Universität Bamberg

Fakultät Wirtschaftsinformatik und Angewandte Informatik

Fakultätskolloquium

Montag, 15. Dezember 2025, 16 Uhr c.t., WE5/01.004

Inconsistency Handling in Spatiotemporally-informed AI Formalisms

Michail Sioutis, PhD

Hybrid, spatiotemporally-informed AI formalisms have the potential to drive positive and disruptive future innovation. Of particular importance for this integration of learning and reasoning is the area of Qualitative Spatial and Temporal Reasoning, which abstracts from numerical quantities of space and time by using qualitative, human-like descriptions instead, like "precedes", "contains", or "is left of". Thanks to its conciseness, this type of reasoning can find application in a plethora of areas such as smart environments, intelligent vehicles, and unmanned aircraft systems. In this talk, Sioutis will report on some recent advances on inconsistency handling of spatio-temporal information within the context of the envisioned hybrid AI formalisms. In relation to inconsistency handling, he will also touch upon a notion of paraconsistency for spatio-temporal information, which may be useful in cases where the sheer abundance of contradictions does not allow for an adequate treatment with classical logic. He will conclude with some future lines of work and open challenges, and invite a discussion on how these may relate to different teams at the University of Bamberg.

Michail Sioutis successfully defended his PhD Thesis and became a Doctor of Artois University in Computer Science in February 2017. Soon after, he started working as a Postdoc abroad, including a period from 2020 to 2022 at the Faculty of Information Systems and Applied Computer Sciences of Otto-Friedrich-University Bamberg, where he also commenced with his ongoing Habilitation. In January 2023 he moved back to France to assume a post as a Tenure-track Professor on AI at the University of Montpellier, and the LIRMM research lab in particular, and since recently he also serves as a manager of the new AI track in the Masters of Computer Science and as an international relations officer for the Department of Computer Science.