

# Zpravodaj pro kybernetiku a informatiku

**ČSKÍ** Česká společnost pro kybernetiku a informatiku

leden  
2011

Sekretariát: Pod vodárenskou věží 2, 182 07 Praha 8 – Libeň

tel: 2 6605 3901

fax: 2 8658 5789

e-mail: cski@utia.cas.cz

<http://www.cski.cz>

## Lednové kalendárium

4. M. Zikmundová: Částicové Markov Chain Monte Carlo  
18. P. Vácha: Texture recognition in variable conditions

## 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:**

4. ledna Markéta Zikmundová: Částicové Markov Chain Monte Carlo

## Výzkumné centrum Data - Algoritmy - Rozhodování Odborná skupina „Rozhodování a řízení za neurčitostí“

Vás srdečně zvou 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](mailto:school@utia.cas.cz))

**Mgr. Pavel Vácha** (ÚTIA AV ČR)

### Texture recognition in variable conditions

Přednáška se koná **18. ledna od 14 hod.**, místnost č. 474.

*Souhrn.* Recognition of natural and artificial materials is an essential part of image understanding and computer vision. Unfortunately, the appearance of materials in real scenes is highly dependent on illumination conditions and camera position. We proposed invariant textural features, which are based on Markovian modelling of texture and which are invariant to illumination colour, local intensity variation and robust to illumination direction changes. Rotation invariance was added as well. Presented applications will include image segmentation, decoration industry, computer graphics, and medical application.

Info na webu <http://www.utia.cz/>

## Odborná skupina aplikované matematické logiky

Seminář se v lednu nebude scházet. Program únorových setkání najdete v příštím Zpravodaji.

## Volná místa

### Chalmers University of Technology

PhD position: "Automotive Active Safety: Non-Hit Car and Truck"

The Mechatronics Group at the Department of Signals and Systems of the Chalmers University of Technology has a vacancy for a PhD position.

The Non-hit Car and Truck project aims at supporting Volvo Cars' 2020 safety vision, which states that by 2020 no one should be killed or seriously injured in a Volvo car, as well as the Volvo Group vision of zero accidents with Volvo functions. To achieve these goals, new and improved safety functions with real-life benefits need to be investigated across the whole safety domain, ranging from strategic drive to in-crash activities. As part of the project, a Ph.D. student will be recruited with a focus on Threat Assessment and Decision Making.

Threat assessment and decision making algorithms will be based on mathematical models describing the evolution of the surrounding environment. In particular, the concept of traffic model will be central to develop effective threat assessment

and decision making algorithms. This includes predicting the evolution of the environment, i.e., surrounding vehicles trajectories. This might be based on traffic rules, communication of intents (blinkers, stop lights) and estimation of surrounding vehicles state. The traffic model, and in general the environment model, will rely on information provided by Sensor Data Fusion algorithms, but will also be based on an adaptive model of the driver behavior. The resulting traffic situation will be used to assess possible threats and evaluate the effect of various possible automatic interventions by the vehicle.

We look for candidates with a M.Sc. degree in Electrical Engineering, Computer Engineering, Automation and Mechatronics, Engineering Physics or similar. A strong background in Mathematics, Mathematical Statistics, Control and Signal Processing is an advantage.

For details and application procedures, please visit the following link <http://www.chalmers.se/s2/EN/news/vacancies-at-signals/positions/ph-d-student-in>

### UT Southwestern Medical Center at Dallas

Post-doc/Ph.D. positions are available to work on the stochastic modeling of protein dynamics observed by single molecule microscopy. The project is carried out in a joint research group with Prof. E.S. Ward at UT Southwestern Medical Center at Dallas.

The positions will provide the opportunity to not only work on projects of significant technical interest but also to become familiar with the fundamental biological questions that are being addressed in the laboratory. Specifically the laboratory investigates the development of new therapeutics for the treatment of diseases such as cancer and auto-immunity.

For candidates for the post-doctoral position, experience in stochastic modeling, stochastic differential equations etc. would be desirable but is not necessary.

For further details on the research carried out in our group please see [www4.utsouthwestern.edu/wardlab](http://www4.utsouthwestern.edu/wardlab).

Please send inquiries (resume, names of referees etc.) to Prof. Raimund J. Ober, University of Texas at Dallas, University of Texas Southwestern Medical Center at Dallas, email: [ober@utdallas.edu](mailto:ober@utdallas.edu)

### Embry-Riddle Aeronautical University

PhD positions are available in the area of DYNAMICS AND CONTROL OF AEROSPACE SYSTEMS under the supervision of Prof. Mahmut Reyhanoglu, Prof. Sergey Drakunov, and Prof. William MacKunis at the Department of Physical Sciences, Embry-Riddle Aeronautical University located in Daytona Beach. These positions cover full tuition and fees plus a \$20,000 per year stipend. Requirements include a strong background in control theory, dynamic systems and mathematics; a Master's degree in engineering, physics, or applied mathematics; and excellent skills in using Matlab and Simulink. It is also desirable that the candidates have hands-on experience on feedback control. It is expected that the candidates have excellent GRE and TOEFL (if necessary) scores as well as strong communication and writing skills.

For details and application procedures, please visit <http://www.erau.edu/db/degrees/phd-engineeringphysics.html>

Contact: Prof. Mahmut Reyhanoglu, Physical Sciences Department, Embry-Riddle Aeronautical University, Daytona Beach, Florida.  
E-mail: [reyhanom@erau.edu](mailto:reyhanom@erau.edu)

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

Uzávěrka příštího čísla: 26. ledna 2011.

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