A characterization of collective conflict for defeasible argumentation
In this paper we define a recursive semantics for warrant in a general defeasible argumentation framework by formalizing a notion of collective (non-binary) conflict among arguments. This allows us to ensure direct and indirect consistency (in the sense of Caminada and Amgoud) without distinguishing between direct and indirect conflicts. Then, the general defeasible argumentation framework is extended by allowing to attach levels of preference to defeasible knowledge items and by providing a level-wise definition of warranted and blocked conclusions. Finally, we formalize the warrant recursive semantics for the particular framework of Possibilistic Defeasible Logic Programming, characterize the unique output program property and design an efficient algorithm for computing warranted conclusions in polynomial space.