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 v 10.00 hod.**

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Pozor! Změna začátku!
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Program na březen 2016:

9. 3. 2016 -   *Rostislav Horčík*
Why is fuzzy logic not applied in computer science, yet?

Despite of the fact that weighted structures are deeply investigated in computer science, it is surprising that fuzzy logic (a logic of weighted structures) has almost no applications in the above-mentioned investigations so far. In the lecture I will present my personal opinion why fuzzy logicians missed the boat to apply their knowledge in computer science. As a case study, I will overview some recent developments on valued constraint satisfaction problems in order to show how these problems are related to fuzzy logic and what kind of questions computer scientists pose about them.

16. 3. 2016 -   *Libor Běhounek*
Predicate fuzzy partial logic - initial steps

Fuzzy partial propositional logic, recently proposed by Behounek and Novak, provides a simple framework accommodating propositions with graded as well as undefined truth. A natural next step is to extend the system to predicate logic of the first and higher orders. I will present first steps in this direction (joint work with Martina Dankova, in progress), considering only undefined truth and leaving aside undefined individuals. In particular, I will discuss basic fuzzy partial quantifiers, first-order and (Russell-style) higher-order fuzzy partial logic, basic properties of first- and higher-order fuzzy partial predicates and functions, and their representation in the usual (non-partial) fuzzy logic.

23. 3. 2016 -   *Marta Bílková*
Many-valued coalgebraic logics

We outline two approaches of designing a logical language for coalgebras, parametric in the coalgebra functor, and apply them in a many-valued setting. Our goal is to give sufficient conditions (both on the coalgebra functor and the algebra of truth values) for the resulting language being expressive for bisimilarity. In this respect, we are generalising results of G. Metcalfe and M. Marti on Hennessy-Milner property for language with box and diamond over crisp many-valued image-finite Kripke frames where the algebra of truth values is a complete MTL-chain; and also results on expressivity of classical coalgebraic logic by D. Pattinson and L. Schröder.