

Zpravodaj pro kybernetiku a informatiku

ČSKI Česká společnost pro kybernetiku a informatiku

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Říjnové kalendárium

7. **V. Beneš: Rozklad chaosu u funkcionalů Poissonových procesů II**
20. **R. Hofman: Inverse modelling for source term reconstruction**
21. **B. Kriesche: Stochastic modeling of spatially resolved data, with applications to the prediction of area weather events**
22. **Kde jsme byli a co jsme tam provedli**
29. **P. Cintula, C. Noguera: Logics with (semilinear) implication revisited**

Odborná skupina aplikované matematické logiky

Vás zve na semináře, které se konají vždy **ve středu** ve 14 hodin v zasedacím sále Ústavu informatiky AV ČR (místnost č. 318), Pod Vodárenskou věží 2, 182 07 Praha 8 – Libeň, stanice metra C Ládví.

Program:

22. října **Kde jsme byli a co jsme tam provedli**
29. října **Petr Cintula, Carles Noguera: Logics with (semilinear) implication revisited**

In our 2010 paper, Implicational (semilinear) logics I, we introduced a framework to study very general notions of implication and the classes of logics they determine. The crucial feature of our implications was that they induce an order relation in any general algebraic (matricial) model of the logic in question. One of the main results of the paper was a partial characterization (restricted to finitary logics) of the so-called semilinear implications and semilinear logics, i.e., logics complete w.r.t. the semantics in which the order induced by the implication is total. In this talk we present a full characterization by identifying the 'missing' property, which can be seen as generalized form of finitariness.

We also discuss three consequences of our work with an interest of their own. First we present a new hierarchy of logics, inspired by the above-mentioned property, characterized by the behavior of their (finitely) meet-irreducible filters/theories. Secondly, while proving the theorem we observed a flaw in the method of natural extensions (one of the important techniques of Abstract Algebraic Logic); here we give an example showing that the method really does not work in general but we also identify a very wide class of logics not affected by this problem. Finally we use the new characterization theorem to greatly strengthen several corollaries from the original paper.

Odborná skupina „Rozhodování a řízení za neurčitostí“

Vás srdečně zve na pravidelné přednášky v budově ÚTIA AV ČR, Pod Vodárenskou věží 4, 182 08 Praha 8 – Libeň.

Typy a nabídky přednášek: M. Kárný (26605 2274, school@utia.cas.cz)
Informace o seminářích: <http://www.utia.cas.cz/AS/news/seminars>

Ing. Radek Hofman, Ph.D. University of Vienna, Department of Meteorology and Geophysics

Inverse modelling for source term reconstruction

Přednáška se koná **20. října od 14 hod.** v místnosti č. 474.

Souhrn. Inverse modeling is a formal approach for estimation of uncertain parameters of a system under consideration given some relevant observations. In atmospheric transport modelling it is successfully applied to estimation of a source term (to provide a source term hypothesis) given concentration measurements. General foundation for the inverse modeling is provided by Bayes's theorem, however, the problem leads to an optimization problem under some assumptions. A source term hypothesis can be inferred via minimizing a cost function measuring a mismatch between measured data and model simulations. These simulations enter the problem in the form of so-called source-receptor sensitivities (SRS) describing possible contribution of source(s) to measurements.

SRSs are usually aggregated in a SRS matrix. Given the matrix and a source hypothesis, resulting receptor values can be obtained simply by matrix-vector multiplication which is beneficial in the case of applied variational approach. Real-world problems are often ill-conditioned so we have to employ a regularization to obtain a unique and stable solution. Different inversion scenarios will be discussed covering situations with both known and unknown source locations. Methodology will be demonstrated on analysis of radionuclide detection from the international monitoring network.

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:

7. října **Viktor Beneš: Rozklad chaosu u funkcionalů Poissonových procesů II**
21. října **Bjoern Kriesche (University Ulm): Stochastic modeling of spatially resolved data, with applications to the prediction of area weather events**

Různé konference

CSEU 2015 - 7th International Conference on Computer Supported Education, Lisbon, Portugal, May 23-25, 2015. Paper submission deadline: December 16, 2014. <http://www.csedu.org/>

CCECE 2015 - The 28th Canadian Conference on Electrical and Computer Engineering, Halifax, Canada, May 3-6 2015. Paper submission deadline: November 15, 2014. <http://www.ccece2015.org/>

ICT-BDCS 2015 - 6th Annual International Conference on ICT: Big Data, Cloud and Security, Singapore, April 27-28, 2015. Paper submission deadline: October 31, 2014. <http://bigdataclouds.org/>

SRES'2015 - The Symposium on Reliability of Engineering Systems, Hangzhou, China, October 15-17, 2015. Abstracts submission deadline: October 31, 2014. <http://www.sres2015.org/>

CDSR - 2nd International Conference of Control, Dynamic Systems, and Robotics, Ottawa, Canada, May 7-8, 2015. Paper submission deadline: January 1, 2015. <http://cdsr.net/>

ICCPs - International Conference on Cyber-Physical Systems, Seattle, Washington, USA, April 14-16, 2015. Abstract registration: October 13, 2014 (mandatory), full paper submission deadline: October 20, 2014. <http://iccps.acm.org/2015/>

ICETC2015 - The Second International Conference on Education Technologies and Computers, Bangkok, Thailand, May 20-22, 2015. Paper submission deadline: April 15, 2015. <http://sdiwc.net/conferences/icetc2015/>

ICIA2015 - The Fourth International Conference on Informatics & Applications, Takamatsu, Japan, July 20-22, 2015. Paper submission deadline: May 25, 2015. <http://sdiwc.net/conferences/icia2015/>

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. října 2014.

Texty z tohoto zpravodaje smějí být uveřejněny jinde jako celek i po částech. Prosíme ovšem o uvedení odkazu na ČSKI jako zdroj.