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SÉMINAIRE DE NICOLETA PREDA

Query Reasoning Across Access, Representation, and Absence

This talk presents research directions on query reasoning across access, representation, and absence. The first part focuses on a technical result on answering queries using views with binding patterns: parameterized access interfaces that must be orchestrated into equivalent execution plans. I will describe the representation class we study—linear path views over a graph-like relational schema, under inclusion dependencies—and the main rewriting results for atomic and path queries. The second part presents ongoing work on SQL reasoning, motivated by the search for an intermediate representation that exposes the common structure behind different SQL formulations. In particular, I will discuss how set difference, negation, anti-joins, and aggregation can express reasoning relative to an identity universe and a relation of counterexamples. I will conclude with Ilyes Tebourski's thesis on negative facts in knowledge graphs, where the challenge is to understand when absence can become a useful learning signal rather than merely missing information.