Zpravodaj pro kybernetiku a informatiku

ČSKI Česká společnost pro kybernetiku a informatiku

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leden 2013

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Lednové kalendárium

8. **M. Zikmundová: On the use of PMCMC in parameter estimation of space-time interacting discs**
16. **E. Turunen: The algebraic structure of Intermediate Syllogisms**
23. **A. Kurz:** *název bude upřesněn později*
30. **R. Nedbal: A language with a constructive semantics for specifying Kripke structures**

Odborná skupina aplikované matematické logiky

Vás zve na semináře, které se konají vždy **ve středu** v zasedacím sále Ústavu informatiky AV ČR (místnost č. 318), Pod vodárenskou věží 2, 182 07 Praha 8 – Libeň, stanice metra C Ládví.

Pozor! Začátek seminářů je posunut na 14 hodin!

Program:

16. ledna **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. ledna **Alexander Kurz:** *název bude upřesněn později*

30. ledna **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.

Odborná skupina pro stereologii

vás zve na *Seminář ze stochastické geometrie*.

Na semináři jsou referovány nové nebo aktuální výsledky z oboru stochastické geometrie, integrální geometrie, geometrické pravděpodobnosti, geometrické statistiky a stereologie.

Seminář se koná v úterý od 15:40 do 17:10 v seminární místnosti Katedry pravděpodobnosti a matematické statistiky MFF UK (Karlín, Sokolovská 83, 1. patro). Zájemci jsou srdečně zváni.

Program:

8. ledna **Markéta Zikmundová: On the use of PMCMC in parameter estimation of space-time interacting discs**

Volná místa

Delft University of Technology

The Delft Center for Systems and Control (www.dcsc.tudelft.nl) of Delft University of Technology, The Netherlands has a vacancy for a PhD position on "Integrated distributed control of cyber-physical systems".

A recurring challenge in cyber-physical systems is to manage a flow of physical or virtual objects (pages, wafers, images, radio frames, audio samples) under strict timing and quality constraints, with limited computational resources and in close interaction with a physical environment that can only be controlled to a limited extent. Trends to ever faster, smaller, more energy-efficient, and higher quality systems lead to an explosion of design complexity and reliability challenges for the final product. A model-driven approach to integrally design the physical architecture of a system, the scheduling of the flow of objects, and the distributed control to execute the schedules is therefore required in order to cope with the complexity and reliability challenges.

In this project we will focus on the development of systematic multi-disciplinary controller design methods for control of the paper path in professional high-volume printers. This includes coping with a mixture of discrete-event aspects (different types and sizes of paper, cleaning) and continuous aspects (heating, cooling, drying, acceleration) as well as the multi-objective nature of the controller design challenges (throughput, energy consumption). Starting from a nominal overall schedule for the paper path, the aim is develop distributed control strategies for the various subcomponents of the printer. This also includes making the controller robust against variations and uncertainties, to cope for example with varying environmental conditions, wear and tear, failing components, etc.

This project will be done in cooperation with the Electronic Systems group of Eindhoven University of Technology, the Model-based System Development group of Radboud University Nijmegen, ESI, and Océ.

We are looking for a candidate with an MSc degree in systems and control or applied mathematics, and with a strong background or interest in control, hybrid and discrete-event systems, cyber-physical systems, and/or optimization. The candidate is expected to work on the boundary of several research domains. A good command of the English language is required.

We offer the opportunity to do scientifically challenging research in a multi-disciplinary research group. The PhD student will also be able to participate in the research school DISC. The appointment will be for up to 4 years. As an employee of the university you will receive a competitive salary, as well as excellent secondary benefits.

More information on this position and on how to apply can be found at http://www.dcsc.tudelft.nl/∼bdeschutter/vac/vac_phd_cps.html or by contacting Bart De Schutter (b.deschutter@tudelft.nl).

Různé konference

ICIPM2012 - 8th International Conference on Information Processing and Management, Seoul, Korea, April 1-3, 2013. Paper submission deadline: January 24, 2013. http://www.aicit.org/icipm

EBW2013 - The International Conference on E-Technologies and Business on the Web, University of the Thai Chamber of Commerce (UTCC), Bangkok, Thailand, May 7-9, 2013. Paper submission deadline: March 20, 2013. http://sdiwc.net/conferences/2013/ebw2013/

CENTERIS2013 - Conference on ENTERprise Information Systems, Lisbon, Portugal, October 23-25, 2013. Paper submission deadline: April 15, 2013, 2013. http://centeris.eiswatch.org

Vydává Česká společnost pro kybernetiku a informatiku pro potřeby svých členů. Neprodejné. Neprošlo korekturami ani jazykovou úpravou. Informace o členství v ČSKI na jejím sekretariátě. Příspěvky posílejte na adresu sekretariátu (přednostně emailem a v elektronické formě LaTeX).

Uzávěrka příštího čísla: 28. ledna 2013.