

Axiomatising admissible rules

Jeroen Goudsmit

Ghilardi (1999) showed that any formula in **IPC** can be approximated by a disjunction of projective formulae, and the implication degree of the formulae in this approximation is bounded by the implication degree of the original. Iemhoff (2001) used this result to provide an axiomatisation of the admissible rules of **IPC**, which was extended by G. and Iemhoff (2014) to Gabbay-de Jongh logics.

A key ingredient to the latter result is that one can flatten formulae to a fixed bounded implication degree. As, modulo provability, there are but finitely many formulae of bounded implication degree, one can obtain formulae that are almost closed under the admissible rules, or rather, a well-behaved subset thereof. We show how one can naturally restrict attention to adequate sets of formulae that are finite modulo provability, and show how this can lead to an axiomatisation of admissibility.