SEMINÁŘ LOGIKY
SEMINAR OF LOGIC

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Reasoning with incomplete and inconsistent information

Consistency has always been considered as an obvious basic requirement of rational decision making, because in classical logic an inference from inconsistent premises leads to explosion. However, epistemic subjects in the real world deal with situations, when they have to create beliefs and make decisions on the basis of inconsistent information. Hence epistemic logics aiming to represent more realistic subjects have to use formal tools dealing with inconsistency in a non-trivial way. We present a framework based on Belnap-Dunn logic, which was designed as a tool for dealing with information contained in databases, which is typically incomplete/inconsistent.

In the talk we concentrate on the information which is uncertain and its uncertainty might be quantified in a certain way. In particular we show how we can define probability and other kinds of uncertainty (belief measures, …) in the framework of BD logic. Moreover, we introduce a modal logic representing agents dealing with uncertain inconsistent or incomplete information.

Thursday 19/01/2023 | 14.00 CET

Meeting room („zasedačka"), Institute of Philosophy CAS, Jilská 1, Prague 1