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Unification and admissible rules for paraconsistent minimal Johanssons' logic J and positive intuitionistic logic IPC^+ . (English) [Zbl 1323.03029](#)

Ann. Pure Appl. Logic 164, No. 7-8, 771-784 (2013).

Summary: We study unification problem and problem of admissibility for inference rules in minimal Johanssons' logic J and positive intuitionistic logic IPC^+ . This paper proves that the problem of admissibility for inference rules with coefficients (parameters) (as well as plain ones – without parameters) is decidable for the paraconsistent minimal Johanssons' logic J and the positive intuitionistic logic IPC^+ . Using obtained technique we show also that the unification problem for these logics is also decidable: we offer algorithms which compute complete sets of unifiers for any unifiable formula. Checking just unifiability of formulas with coefficients also works via verification of admissibility.

MSC:

03B53 Paraconsistent logics

03B25 Decidability of theories and sets of sentences

68T15 Theorem proving (deduction, resolution, etc.) (MSC2010)

Cited in 14 Documents

Keywords:

paraconsistent minimal Johanssons' logic; positive intuitionistic logic; admissible inference rules; unifiers; unification problem

Full Text: [DOI](#)

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