

- LARISA MAKSIMOVA, VETA YUN, *On strong recognizability of the intuitionistic logic.*

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The problems of recognizability and strong recognizability, perceptibility and strong perceptibility in extensions of the minimal logic J are studied. These concepts were introduced in [1]–[3].

Let L_0 be a J -logic and L be a finitely axiomatizable logic containing L_0 . Say that L is *perceptible over L_0* if there is an algorithm verifying for any formula A if the inclusion $L_0 + A \geq L$ holds. L is *strongly perceptible over L_0* if there is an algorithm verifying for any finite set Rul of axioms and rules of inference if the inclusion $L_0 + Rul \geq L$ holds.

A logic L is *recognizable over L_0* if there is an algorithm verifying for any formula A the equality $L_0 + A = L$. A logic L is *strongly recognizable over L_0* if there is an algorithm which for every finite system Rul of axiom schemes and rules of inference decides if the logic $L_0 + Rul$ coincides with L .

Although the intuitionistic logic Int is recognizable over J [1] the problem of its strong recognizability over J is not yet solved.

We prove that Int is strong recognizable and strong perceptible over the minimal pre-Heyting logic $Od = \neg\neg(\perp \rightarrow p)$ and the minimal well-composed logic $JX = (\perp \rightarrow p) \vee (p \rightarrow \perp)$.

In addition let us consider the formula $F = (\perp \rightarrow p \vee q) \rightarrow (\perp \rightarrow p) \vee (\perp \rightarrow q)$. It is unknown whether the logic $J + F$ is recognizable over J . We prove that the formula F is perceptible over JX .

[1] L.L.MAKSIMOVA, V.F. YUN, *Recognizable Logics, Algebra and Logic*, vol. 54 (2015), no. 2, pp. 167–182.

[2] ——— *Strong Decidability and Strong Recognizability, Algebra and Logic*, vol. 56 (2017), no. 5, pp. 370–385.

[3] L.L.MAKSIMOVA, *Recognizable and Perceptible Logics and Varieties, Algebra and Logic*, vol. 56 (2017), no. 3, pp. 245–250.