URMC-jus-AL — GitHub Research Repository Overview

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Overview

This repository presents the interdisciplinary research framework **URMC-jus-AL**, integrating mathematics, law, and cognitive architecture. The project explores the *Universal Regularized Memory Cascade (URMC)* and its adaptive legal derivative *URCA Jus Part*, focusing on living law, responsibility systems, and human-AI co-regulation. The repository contains analytic reports, simulation data, and conceptual works demonstrating how AI memory architectures can support transparent, ethical, and adaptive regulatory systems. All publications follow open-science principles and are released under the Apache 2.0 License.

Publications & Research Outputs (Zenodo DOIs)

- URMC Research Platform Final Report https://doi.org/10.5281/zenodo.17442817
- URCA Jus Part Legal Adaptive Architecture https://doi.org/10.5281/zenodo.17419136
- Concept Life AL Living Law and Responsibility Systems https://doi.org/10.5281/zenodo.17410128

Purpose

The repository serves as a foundation for interdisciplinary collaboration between human researchers and AI systems, promoting transparent data exchange and adaptive learning mechanisms. It supports further academic development in: **Mathematical foundations** (Navier–Stokes regularity, URCM invariants) **Legal systems engineering** (living law models, memory-based governance) **Cognitive architecture design** (Participatory Intelligence and URCM ethics)

Acknowledgment

Created by the Human–AI Partnership Team as part of ongoing research into memory-based law and adaptive governance systems. All contributors share authorship equally under open collaboration principles.