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LEADS

LEgality Attentive Data Scientists

(<https://cordis.europa.eu/project/id/956562>)

Bridging the gap between data science and law

The emergence of data science has raised a wide range of concerns regarding its compatibility with the law, creating the need for experts who combine a deep knowledge of both data science and legal matters. The EU-funded LeADS project **will train early-stage researchers** to become legality attentive data scientists (LeADS), the new interdisciplinary profession aiming to address the aforementioned need. These scientists will be **experts in both data science and law**, able to maintain innovative solutions within the realm of law and help expand the legal frontiers according to innovation needs. The project will create the theoretical framework and the practical implementation template of a common language for co-processing and joint-controlling basic notions for both data scientists and jurists. LeADS will also produce a comparative and interdisciplinary lexicon.

Overall LEADS envisage to open 15 position for ESRs and hopes to enable all ESR to enrol in a PhD program.



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PHD "DATA SCIENCE"

<https://www.santannapisa.it/en/formazione/data-science>

Ph.D in LAW

<https://www.santannapisa.it/en/education/phd-law>

N.1 Project Title: Reciprocal interplay between competition law and privacy in the digital revolution

Objectives: Data are more and more important resources in the so-called Digital Revolution: the impact on competition law is increasingly relevant and so are the implications of data protection law on competition law. The researcher will address these implications, analysing some relevant topics: the impact of data portability and the requirements in terms of interoperability in the new GDPR compared to the barriers to entry and to market dominance; how customer data can be "assessed" as an index of market dominance for the big information providers (Google, Apple, Facebook, Amazon); and how SMEs can benefit from data protection law and competition law in order to increase their volume in the market.

N. 2 Project Title: Unchaining data portability potentials in a lawful digital economy

Objectives: Empirically test the potentials of the right to data portability. The research in the framework of LeADS will relate data portability not only to data protection law, but also to competition law and unfair business practices (e.g., offer or price discrimination between groups of consumers through profiling operations), setting the scene for their regulatory interplay in line with current and forthcoming technologies. In doing so specific attention will be offered to the possible technical solutions to guarantee effective portability. Additionally, the technical, statistical, and privacy implications of the new right will be evaluated, such as the need for standard formats for personal data, and the exception in Article 20.2 of the GDPR, according to which the personal data, upon request by the data subject, should be transmitted from one controller to another "where technically feasible".

N. 3 Project Title: Differential privacy and differential explainability in the data sphere: the use case of predictive jurisprudence

Objectives: Human life and economy are exponentially data driven. The switch from residential to cloud based data storage is making increasingly difficult to reap the maximum from data while minimizing the chances of identifying individuals in datasets. Researcher will explore the interplay between differential privacy technologies and the data protection regulatory framework in search of effective mixes.

N.4 Project Title: Neuromarketing and mental integrity between market and human rights

Objectives: ESR's research question is whether and how neuromarketing can affect human rights of individuals, considering in particular recent interpretations of rights contained in the European Convention of Human Rights and in the EU Charter of Fundamental Rights, in particular "mental privacy", "cognitive freedom", and "psychological continuity". Indeed, advanced data analytics provide a very high level of understanding of users' behaviour, sometimes even beyond the conscious self-understanding of the users themselves exploiting all user's idiosyncrasies, including user's vulnerabilities harming the exercise of free decision making



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https://en.univ-toulouse.fr/sites/default/files/Doctoral-school_MITT-Mathematics-Informatics-Telecommunications_UFTMP.pdf

N. 5 | Project Title: Distributed reliability and blockchain-like technologies

Objectives: Guarantee a reliable and secure implementation of instruments that implement innovative and transversal data protection principles without the need of centralized authorities or trusted third parties. Explore, for instance, the potentials of blockchain-like technologies as instruments to guarantee data integrity in a distributed manner and without the need to know otherwise sensitive information. Study and relate the current and forthcoming techniques for big-data storage, retrieval, and management from a legal and technological perspective. Especially on the impact of moving from traditional local/internal database management systems to novel geo-distributed data storage and of processing techniques that leverage public and hybrid cloud-based solutions. ESR will develop methodologies and actual tools to produce legal analytics useful for policy analysis, interrelating various legal domains

N. 6 | Project Title: Big data, small data, and business practices

Objectives: In an ideal identity and access management system, the user should not have to present more credentials to a service provider than are needed to access its resources (data minimization/least privileges). The user should consent to the release of her credentials to make it compliant with GDPR. And (s)he should not be trackable though the use of his/her credentials, except in cases of abuse. The objective of this research is to define a complete framework covering both technical and legal aspects in order to guarantee the privacy of users while allowing the service providers to prevent and react to unlawful behaviours for complying with legal requirements.



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PHD Social-AI

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N. 6 | Project Title: Personal information as currency for the Supply of Digital Content.

Objectives: The aim of this research will be to understand the legal implications of the “provision of personal data” in the exchange of digital content and how the existing European legal framework of 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). The researcher will first identify general contractual issues arising in relation to contracts for the supply of digital content, and then consider the actual gap and how the new proposed directive will shape the law in this field, as well as examining its impact on existing contractual notions and consumer protection.



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PHD within the Law, Science, Technology and Society research group (LSTS)

<https://www.vub.be/en/phd#phd>

<https://lsts.research.vub.be/>

N. 8 Project Title: Public-private data sharing from “dataveillance” to “data relevance”

Objectives: The use of private databases by States and in particular by enforcing authorities (i.e. police, secret services) is an emerging reality. Systematic government access to private databases and so-called “web crawling” are two new technological challenges that should be considered by lawyers, in particular after important rulings from the EUCJ. ESR will analyse the feasibility of a new paradigm of public-private data sharing, which reconceptualises the principle of purpose limitation and strengthens the concept of “data quality”, thereby reconciling public interests with fundamental individual rights.

N. 9 Project Title: Solving the conflicts between data owners and data exploiters through a spectrum of quasi- property models

Objectives: The research is supposed to (a) classify the types of information currently subject to commercial exploitation in their original or anonymized and/or aggregated form, (b) map in an intuitive, simple (but comprehensive) matrix the conflicting interests related to each information asset, and (c) define a set of proprietary entitlements, characterized by flexible structure and content and different degrees of exclusivity, to be attributed to each player in order to solve with a unitary tool the clash between concurrent interests over the same information asset. The goal is to provide balancing tools that follow—instead of opposing—market trends and are closer to consumers’ actual perceptions. The aim is fostering consumer trust and helping business players respect users’ fundamental rights without renouncing to competitive market strategies



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PhD

https://social-sciences.phd.uj.edu.pl/en_GB/doctor_programs/legal_sciences
(some classes in Polish)

<https://social-sciences.phd.uj.edu.pl/society-of-the-future>

N. 10 Project Title: Technical and legal aspects of privacy-preserving services: the case of Health Data

Objectives: Technical and legal aspects of medical data protection using traditional encryption techniques, coupled with proper key management schemes, as well as anonymization and/or privacy-preserving data management techniques using efficient cryptography (e.g. homomorphic, secure multi-party computations)

N. 11 Project Title: The boundaries of information property: from concepts to practice

Objectives: (1) Construct a theoretical framework defining the concept of information and information property, and classify in a single, unitary spectrum the various types of information regulated and protected at EU and domestic levels. Perform a wide analysis of legal regimes affecting information, including data protection and the various forms of IP protection, distinguishing the legal regimes affecting corporate information (such as patents or software) and user information (data collected from or stored by users). (2) Research business practices and business models related to the management and exploitation of information assets, their impact on development of a public regulatory framework, as well as compatibility of the commodification/propertyization of information and personal data at both the EU and transnational level with the dogmatic pillars of national private law systems. (3) Develop business guidelines to assist producers, service providers, and consumers in managing and contracting over their information assets and data in a less antagonistic, more unitary fashion, and define policies that can effectively guarantee the exercise of property and intellectual property rights over the information.

N. 12 Project Title Processing of biometric data to support the use of e-identities in key activities of the EU digital society

Objectives: Study processes, services and protocols that require biometric data in user authentication in the context of services supporting the EU Digital Single Market, such as: e-education (e.g., digital diploma certificates), e-health (e.g., electronic patient records, biomedical data), and e-commerce (e.g., intellectual property rights, fintech). The technology will be discussed in relation to the various legal regimes that protect data in their different forms, including the recently approved and forthcoming EU regulations, comparative law and business practice

N. 13 Project Title Technologies for algorithms and algorithmic transparency and fairness

Objectives: Understand the reasons for existing opacity and inscrutability in algorithms and protocols (e.g., technical, economic, and social aspect) and discuss the application of principles of algorithmic transparency and accountability, such as awareness, explanation, data provenance, auditability, validation and testing (e.g. ACM Public Policy Council statement²³). Explore ways to ensure algorithmic transparency and accountability and study solutions to ensure that critical outputs are not biased or erroneous but trustworthy, lawful, and fair.



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N. 14 Project Title: From Privacy by design to Privacy by Using

Objectives: Analysing the tools designed to protect against risks related to the exploitation of personal data and thereby refine the methodology of analysis of such risks; drawing a scheme of implementation of the process of privacy by design and legal design in order to modulate prevention of the risks and promotion of innovation. In addition it will: a) Suggest a renewed approach for contractual instruments (Terms and conditions, Privacy charter) in order to balance the asymmetry of information which is detrimental to the user and inefficient from an economic perspective; create appropriate instruments of information for the user, best practices for data brokers, and collective assessment of their efficiency through various processes (label, control by a rating agency, fostering class or collective action); promote such instruments at an international level. b) Establish learning processes driven by the concept of “Privacy by using” in order to increase the user’s ability to define in a more accurate way his own behaviour as regards the protection of his privacy. c) Draw the architecture of the regulation according to a “principle of action” which rests on two pillars: action of the data broker and action of the individual from whom data are extracted

N. 15 Project Title: Empowering data owners by promoting PIMS

Objectives: (1) Study digital platform and personal data. The 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: a) link this analysis to the exploration of online behaviour and IT use (browsing, contribution, participation) that generate personal data as well as large network effects; b) assess (efficiency, impact studies) the many specific privacy regulations that apply to online platforms, business models, and behaviours. (2) Proposal of a user centric data valorisation scheme by analysing user-centrics patterns, the project aims to: a) Identify alternative schemes to data concentration, to place the user at the heart of control and economic valorisation of “his” data, whether personal or not (VRM platforms, personal cloud, private open data); b) Assess the economic impact of these new schemes, their efficiency, and the legal dimension at stake in terms of liability and respect of privacy. Starting from the analysis of “the economy of the gratuity” based on a barter model, the project will suggest new models allowing the user to benefit from the value of the data

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