ANNA GLENSZCZYK, Intuitionistc Control Logic - an overview. Institute of Mathematics, University of Silesia, Bankowa 12, Katowice, Poland. E-mail: anna.glenszczyk@us.edu.pl.

Intuitionistic Control Logic (ICL) was introduced by Ch. Liang and D. Miller. It adds to Intuitionistic Propositional Logic elements of classical reasoning by adding a new logical constant for falsum. Having two different falsum constants enables to define two distinct negations: an ordinary intuitionistic negation and a new negation defined using the additional falsum, which bears some characteristics of classical negation. As a result it is possible within ICL to type programming language control operators while maintaining intuitionistic implication as a genuine connective.

In our talk we would like to discuss basic properties of ICL compared with those of Intuitionistic and Classical Propositional Logics. In particular we will give description of its monadic fragments. We also show that it is possible to embed ICL into second order propositional modal logic using a modification of Gödel-McKinsey-Tarski translation.

[1] ANNA GLENSZCZYK, Negational Fragment of Intuitionistic Control Logic, Studia Logica, vol. 103 (2015), no. 6, pp. 1101–1121.

[2] —— Monadic Fragments of Intuitionistic Control Logic, Bulletin of the Section of Logic, vol. 45 (2016), no. 3/4, pp. 143–153.

[3] CHUCK LIANG, DALE MILLER, Kripke semantics and proof systems for combining intuitionistic logic and classical logic, Annals of Pure and Applied Logic, vol. 164 (2013), no. 2, pp. 86–111.