



**INSTITUTE  
OF PHYSIOLOGY** CAS



# **WORKSHOP**

## **„Analysis of image data for diagnostics“**

**October 25-26, 2016**  
organized by the Institute of Physiology,  
The Czech Academy of Sciences

Venue:  
**Institute of Molecular Genetics, lecture room No. 0.195,  
Vítěňská 1083, Prague 4, 14220**



*Strategy AV21: Diagnostic Methods and Techniques*





# 25<sup>th</sup> October

## lecture room No. 0.195 (ground-floor)

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**10:00**      **Introduction**

**10:10-11:00**    **Paolo Bianchini**, Instituto Italiano di Technologica, Genova

• **Quantitative STED and new advances towards label free nanoscopy**

*11:00-11:30*    *Coffee break*

**11:30-12:00**    **Oleksandr Chernyavskiy**, Institute of Physiology, CAS

• **Biomedical applications of time-correlated single photon counting**

**12:00-12:30**    **Štěpán Kubík**, Institute of Physiology, CAS

• **Arc/Homer 1a catFISH: Imaging the effect of psychotomimetic MK-801 on similarity of neuronal ensemble representations in the cognitive circuit**

*12:30-14:00*    *Break*

**14:00-14:50**    **Katja Schladitz**, Fraunhofer Institut für Techno- und Wirtschaftsmathematik (ITWM), Kaiserslautern

• **Characterization of biological structures by the intrinsic volumes**

**14:50-15:20**    **Jiří Janáček**, Institute of Physiology, CAS

• **Analysis of confocal images of capillary networks**

*15:20-16:10*    *Coffee break*

**16:10-16:40**    **David Kala**, Institute of Physiology, CAS

• **Methods for blood-brain barrier permeability detection**

**16:40-17:10**    **Filip Plešinger**, Institute of Scientific Instruments CAS

• **SignalPlant: Open platform for multimodal data analysis**

**17:10-17:40**    **Jan Kybic**, Faculty of Electrical Engineering, Czech Technical University in Prague

• **Multiple myeloma bone marrow infiltration detection in CT**

**17:40-18:10**    **Filip Španiel**, National Institute of Mental Health

• **What does MRI imaging tell us about self?**

*18:20*            *Visit to the microscopy core facility - Institute of Physiology, CAS  
(Department of Biomathematics )*

*18:45*            *Party with refreshments – Institute of Physiology, CAS, Department  
of Biomathematics, lecture room*

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**26<sup>th</sup> October**

**lecture room No. 0.195 (ground-floor)**

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- 8:30-9:00**     **Daniel Jiráček**, Institute for Clinical and Experimental Medicine, Prague  
•**MR imaging of transplanted cells**
- 9:00-9:50**     **Konstantin Korotkov**, Federal University of Informational Technologies,  
Mechanics and Optics, Saint-Petersburg  
•**The science of measuring energy fields, health and wellbeing.**  
  **Non-invasive body imaging to assess body functions.**
- 9:50-10:20**    **Michal Cifra**, Institute of Photonics and Electronics, CAS  
•**Imaging human endogenous chemiluminescence for non-invasive  
monitoring of oxidative stress**
- 10:20-11:10**   **Eva Dražanová**, Institute of Scientific Instruments, CAS  
•**Specific approach for analysing MRI data in different animal models**
- 11:10-11:40*    *Coffee break*
- 11:40-12:10**   **Lenka Dvořáková**, Institute of Scientific Instruments, CAS  
•**MR diffusion tensor imaging and evaluation of rat spinal cord injury**
- 12:10-12:40**   **Radovan Jiřík**, Institute of Scientific Instruments, CAS  
•**Quantification of tissue perfusion using MRI**
- 12:40-13:10**   **Petr Matula**, Faculty of Informatics, Masaryk University  
•**Robust and reliable quantitative analysis of live cell  
microscopy images**
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## More information

### Contact and registration:

No registration fee

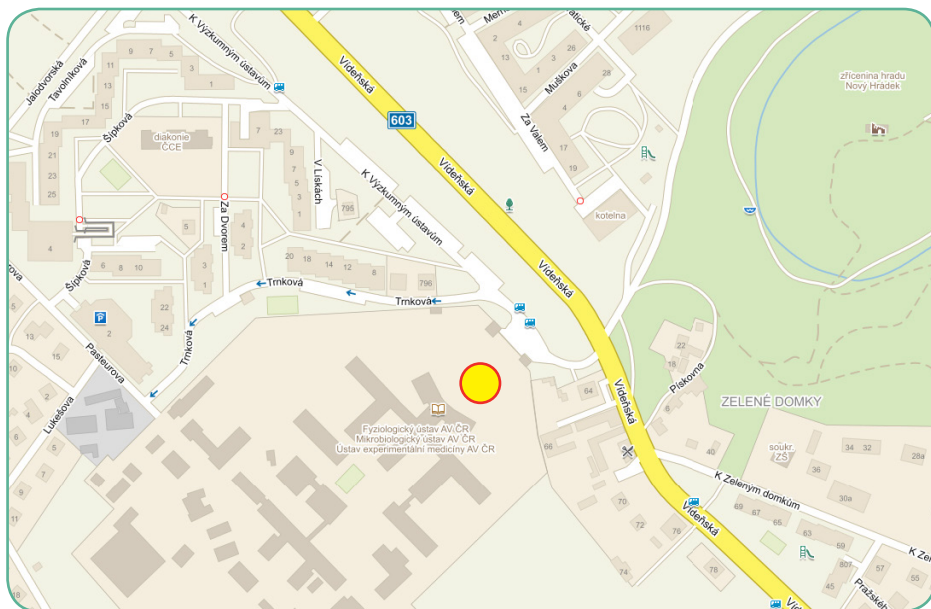
Free attendance

For special requests contact Lucie Kubínová - [lucie.kubinova@fgu.cas.cz](mailto:lucie.kubinova@fgu.cas.cz)

**Address of Event:** Institute of Molecular Genetics, meeting room no. 0.195 (ground-floor), Vídeňská 1083, Prague 4

**Public transport:** bus 193, stop: Zelené domky

**Car:** Parking is available on campus.



*This scientific event is organised within the Strategy AV21 research program Diagnostic Methods and Techniques (topic „Advanced non-invasive diagnostics procedures for human and veterinary medicine and biology“), funded by The Czech Academy of Sciences.*