

Odintsov, Sergei; Rybakov, Vladimir

Inference rules in Nelson's logics, admissibility and weak admissibility. (English)

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Summary: Our paper aims to investigate inference rules for Nelson's logics and to discuss possible ways to determine admissibility of inference rules in such logics. We will use the technique offered originally for intuitionistic logic and paraconsistent minimal Johansson's logic. However, the adaptation is not an easy and evident task since Nelson's logics do not enjoy replacement of equivalences rule. Therefore we consider and compare standard admissibility and weak admissibility. Our paper finds algorithms for recognizing weak admissibility and admissibility itself – for restricted cases, to show the problems arising in the course of study.

MSC:

03B53 Paraconsistent logics

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Keywords:

Nelson's logic; strong negation; admissible inference rules; weak admissibility; decidability; Vorob'ev translation

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