 7 prominent European universities and research centers.

The ESRs are divided into 4 Crossroads, i.e., major challenges that still need to be addressed in data-driven societies: (1) Privacy vs Intellectual Property (2) Trust in Data Processing & Algorithm Design (3) Data Ownership (4) Empowering Individuals. Within and across these crossroads they will collaborate to encourage continuous learning

within a team environment.

Together, they form an innovative, multidisciplinary research community that will develop expertise in both data science and law that aims at reconciling the conflicting objectives of EU regulatory policy: fostering innovation while championing the protection of fundamental rights.

Each ESR wrote an introductory profile, and we invite you to get to know the LeADS researchers!

ESRs in Crossroad 1: Privacy vs Intellectual Property

Crossroad 1 focuses on interfaces between two branches of European law of paramount importance in the regulation of data, namely European data protection and intellectual property law. These two regulatory frameworks contribute to the regulation of data-driven innovation and data sharing practices among both private and public stakeholders.

In some cases, they move towards common

objectives of the free flow of data within the European single market. In other cases, the overlap between these two bodies of law raises specific tensions between the fundamental rights that ground the European right to data protection and the economic interests fueling intellectual property rights.

This crossroad thus aims at mapping the interactions between both regulatory

branches and illustrating present and future trends of convergence and conflicts.

The following 4 ESRs will be exploring the various levels of interdependences between privacy and intellectual property laws in the context of EU innovation policy.



ESR 1 Qifan Yang

Project Title: Reciprocal interplay between competition law and privacy in the digital revolution

Host Institution: SSSA

Qifan Yang joined the project “LeADS- European Training Network on Legality Attentive Data Scientists” in November 2021 as an Early-Stage Researcher. She will be conducting research activities on the topic of “Reciprocal interplay between competition law and privacy in the digital revolution” (ESR1) within this framework. In addition to her research for LeADS, she is a researcher in the LIDER Laboratory at Scuola Superiore Sant’Anna of Pisa and a Ph.D. student in the National Doctorate in Artificial Intelligence. She holds a European Master in Law and Economics (joint degree), a Bachelor of Law, a Bachelor of Economics, and Chinese legal professional qualification certificate A.

Qifan’s key research area is comparative data law and competition law. Her previous work pays more attention to the legal liability framework and regulations of market behavior with the intervention of digital technologies. She also works on the legal regimes of data protection and modes of data governance, especially the blurred borders between personality and property rights and the impact on market competition.

In the LeADS project team, her research will follow the reflections and impacts of the European data protection regulation on competition dynamics, with a focus on the relevance of personal data to the consolidation of market dominance. She will address and analyze some questions like: (1) the relationship between personal data protection and market competition, including market dominance, market concentration, welfare distribution, etc.; (2) the impacts of data portability and interoperability requirements in terms of GDPR on entry barriers and market dominance; (3) how SMEs and consumers can benefit from data protection laws and competition laws.

She hopes her research will provide principles or rules of personal data privacy in line with the development of digital economy and contribute a predictive theory or model as the policy guidelines.

ESR 3 Tommaso Crepax

Project Title: Unchaining data portability potentials in a lawful digital economy

Host Institution: SSSA

Tommaso Crepax is an Early-Stage Researcher at Scuola Superiore Sant'Anna for the LeADS Project and a Ph.D student of the National Doctorate in Artificial Intelligence. Tommaso's background in regulation of and by technology finds its academic roots at the Tilburg Institute for Law and Technology, where he graduated *cum laude* as Master's student, and in which he subsequently worked as lecturer and program coordinator. Before joining Liderlab, Tommaso was associate researcher at the KU Leuven Center of IP and IT law in the "privacy engineering" cluster. Tommaso's areas of expertise encompass privacy, cyber-security and data protection of information systems, which he both studied in theory as well as applied in practice in EU funded Horizon 2020 projects. In his research, Tommaso loves to work side-by-side with data scientists, computer scientists and information engineers, whom in the years granted him the title of "legal engineer".

At LeADS, Tommaso will deal with the topic of "Unchaining the potentials of the right to Data Portability". Thanks to the elite, cumulative knowledge and expertise of supervisors, lecturers and collaborators in the LeADS project, Tommaso expects to expand his understanding of privacy, data protection and cybersecurity far beyond the classic legal edges, thanks to new theoretical and hands-on experiences in performing data analytics with machine learning techniques, implementing cybersecurity in information systems, and developing the skillset of the first generation of Legality Attentive Data Scientists.

One thing most people do not know about Tommaso is that he used to be a boogie woogie and acrobatic rock'n'roll dancer for about 12 years. In his spare time, he plays guitar, tennis, basketball —go Bulls! — and, most importantly, pampers his two nephews.

ESR 5 Mitisha Gaur

Project Title: Differential privacy and differential explainability in the data sphere: the use case of predictive jurisprudence

Host Institution: SSSA

Mitisha Gaur has been associated with the LeADS Program as an early-stage researcher since early November 2021. She is working with AI and differential Privacy [ESR 5]. Mitisha is also enrolled in the national doctorate program in AI as a supernumerary student with the University of Pisa under joint supervision of the Scuola Superiore Sant'Anna, Pisa.

Prior to her joining the LeADS Program, Mitisha graduated with a Bachelors in Law (LL.B) along with an honors in Intellectual Property from the Rajiv Gandhi School of Intellectual Property Law at the Indian Institute of Technology, Kharagpur in 2019, following which she was retained by Shardul Amarchand Mangaldas, a premier Indian Law firm. During her time at the law firm, she worked as a legal associate with the regulatory teams operating in the Technology and FinTech sectors. The commercial nature of her work has provided great insights and depth to her understanding of the nuances and the requirement of a balanced approach between regulators and corporate bodies for the true adoption of new technologies, fair practices and industry norms.

Mitisha has been deeply interested in the relationship and the requirement of balance between data privacy and data harvesting which she believes can only be achieved through reasonable regulations and a commitment to ethical functioning by industry players. She believes the fulcrum of this effort lies in a deep understanding of the functioning of technology coupled with the appropriate levels of regulations to maintain and promote transparency of operations via-a-vis data principals.





She hopes to contribute to the discussion surrounding the need for ethical data privacy practices and create a model framework for implementation which makes this an industrial norm, without compromising on neither an individual's fundamental right to privacy or an organisation's functions relating to commercialisation of data collected by it.

Mitisha works at the LIDER Laboratory, Scuola Superior Sant'Anna, Pisa and is also associated with the Predictive Justice Project.

ESR 13 Onntje Hinrichs

Project Title: Solving the conflicts between data owners and data exploiters through a spectrum of quasi-property models

Host Institution: VUB

Onntje joined the LeADS project in the end of 2021 as an early-stage researcher at Vrije Universiteit Brussel. His research will focus on how to solve the often contradicting interests of data owners and data exploiters. Prior to joining the LeADS project, Onntje obtained a Bachelor in European Studies from Maastricht University and a Master in European law from the law faculty Lyon 3. He furthermore has had the chance to take several courses at Queen Mary University of London in technology and telecommunications law focusing on EU data protection laws or challenges posed by evolving areas such as cloud computing or AI.

Followed by an internship at the French-German Chamber of Commerce, he has been working for five years as a legal advisor in a consumer association focusing on dispute resolution mechanisms and assisting consumers in reaching out-of-court solutions in cross-border conflicts with the European Consumer Centres Network created by the European Commission.

His research in the LeADS project will focus on questions such as (1) How are data subjects protected in both the existing European regulations as well as the current policy discourse about future legislative proposals regarding the data sharing economy? (2) Is all data from the different stakeholders protected equally under European regulations? (3) Does European data protection regulation enable or meddle with the business' interest to rely on data-driven innovations for further economic growth? With his research he aims at clarifying and solving the conflicts between data owners and exploiters, to foster consumer trust and help business players respect user's fundamental rights without renouncing to competitive market strategies.

After having lived, studied, and worked in 5 different Member States of the EU Onntje is now looking forward to getting to know the "capital" of the European Union.

ESRs in Crossroad 2: Trust in Data Processing & Algorithm Design

Crossroad 2 focuses on trust of data subjects towards the processing of their own personal data, i.e., transparency in automated and semi-automated data processing, accountability in data management and fairness in algorithm design.

Trust comprises "internal trust", distinguished as the attribution of trust due to internal characteristics ("trustworthiness") contrasted with "global

trust", which is usually affected by external factors such as circumstances and infrastructures. The concept of trust can be quantified, and estimated computationally, albeit with certain limitations.

Data processing must then also be considered from a sociological perspective because of the power imbalances it can create when information is disclosed due to the disclosing party

becoming vulnerable to his or her audiences. When the privacy of information is legally protected, it fosters a sharing culture by mitigating the risks inherent to the disclosure and rebalancing power asymmetries between sharers and their audience. The key for this to happen is trust.

The following 4 ESRs will research how to build trust and transparency in data driven technologies.

ESR2 Louis Sahi

Project Title Distributed reliability and blockchain-like technologies

Host Institution: UPS-IRIT

I am Louis SAHI, graduated in Cybersecurity from Cote d'Ivoire. I have a bachelor's degree in Network and Computer Sciences. I have experience in the industry in Cote d'Ivoire and Morocco.

You can connect to me by this link: [linkedin.com/in/louis-sahi](https://www.linkedin.com/in/louis-sahi)

The objectives of this research are to conceive, develop, and implement reliable and secure instruments that guarantee innovative and transversal data protection principles, without the need of centralized authorities or trusted third parties. For instance, the potentials of blockchain-like technologies will be explored as instruments to guarantee data integrity in a distributed manner and without the need to know otherwise sensitive information.



ESR 9 Xengie Doan

Project Title: Processing of biometric data to support the use of e-identities in key activities of the EU digital society

Host Institution: UL

Xengie Doan (they/she) is a nonbinary scientist with Master's in Bioinformatics from the University of Oregon. After obtaining their Master's, they worked as a bioinformatician at the Stowers Institute for Medical Research assembling genomes, analyzing repetitive DNA sequences in cancer genomes, and creating semi-automated analysis pipelines. They then worked as a bioinformatics engineer at Sage Bionetworks helping build infrastructure, community sourced metadata models, and user-friendly dashboards and tools as part of a data coordination center for the Human Tumor Atlas Network.

Xengie is ESR9, focusing on processing genomic, biometric and/or biomedical data to support the use of e-identities in key activities and services of the EU digital society with Prof. Gabriele Lenzini at the University of Luxembourg. Their research interests surround improving the genomic and biomedical data consent process to be more lawful, ethical, secure, and transparent to protect data considering the various existing and proposed legal regimes for data protection in the EU.

Xengie hopes to investigate different models of informed consent and refusal to address specific contextual needs, co-design to increase trust and transparency of the process, and user-centered consent processes for fewer barriers to empowered and autonomous decision making. They are very excited to be part of LeADS and look forward to learning and collaborating with such a diverse and interdisciplinary team. Xengie can be reached at: xengie.doan@uni.lu



**ESR 14 Robert L. Poe****Project Title: Neuromarketing and mental integrity between market and human rights****Host Institution: SSSA**

Robert L. Poe joined LeADs in November, 2021 as an early-stage researcher. He will be researching whether and how neuromarketing can affect the human rights of individuals (ESR 14). In conjunction with his responsibilities to LeADS, he is enrolled in the National Doctorate in Artificial Intelligence and is a researcher at the LIDER Laboratory, Scoula Superiore Sant'Anna.

His research will focus on questions like: (1) at what point do neuromarketing techniques become a type of manipulation or coercion, such that the practices violate fundamental rights; (2) what is the state-of-the-art technology that can allow marketers to circumvent a consumers ability to act otherwise; (3) and what are the policies that could be implemented, either privately or publicly, to ensure public trust, empowerment, and, if needed, protection? He hopes his research will: (1) lead to policy action, and (2) contribute to the eventual expansion in scope of fundamental rights to encompass cognitive rights. Before Robert began his academic journey, he received an industrial controls certification and worked for various companies as an electronics technician. In academia, Robert studied philosophy and literature (BA) and law (JD). During his undergraduate, he wrote his honors thesis in metaethics, about how values exist, relate to one another, and develop over time; and during his juris doctorate, he volunteered at the Community Legal Clinic and participated in the Sherman Minton Moot Court Competition. Professionally, he worked for the appellate division at the York County District Attorneys Office and in the real estate department at Stock and Leader, attorneys at law. At the beginning of 2021, he moved to Europe for family reasons.

**ESR 15 Soumia Zohra El Mestari****Project Title: Technologies for algorithms and algorithmic transparency and fairness****Institution: UL**

Soumia Zohra El Mestari comes from Algeria and is joining the university of Luxembourg. She holds a double MSC and engineering degrees in computer science.

Soumia stands between Machine learning and cyber security and is interested in making data driven solutions privacy friendly.

Within the LeADS project she is ERS N°15 working on Technologies for algorithms and algorithmic transparency and fairness.

Her research interests are: Privacy Enhancing technologies, Data science (especially Deep Neural Networks), Privacy Preserving Machine Learning.

Since Soumia comes from a technical background she aims at providing suitable implementations of the existing data regulations. Furthermore, she also would like to provide enhanced versions of the existing technologies that are performant, fair and privacy friendly. Soumia loves exploring new ideas, improving concepts and mixing out things and solutions. They call it research Soumia calls it curiosity.

Outside of PPML and Tech, Soumia writes and loves learning new languages. She works out and is fond of material arts especially boxing and wishes that she can one day learn to play guitar. Soumia also enjoys travelling and seeing new cultures.

ESRs in Crossroad 3: Data ownership

Crossroad 3 focuses on the challenge of ownership of personal and non-personal data, mainly in critical infrastructures to enable fair sharing.

Considering the interdisciplinary approach that characterizes the LeADS project, the approaches of both disciplines on how “data” and “property” are perceived by data scientists and lawyers can

be radically different. For instance, whereas the term “ownership” in computer and data science is associated with the possession and responsibility for a particular dataset, it is related to the term “property” and property rights in the legal field.

It is therefore necessary to harmonize the notions behind the terms “data” and “ownership” to build

an interdisciplinary approach to data ownership. It is through a shared perspective that legal-technical solutions can be presented.

The following 3 ESRs will conduct research from different perspectives on the challenges posed by data ownership.

ESR 4 Cristian Lepore

Project Title: Big data, small data, and business practices

Host Institution: UPS-IRIT

I am Cristian Lepore, I am a cyber security fellow and ESR member of the University of Toulouse III. I am the primary maintainer of the SecTeal compiler [1] and the original architect of the Authclick application [2], but since 2019 I am not involved anymore in the project. In 2020, I focused my activity on formal models and digital identity. In 2021, I assessed the self-sovereign identity European framework (eSSIF) to figure out possible challenges and solutions. My latest positions held in the industry were as a cryptographic engineer and infrastructure analyst. From a Ph.D. I will gain the critical thinking to lead the next wave of innovation and push my own research forward. I will be exploiting the opportunity that COVID-19 brought to the digital world from a legal and technical perspective as well



ESR 7 Bárbara da Rosa Lazarotto

Project Title: Public-private data sharing from “dataveillance” to “data relevance”

Host Institution: VUB

Background: Bachelor in Laws, Master in Legal Studies, Currently part of a non-profit association called Women4Cyber Portugal.

Research interest: My research interests are the intersection between technology and law, especially its repercussions on the fundamental rights of individuals.

Expectations for the project and plans for the future: This project will give me the knowledge and the skills to become a better researcher in the future and understand better the issues and the solutions related to technology and law.





ESR 12 Aizhan Abdrassulova

Project Title: The boundaries of information property: from concepts to practice

Host Institution: JU

My name is Aizhan Abdrassulova. I'm from Kazakhstan. I am a lawyer, I have a master's degree in international law. I graduated from the Eurasian National University in Nur-Sultan. I have experience as a lawyer in a national company and also teaching experience in the courses Theory of State and Law, International private law and Intellectual property law. I am ESR 12, the topic is "Boundaries of Information Property - from concept to practice".

My scientific interest is precisely related to the topic of information property, I am aware of the enormous importance in our time and at the same time the number of conflicts in this area of law. To define the boundaries of information property means to solve such large-scale problems as the way of legal regulation of this area, the elimination of gaps and contradictions in the legislation of the European Union and national legal systems. Information has a diverse and contradictory nature, which makes it impossible to attribute it to one or another method of legal regulation. And I plan to make a significant contribution to the identification, interpretation and analysis of this category from the point of view of law.

It is a great honor for me to be a part of the LEADS project. I want to bring all my best skills and abilities to it. Even the online presence at the first module gave me a clear understanding that the project is grandiose and I expect great results from it. I expect a new communication experience, the development of my soft skills and hard skills, a lot of new knowledge, material and hard work. And, of course, communication with talented people, my colleagues, who, I hope, will become my close friends.

ESRs in Crossroad 4: Empowering Individuals

Last but not least, crossroad 4 of the LeADS project focusses on empowering individuals (both individuals but also entities such as SMEs) in their data processing through data protection rights or "by design" technologies such as blockchain. The research thus aims at (i) providing measures to establish a necessary level of freedom in data

processing applicable to public or private entities (ii) to elaborate legal or technical privacy-preserving instruments directed to individuals and binding to public/private entities (iii) to shape the individual autonomy and/or limitations in disposing personal data (iv) to model effective instruments allowing individuals self-control of data (v) to build

awareness within all groups of involved actors.

The following 4 ESRs will focus their research on empowering individuals by technological solutions and legal remedies.

ESR 6 Maciej Zuziak

Project Title: Personal Information as currency for the supply of digital content

Host Institution: CNR

Maciej Zuziak is a jurists and computer programmer with an interest in data mining, natural language processing and personal data collection methods. His previous professional experience consists of practising in various law firms such as Allen & Overy, DLA Piper or DZP, mainly in the field of commercial dispute and finance. He had also the opportunity to hold an internship at the Permanent Mission of the Republic of Poland to the United Nations during Polish tenure at the Security Council. In terms of academic background, in 2021 he obtained a Master in Law with honours from the Faculty of Law and Administration of the University in Silesia. Previously, he had an opportunity to attend classes and courses in, among others, Washington College of Law and University of Political Science and Law in Beijing.

Based at the Alessandro Faedo Institute for Informatics and Technology at the Consiglio Nazionale delle Ricerche he is responsible for conducting research on the usage of information as currency for the Supply of Digital Content. The aim of this research will be to understand the implications of the “provision of personal data” in the exchange of digital content and how the existing European legal framework of a contract for the supply of digital content (considering the new proposed EU directive in this field) can coexist with the principles of personal data protection (data minimisation, purpose limitation, etc).

His previous research focused on the digital market and digitalization of public administration in the region of East Asia. In connection to that, he was awarded two consecutive research grants from the Polish National Agency for Academic Exchange, he also was responsible for translating chosen provisions of the new Chinese Civil Code. In recognition of his contribution to the academic discussion, he was awarded Rector’s personal distinction for outstanding academic achievements at the University of Silesia in 2021.



ESR 8 Fatma Sümeyra Doğan

Project Title: Technical and legal aspects of privacy-preserving services: the case of Health Data

Host Institution: JU

My name is Fatma Sümeyra Doğan and in the LeADS project, I am ESR 8. I recently graduated with Masters's from Istanbul Medeniyet University while I was working as a full-time lawyer. For my thesis, I studied the patentability of computer-implemented inventions under European Union law. As my thesis topic indicates, intersections of law and technology have always been my interest area. Following the footsteps of the EU, with the new legislation, data protection law became one of the most trending work fields in Turkey. While working in this field I felt the absence of my lack of knowledge in technology a lot. I tried to learn by myself, but the broadness of the technical field scarred me and as a result, I thought I could not make it on my own.

While I was working in a job which was close to my house, which is like a miracle in Istanbul, and trying to finish my thesis, the pandemic happened. Like the rest of the world, I stayed at home and baked bread and questioned my choices in life a lot.



As a result, I came to the conclusion that I do not want to spend my whole life in Istanbul as a lawyer. Thus, I began the quest to broaden my horizons. During my search, I came across the advertisement for the project, and I felt jurists who are living in another part of the world felt the same urge as me but instead of scaring from it, they have worked on the topic and even wrote a project about it.

In the context of the project, my research topic is related to the protection of health data and regulatory methods can be applied to standardizing usage of sensitive data. With the global pandemic, the importance of health data alongside other data types has risen exponentially. However, data protection methods, are still far from perfect, thus it is aimed to support the improvement of data protection methods in terms of policy-making and regulatory legislation. There are four crossroads aimed to be achieved in the course of project and my research topic falls under the fourth crossroad titled: "Empowering Individuals". As the title speaks for itself, this section of the project intends to strengthen individuals and ultimately provide better protection over personal data in a world ruled by data-driven services.

It is an undeniable fact that technology is now an inseparable part of our life, considering this fact I believe that more individuals should be able to understand its language so that we could be able to defend our rights. Long story short, I am truly happy that my road came across with LeADS project.

ESR 11 Armend Duzha

Project Title: Empowering data owners by promoting Personal Information Management Systems

Host Institution: UPRC

Personal Information Management Systems (or PIMS) seeks to empower individuals regarding their data by giving them more control. PIMs allow individuals to manage their data in secure, local or online storage systems and share them when and with whom they choose.

This project will study digital innovation and business models (e.g., multisided markets, freemium) dependent on the collection and use of personal data (in different sectors such as creative industries, media, travel, housing, etc.). It will also link this analysis to the exploration of online behaviour and usage (browsing, contribution, participation) that generate personal data as well as large network effect, and assess (efficiency, impact studies) the many specific privacy regulations that apply to online platforms, business models, and behaviours. Moreover, the project will design a proposal of a user centric data valorisation scheme by analysing user-centric patterns, aiming to identify alternative schemes to data concentration, to place out private open data), and assess the economic impact of these new schemes, their efficiency, and the legal dimension at stake in terms of liability and respect of privacy.

Armend Duzha has a background in Economics. Originally from Albania, he moved in Italy in 2008, where he began his academic journey at University of Bologna. After graduating in Business Administration and Management (2011) with a full scholarship, he completed his studies in Economics and Market Policy (2013) with honour. In 2014, he moved to the industry, working as a Project Manager for R&D projects funded by the European Union under the various programmes (e.g., Horizon 2020, AAL, etc.). During the last 7 years he has been involved in multiple projects through which he has acquired expertise and know-how in a wide range of research areas among which: Health, Wellbeing and Active, Cybersecurity and Critical Infrastructure Protection, Cloud Computing and Big Data Analytics, and many more. He is looking forward to continuing his research with LeADS on empowering citizens in privacy and security.

Key facts

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Contact us

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