

# Zpravodaj pro kybernetiku a informatiku

**ČSKÍ** Česká společnost pro kybernetiku a informatiku

prosinec  
2009

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## Prosincové kalendárium

1. **M. Prokešová:** Palmova věrohodnost a odhad parametrů v Coxových procesech
2. **R. Horčík:** Vlastnost disjunkce a složitost substrukturálních logik
3. **Autumn 2009 Pattern Recognition and Computer Vision Colloquium**
9. **P. Hájek:** Některé výsledky o produktové logice
14. **R. Hable:** Modeling Complex Uncertainties in Data-Based Decision Theory - Concepts of Imprecise Probabilities and Topological Properties
15. **J. Ajgl:** Multisensor Information Fusion
15. **T. Mrkvička:** Test dobré shody pro bodové procesy s nestacionárními kótami
15. **V. Gvoždiak:** Jakobsonova sémiotická teorie
16. **Vánoční posezení**

## Odborná skupina aplikované matematické logiky

Vás zve na semináře, které se konají vždy ve středu v 9:00 hod. v zasedacím sále Ústavu informatiky AV ČR (místnost č. 318), Pod vodárenskou věží 2, 182 07 Praha 8 – Libeň, stanice metra C Ládví.

### Program:

2. prosince **Rostislav Horčík:** Vlastnost disjunkce a složitost substrukturálních logik
9. prosince **Petr Hájek:** Některé výsledky o produktové logice
16. prosince **Vánoční posezení**

## Odborná skupina pro sémiotiku

Vás zve na přednášku

**Vít Gvoždiak** (UP Olomouc)

### Jakobsonova sémiotická teorie

Přednáška se koná **15. prosince ve 16.00 hod.**, v FÚ AV ČR, Praha 1, Jilská 1, 1.p. zasedací místnost.

Všichni zájemci jsou srdečně zváni.

## Výzkumné centrum Data - Algoritmy - Rozhodování Odborná skupina pro inteligentní systémy

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

Tipy a nabídky přednášek: T. Kroupa (26605 2592, [kroupa@utia.cas.cz](mailto:kroupa@utia.cas.cz))

**Robert Hable** (University of Bayreuth)

### Modeling Complex Uncertainties in Data-Based Decision Theory - Concepts of Imprecise Probabilities and Topological Properties

Přednáška se koná **14. prosince ve 14:00 hod.**, místnost č. 25.

*Souhrn.* Decision theory is, in particular in economics, medical expert systems and statistics, an important tool for determining optimal decisions under uncertainty. Since the arising uncertainties are often too complex to be described by classical precise probability assessments, different concepts of imprecise probabilities have been developed where single probabilities are replaced by whole sets of probabilities - called credal sets. In order to successfully deal with data-based decision theory, topological properties of credal sets are crucial. This is because

minimax theorems play an important role in decision theory and such theorems are based on topological properties. In the talk, different concepts of imprecise probabilities are compared and it is demonstrated that, in particular, Walley's concept of coherent lower previsions appears to have advantageous properties for applications in decision theory. However, it is also pointed out that modeling with coherent lower previsions needs some care because an unfortunate choice may lead to arbitrary results. This is a consequence of the fact that the commonly used method of natural extension suffers from a severe instability.

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

<http://as.utia.cz/dcu/DCU.php>

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

Tipy a nabídky přednášek: M. Kárný (26605 2274, [school@utia.cas.cz](mailto:school@utia.cas.cz))

### Jiří Ajgl

(Západočeská univerzita v Plzni, Katedra kybernetiky, [jirijagl@kky.zcu.cz](mailto:jirijagl@kky.zcu.cz))

### Multisensor Information Fusion

Přednáška se koná **15. prosince ve 14 hod.**, místnost č. 474.

*Souhrn.* The talk discusses information fusion in the probabilistic framework. The classical centralised multisensor approach is compared with distributed and decentralised cases. Estimates based on different data sets are fused under different criteria. The Distributed Kalman filter, Channel filter and Covariance intersection method are shown.

## Odborná skupina pro rozpoznávání – CPRS

pořádá spolu s Centrem strojového vnímání (CMP) katedry kybernetiky ČVUT FEL dne 3. prosince od 10:50 hodin

### Autumn 2009 Pattern Recognition and Computer Vision Colloquium

Kolokvium se koná v místnosti č. 205, FEL ČVUT, Karlovo nám. 13, Praha 2, budova G.

### Program:

- |             |  |
|-------------|--|
| 10:50-11:00 | <b>Welcome and speaker introduction</b>  |
| 11:00-11:45 | Matti Pietikainen (University of Oulu, Finland)<br><b>Motion and Activity Analysis with Spatiotemporal Local Binary Patterns</b>                       |
| 11:45-12:30 | Rainer Lienhart (U. Augsburg, Germany)<br><b>Multimodal Image Search</b>   |
| 12:30-13:30 | <i>Lunch break</i>   |
| 13:30-14:15 | Boris Flach (CMP Prague, Czech Republic)<br><b>Shape priors and MRF-segmentation</b>   |
| 14:15-15:00 | Francois Fleuret (IDIAP, Switzerland)<br><b>Stationary Features and Cat Detection</b><br><i>Coffee break</i>   |
| 15:30-16:15 | Christoph Lampert (Max Planck Institute for Biological Cybernetics, Tuebingen, Germany)<br><b>Structured Regression for Efficient Object Detection</b> |
| 16:15-17:00 | TBA  |
| 17:00 -     | CMP visit (laboratory, demos, posters), informal discussion  |

Další informace viz <http://cmp.felk.cvut.cz/cmp/events/colloquium-2009.12.03/>

## 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 zpravidla jednou za dva týdny, 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:

- 1. prosince** **Michaela Prokešová: Palmova věrohodnost a odhad parametrů v Coxových procesech**
- 15. prosince** **Tomáš Mrkvíčka: Test dobré shody pro bodové procesy s nestacionárními kótami**

## Různé konference

**i-Society 2010** - International Conference on Information Society, June 28-30, 2010, London, UK. Submission Deadline: January 31, 2010  
[www.i-society.eu](http://www.i-society.eu)

**Systol'10** - Conference on Control and Fault-Tolerant Systems, October 6-8, 2010, Nice, France. Submission Deadline: May 15, 2010  
<http://www.systol10.org>

**ANTS 2010** - Seventh International Conference on Swarm Intelligence, September 8-10, 2010, Brussels, Belgium. Submission Deadline: February 28, 2010  
<http://iridia.ulb.ac.be/ants2010>

**CIS & RAM 2010** - IEEE International Conference on Cybernetics and Intelligent Systems & IEEE International Conference on Robotics, Automation and Mechatronics, June 26-30, Singapore. Submission Deadline: January 15, 2010  
<http://www.cis-ram.org/2010/>

**WODES 2010** - 10th International Workshop on Discrete Event Systems, August 30 - September 1, 2010, TU Berlin. Submission Deadline: March 31, 2010  
[www.wodes2010.org](http://www.wodes2010.org)

**ICOSSE'10** - The 9th International Conference on SYSTEM SCIENCE and SIMULATION in ENGINEERING, October 4-6, 2010, Iwate, Japan. Submission Deadline: July 31, 2010  
<http://www.wseas.us/conferences/2010/japan/icosse/index.html>

## Volná místa

### University of Maryland

Post-Doctoral Research Appointment, ISR University of Maryland Opportunities for Fall 2010 For Ph.D. recipients in Engineering, Computer Science, Mathematics and related areas.

The Institute for Systems Research (ISR) is an interdisciplinary research unit of the University of Maryland. Located in College Park, MD, ISR generates fundamental knowledge and technologies for integrated design for control of complex engineering systems. ISR has the following research emphases:

Global Communications Systems Sensor-Actuator Networks Next-Generation Product Realization Systems Societal Infrastructure Systems Cross-Disciplinary Systems Education

ISR's research programs are at the forefront of advances in modern systems engineering, and incorporate sophisticated analytical and computational methods with state-of-the-art experimental and modeling techniques.

**INTEREST AREAS** A multi-disciplinary team of outstanding scientists and engineers is pursuing in-depth studies in the implications and applications of modern computer technology to control and communication systems technologies. Extensive industrial collaboration is an integral part of the program. ISR's research projects encompass a diverse set of systems problems; they include intelligent control of processes, electromechanical motion control, wireless communication networks, high-speed satellite and terrestrial communication networks, telemedicine systems, and virtual factories for the manufacture of electromechanical devices.

While we welcome applications from qualified parties with interests in systems, control, and communications, we are especially seeking persons for research projects on the following topics:

Bio-inspired devices and systems Hybrid system modeling and analysis (hybrid discrete/continuous systems; discrete/continuous control; stochastic systems; model checking) Information and Coding MEMS and nanosystems Robotics

Speech Enhancement, Assistive Speech Technologies, Vocal Tract Modeling, and Articulatory-based Speech Recognition

Please indicate the prioritized area(s) in which you are interested [not more than three].

**APPOINTMENTS** ISR Post-doctoral appointments are available for recipients of Ph.D. degrees who have interests in systems engineering and its applications. Candidates must have received their degrees by August 31 of the same year that the appointment begins. Typically, appointments are effective from September through August. Academic excellence and outstanding potential for basic research weigh heavily in appointment selection.

**BENEFITS** ISR Post-Doctoral appointees enjoy the unique opportunity of participating in state-of-the-art research in systems engineering. Exceptional opportunities exist for research in collaboration with leading industrial and government research laboratories. Appointments offer generous salaries and provide excellent benefits. They are typically for one year and are renewable up to a second year based on performance and the availability of funds.

**APPLICATION** To be considered for a post-doctoral appointment, applicants must submit the following materials: - Curriculum vitae including a list of publications, - Sample publications (2 or 3 will suffice), - A transcript from the institution where the Ph.D. was (or will be) earned, showing grades in courses taken, - Statement of research interests and goals, including a) the applicant's prioritized area(s) of interest from the list above, and b) the reason one wishes to participate in this program, - Three letters of recommendation.

All materials must be received by January 15, 2010 to qualify candidates for Fall 2010 consideration.

### MAIL APPLICATIONS TO:

Institute for Systems Research  
Attn: Post-Doctoral Appointment Review  
2175 A.V. Williams Building  
University of Maryland  
College Park, MD 20742

For additional information, email [sue@umd.edu](mailto:sue@umd.edu)

The Institute for Systems Research is a permanent state-supported institute of the University of Maryland, within the A. James Clark School of Engineering and the Glenn L. Martin Institute of Technology.

**PhD: Embry-Riddle Aeronautical University**, Daytona Beach, Florida

PhD positions are available in the area of DYNAMICS AND CONTROL OF AEROSPACE SYSTEMS under the supervision of Prof. Mahmut Reyhanoglu and Prof. Sergey Drakunov 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/phd-engineering-physics>.

Contacts: Prof. Mahmut Reyhanoglu and Prof. Sergey Drakunov, Physical Sciences Department, Embry-Riddle Aeronautical University, Daytona Beach, Florida.

E-mail: [reyhanom@erau.edu](mailto:reyhanom@erau.edu) or [drakunov@erau.edu](mailto:drakunov@erau.edu)

**PhD: University of Hong Kong**

The Department of Electrical and Electronic Engineering of the University of Hong Kong is seeking for PhD candidates to be enrolled in Control Systems for the academic year 2010-2011. This academic year starts on September 1, 2010. All courses and activities are conducted in English. Interested candidates should send their CV to Dr. Graziano Chesi ([chesi@eee.hku.hk](mailto:chesi@eee.hku.hk)) and are invited to visit his webpage <http://www.eee.hku.hk/~chesi/> for research details. Applications should be submitted to the Graduate School of the University of Hong Kong, see <http://www.hku.hk/gradsch/web/apply/> for instructions. The deadline for applications is December 31, 2009.

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