Ústav informatiky
Akademie věd České republiky

Pod Vodárenskou věží 2, 182 07 Praha 8

ÚI AV ČR ve spolupráci s Odbornou skupinou aplikované matematické logiky České společnosti pro kybernetiku a informatiku

pořádá

v seminární místnosti ÚI AV ČR - místnost č. 318
(stanice metra C Ládví)

Seminář aplikované matematické logiky

který se schází **ve středu ve 14.00 hod.**

******** Pozor! Změna začátku! ********

Program na leden 2013:

16. 1. 2013 - *Esko Turunen:*
The algebraic structure of Intermediate Syllogisms
In his book 'Intermediate Quantifiers' (2000) Philip L. Peterson introduced 3 quantifiers 'Almost-all', 'Most' and 'Many' and extended Aristotelian syllogisms containing the two classical one ('All' and 'Some'), to a syllogistic system containing 5 quantifiers (and their negative counterparts). Peterson gave a set theoretical semantics to his new quantifiers and proved that, out of the 4000 possible intermediate syllogisms, there are 105 valid one, 24 of the being the classical Aristotelian syllogisms. In this talk we show that Peterson's syllogisms can be associated with simple MV-algebra values which determine the validity/invalidity of each syllogism. We also shortly discuss possible extensions of syllogistic systems and, finally, we propose a simple way to deal with multi valued syllogisms.

23. 1. 2013 - *Alexander Kurz* (University of Leicester):
Coalgebraic, algebraic, and proof theoretic semantics of Dynamic Epistemic Logic
Joint work with Guiseppe Greco and Alessandra Palmigiano
We will start by discussing the Dynamic Epistemic Logic of Baltag-Moss-Solecki from a coalgebraic point of view and then use duality theory in order to derive a novel algebraic semantics, which, by construction, will give us a complete Hilbert system extending intuitionistic propositional logic. Based on the fact that the dynamic modal operators have adjoints, we also show how to further obtain a display-style sequent calculus.

30. 1. 2013 - *Radim Nedbal:*
A language with a constructive semantics for specifying Kripke structures
We introduce a declarative language that not only facilitates efficient representation of Kripke structures but also takes into account background information represented as a database instance. The language is defined semantically so that any set of formulae has at least one model. Most importantly, these models have a compact representation that can be computed efficiently.