

# Zpravodaj pro kybernetiku a informatiku

**ČSKI** Česká společnost pro kybernetiku a informatiku

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## Prosincové kalendárium

13. A. Přenosil: **Brouwerian algebras as negative cones of idempotent involutive residuated lattices**
20. Christmas seminar

## Odborná skupina pro logiku, pravděpodobnost a usuzování

Vás zve na semináře, které se konají vždy **ve středu** v 10 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:

13. prosince **Adam Přenosil: Brouwerian algebras as negative cones of idempotent involutive residuated lattices**

In this talk we describe a categorical equivalence between Brouwerian algebras (i.e. Heyting algebras possibly without the lower bound) and a variety of idempotent involutive residuated lattices (InRLs). One direction of this equivalence is given by the negative cone functor, while the opposite direction is given by a certain twist product functor. In particular, it turns out that Brouwerian algebras are precisely the negative cones of idempotent InRLs. This equivalence extends an equivalence between relative Stone algebras (i.e. Gödel algebras possibly without the lower bound) and odd Sugihara monoids established by Galatos & Raftery (2012) and recently extended to arbitrary Sugihara monoids by Galatos & Raftery (2015) and Fussner & Galatos (unpublished). We will also sketch how to extend our equivalence in order to cover these cases as well as the case of Abelian l-groups. This talk is based on joint work with Nick Galatos.

20. prosince **Christmas seminar**

## Volná místa

### New York University, USA

The Laboratory for Resilient and Agile Complex Systems (LARX), directed by Prof. Quanyan Zhu, at the Department of Electrical and Computer Engineering, New York University, has a postdoc position on the topic of developing the theory and applications for networked control systems and the Internet of things. Post-doctoral applicants should have a theoretically-focused PhD in a related area.

Applicants should have a strong background in mathematics, optimization or control, well-developed analytical and problem-solving skills, outstanding academic track record, and excellent English communication skills.

For interested applicants, please send your CV and two selected research papers. Please submit the applications or inquiries regarding the position to Prof. Quanyan Zhu, by email [qz494@nyu.edu](mailto:qz494@nyu.edu)

### Nanyang Technological University, Singapore

#### Job Description:

A postdoctoral research fellow with a background in control and dynamics (of automobiles preferably) for a project aimed at fault and attack detection in critical sensors and systems of an autonomous car is required. The successful candidate will work with Professor Danwei Wang and a group of Research Fellows, Research Associates and PhD/Masters/Bachelors students in the school of EEE at Nanyang Technological University, Singapore.

#### Major responsibilities include

- Design and development of methodology and architecture for detection of malicious intrusion and malfunctions of safety and critical sensors, actuators and control systems of autonomous vehicles.
- Filter design (e.g. Kalman filter) for sensor fusion with application to failure detection.

The applicant must

- Have completed/near completion of his/her Ph.D in electrical engineering, control engineering, signal processing or other related fields
- Be willing to collaborate with other team members and help and guide junior researchers on a regular basis
- Be comfortable with software development for mobile robotic systems/autonomous vehicles or be comfortable to learn the respective software systems
- Have good verbal and written communication skills in English

Preference will be given to applicants with following additional skills and experiences:

- Extensive C/C++/ Python/MATLAB programming skills
- Familiar with ROS programming terminology
- Experience of working with mobile robotic sensors and systems

#### Application Procedure:

Interested candidates please email your CV/resume together with a cover letter to: Professor Danwei Wang: [edwwang@ntu.edu.sg](mailto:edwwang@ntu.edu.sg)

Initial contract is for one year with a possibility of extension up to a maximum of two years. An attractive remuneration based on the experiences and qualifications and a standard benefit package competitive with the industry will be provided for the successful applicant. Only shortlisted candidates will be notified for interview.

### UC Berkeley, USA

Two postdoctoral positions are available in the Departments of Electrical Engineering & Computer Sciences and Mechanical Engineering at the University of California, Berkeley. The research topics are in the broad areas of machine learning, optimization theory and control systems.

The preferred start date is anytime before March 2018. To apply, please send a cover letter describing your research interests and background, CV, three sample publications, and the contact information of two references to Prof. Somayeh Sojoudi ([sojoudi@berkeley.edu](mailto:sojoudi@berkeley.edu)).

Please check out the website <http://eecs.berkeley.edu/~sojoudi> for more details.

### King Abdullah University of Science and Technology (KAUST)

The Robotics, Intelligent Systems, and Control (RISC) lab at KAUST is seeking postdoctoral researchers in the areas of multi-agent systems, autonomy, and distributed robotics. The RISC lab is engaged in a variety of projects involving distributed decision architectures with a network of autonomous agents and/or human actors. Current topics include aerial swarms, self-assembly, crowd monitoring, and smart grid. For more information, please visit <https://risc.kaust.edu.sa/>

We seek researchers with backgrounds in foundational areas (e.g., decision and control, game theory, machine learning) as well as prior experience with robotics platforms and testbeds. Prospective candidates should contact Jeff Shamma ([jeff.shamma@kaust.edu.sa](mailto:jeff.shamma@kaust.edu.sa)) with (i) a current CV; (ii) a brief statement of prior research experience and future interests; and (iii) contact information for 3 references.

For more information about life at KAUST, please visit

<https://www.kaust.edu.sa/en/live-work>

## Různé konference

**FedCSIS 2018** – Federated Conference on Computer Science and Information Systems, September 9-12, 2018, Poznań, Poland. Paper submissions deadline: May 15, 2018. <http://fedcsis.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 pošlete na adresu sekretariátu (přednostně emailem a v elektronické formě LaTeX).

Uzávěrka příštího čísla: 27. prosince 2017.

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