Hypermodelex Observatory

AI4Legs-V Workshop

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Turin

Chantal Bomprezzi, Pier Francesco Bresciani

University of Bologna, Alma AI - CIRSFID

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ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

What is the Hypermodelex Observatory?

https://site.unibo.it/hypermodelex/en/publications

Key Objectives

- ❖ Monitor relevant publications connected to the project

- ❖ Tracking developments in the field

- ❖ Monitor policy, legislation and institutional responses to the topic

- ❖ Deduce the prevailing trends, the most frequent themes, and the newest developments

- ❖ Provide a publicly accessible database on the topic for policymakers, institutions, companies, universities, practitioners, etc.

- ❖ Promote the exchange of knowledge

Structure

LEGENDA

Sub- projects	Content	Typology	Territorial scope
- Legal theory - Technical advanced solutions - Legal design	- Cybersecurity - Blockchain - Data protection - AI - Metaverse - Smart contract - NLP - Big data - Digital assets	- Bill - Legislation - Case-law - Soft law - Report - Paper - Press releases	- Sub-national - National - Supranational - International

Structure (example)

2025-09-COUNCIL-OF-EUROPE-DRAFT-GUIDELINES-ON-PRIVACY-AND-DATA-PROTECTION-IN-THE-CONTEXT-OF-LLMS
[.pdf 45Kb]

Title: Council of Europe, "Draft Guidelines on Privacy and Data Protection in the context of Large Language Models-based systems"

Abstract: The rapid advancement of technology, particularly AI foundation models and LLM-based systems, is redefining privacy and data protection. These guidelines address associated privacy risks, highlighting the need to safeguard individual rights as these technologies proliferate across sectors. They provide essential guidance for governments and developers on managing privacy risks under Convention 108+, ensuring compliance with data protection obligations. Additionally, the Committee's work promotes regulatory clarity and international cooperation, focusing on the application of Convention 108 principles to the lifecycle of LLMs and related systems.

Subproject area: Legal theory
Content: AI, Data protection
Typology: Soft law
Territorial scope: International

Update frequency

❖ Continuous monitoring

❖ Website updated approximately every 3 months

❖ Starting year: 2024

❖ Chronological ordering (from the most recent to the oldest)

Selection Methodology

❖ Authoritative sources (official reports, legislation, institutional documents, …)

❖ Reputable subjects (EU bodies, national governments, international organisations, academic institutions,…)

❖ Open access sources (possibility to download directly from the website)

Key findings and trends

MAIN TRENDS

❖ **Generative AI for Parliamentary Support** – AI is primarily studied as a tool to support parliamentary work, with generative AI addressing information asymmetry between parliament, executive, and bureaucratic bodies

❖ **Enhanced Legislative Quality** – Focus on improving regulatory quality and political control through advanced data analysis and hybrid systems combining generative AI with coded rules

❖ **Democratic and Constitutional Safeguards** – Emphasis on transparency, public debate access, and maintaining constitutional legitimacy in AI deployment

❖ **Risk Mitigation Framework** – Attention to opacity, bias, epistocratic risks, and impacts on democracy and constitutional principles

Key findings and trends

MOST RECURRING THEMES

- ❖ Generative and neuro-symbolic AI as decision-support and regulatory tools

- ❖ Integration of AI with accountability and explainability mechanisms

- ❖ AI's impact on regulatory quality, public policy evaluation, and evidence-based policymaking

- ❖ Digital tools and computational languages for law (Rules as Code, Law as Code)

- ❖ Ethical and legal aspects: transparency, bias, and fundamental rights protection

- ❖ Data protection compliance and privacy safeguards in AI systems

- ❖ International governance frameworks and AI regulation alignment

Key findings and trends

EMERGING AND NOVEL THEMES (1/2)

❖ **Advanced Hybrid Systems** – Integration of symbolic AI and generative AI for more accurate, explainable outputs

❖ **Extended Reality (XR) for Law** – Virtual and augmented reality applications (XR4LAW) to support legislative processes

❖ **Public Sector AI Strategy** – Guidelines and frameworks for trustworthy, sustainable AI in public administration aligned with the EU AI Act

❖ **Numeric Constitutionalism** – Use of AI to democratize access to technical knowledge and objective decision-making

Key findings and trends

EMERGING AND NOVEL THEMES (2/2)

❖ **Generative AI Risk Assessment** – New methodologies for evaluating and mitigating risks specific to generative models

❖ **Foundation Models and Transparency** – Focus on transparency indices and responsible development of large language models

❖ **Metaverse and Digital Governance** – Emerging applications in virtual worlds and their regulatory implications

❖ **Cross-Sector AI Adoption** – Evidence-based approaches to AI implementation across public administration, research, business, and education
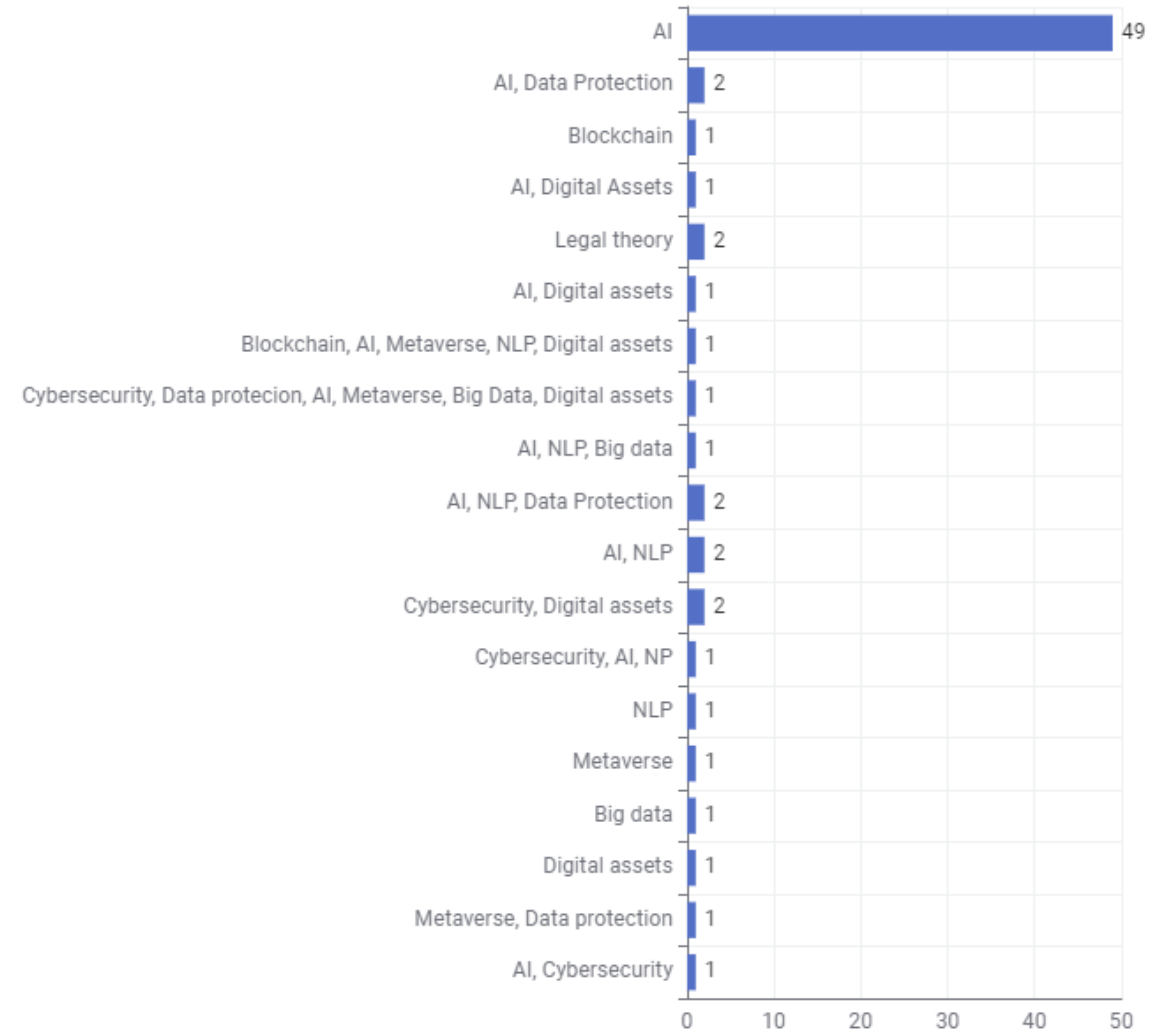
Current observations

Bar Chart

TREND

Shift from innovation-focused to rights-based AI governance

CHALLENGE

Balancing innovation with accountability across jurisdictions
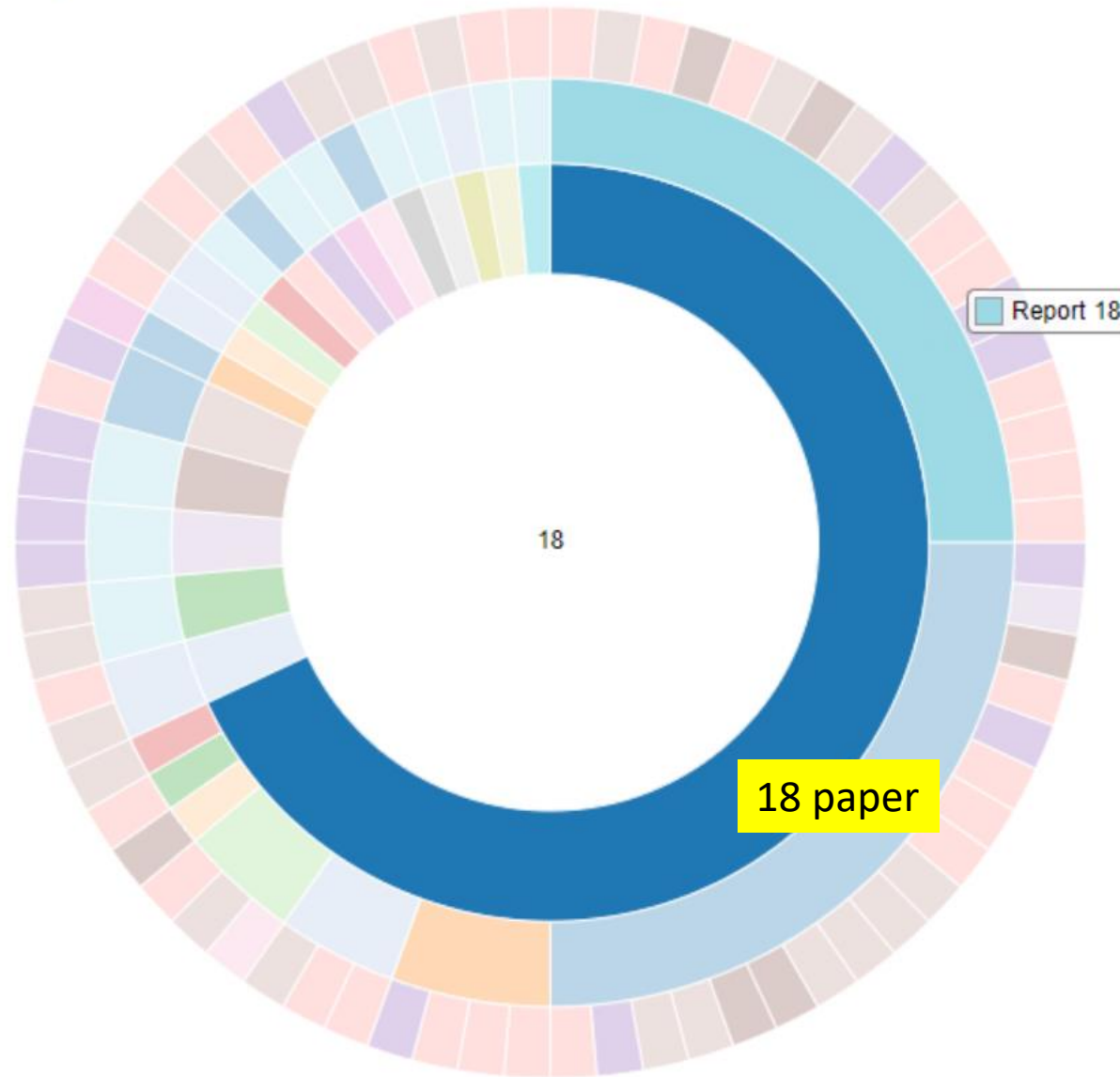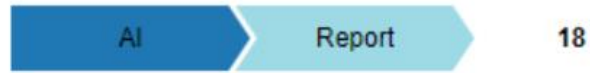
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Sunburst Chart

JOINT US!

Thank you for your attention.

Chantal Bomprezzi, Pier Francesco Bresciani
University of Bologna, CIRSFID ALMA AI

chantal.bomprezzi@unibo.it; pierfrancesco.brescaini@unibo.it