

Title: Casting doubt. Shadow arguments in defeasible reasoning
(joint work with Christian Straßer and Jesse Heyninck)

Abstract: In defeasible reasoning it is often desirable for a cautious reasoner to withdraw an argument if the application of further defeasible inference steps to its conclusion leads to an incoherent outcome. We define a structured argumentation theory implementing this cautious rationale. Our theory filters out arguments which lead to conflicts by casting doubt on their conclusions via a logical operator for 'untrue' formulas. This operator is defined in terms of a three-valued core logic. We compare the use of this operator with related approaches from the literature, such as the contraposition of defeasible rules and Caminada's 'hang yourself'-arguments.