

Completeness in first-order modal logic: the present stage

Valentin Shehtman

The talk will give an overview of completeness and incompleteness results in first-order modal logic obtained in the 21st century. The situation can be briefly characterized as follows: completeness is unpredictable for Kripke and Kripke sheaf semantics, often expectable for simplicial semantics and usually unknown for intermediate semantics (Kripke bundle, functorial, Kripke metaframe). We will also discuss operations on logics and frames preserving completeness and the construction of Kripke completion.