Barcelona, Legal Logic Lab

Discotec affiliated Cost Brainstorm session

École National Supérieure des Arts et Métiers (ENSAM),Lille

Joost J. Joosten

University of Barcelona

Thursday 19-06-2025

▶ Background:

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- Studied mathematics and physics in Amsterdam

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- Some experience in industry: financial sector + Spin off: Formal Vindications S.L.

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 - Formalisations through logical language based on adequate formal ontologies
 - Applying scope of Limiting theorems to the legal domain
 - Expertise in understanding how to apply a myriad of logical techniques to legal sector: type-theory, model checking, proof assistants, formally verified software, controlled natural language, modal logics, formal ontologies, etc.

(no co-authors mentioned for the sake of brevity)

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A case study on NASA's Formal Requirement Elicitation Tool (FRET).

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- Specification languages for computational laws versus basic legal principals, European Review of Digital Administration & Law To appear 2025

▶ Legal Principles in Rule-based Artificial Intelligence. Post-proceedings of the International Symposium on Compliance for Algorithmic Law (SCALGO 2022), Lecture Notes in Computer Science, 2024.

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- ➤ To drive or not to drive: A formal analysis of Requirements (51) and (52) from Regulation (EU) 2016/799. In TransJus Working Papers Publication Number 4, 2019.

Model-checking in the Foundations of Algorithmic Law and the Case of Regulation 561, submitted to Artificial Intelligence and Law, 2023.

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- See webpage: http://www.joostjjoosten.nl/

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Order change:

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- B. the digital systems supposed to adhere to these regulations;
- D. The verification methods that are better suited to the validation of the formalised legislation, either with itself (for inconsistencies), and against the executable code (adherence).