

Defeasible Reasoning

Abstract for Invited Talk

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Preferential approaches to defeasible reasoning have turned out to be particularly promising for the propositional case, mainly because they are based on an elegant, comprehensive, and well-studied framework for non-monotonic reasoning proposed by Kraus, Lehmann, and Magidor—often referred to as the KLM approach. In the first part of this talk I will provide an introduction to propositional KLM-style defeasible reasoning. This will be followed by an overview of attempts to extend KLM-style defeasible reasoning beyond propositional logic. More specifically, I'll look at the application of the KLM approach to description logics and some restricted first-order logics. In doing so, I'll describe what has worked well, but also what are the (many) remaining challenges.

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