

Workshop

**Imaging neuronal activity in sensory systems:
experimental and modeling approach**Time: **19/20.09.2011**Venue: **The Nencki Institute of Experimental Biology, Pasteur 3 Str. Warsaw,
Poland****Program:****Monday September 19th**

10.00 – 11.00 Registration

10.30-11.00 Welcome coffee

11.00-11.15 Workshop opening

Session I: Cellular imaging

11.15-12.00 **Zoltán Kisvárday**, Dept. Anatomy, Histology & Embryology, University of Debrecen, Debrecen, Hungary
Three-tiered architecture of lateral connections in the primary visual cortex

12.00-13.00 Lunch break

13.00-13.30 **Petra Henrich-Noack**, Institute of Medical Psychology, Otto-von-Guericke University, Magdeburg, Germany
The eye as a window to the brain

13.30-14.00 **Paweł Hottowy**, Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland
High-resolution imaging of neural activity with multielectrode arrays

14.00-14.15 Coffee break

14.15-15.00 **David Lyon**, University of California, Irvine, USA
Mechanisms underlying the orientation tuning of surround suppression in V1

Thursday September 20th

Session II: Imaging of system dynamics

9.00-9.45 **Amos Arieli**, Weizmann Institute of Science, Rehovot, Israel
From perception to action: the role of ongoing and evoked activity

9.45-10.00 Coffee break

10.00-10.30 **Ewa Kublik**, Nencki Institute, Warsaw, Poland
Thalamo-cortical interactions in different behavioral states

10.30-11.00 **Artur Łuczak**, Canadian Centre for Behavioural Neuroscience, The University of Lethbridge, Lethbridge, Canada
Patterns of spiking activity in large populations of extracellularly recorded neurons

11.00-11.30 **Dirk Schubert /Rembrandt Bakker**, Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands
What does multielectrode array data reveal about cortical microcircuits?

11.30-12.30 Lunch break

Session III: Theoretical approaches to imaging data

12.30-13.15 **Klaus Obermayer**, School of Computer Science and Electrical Engineering and Bernstein Center for Computational Neuroscience, Technische Universität Berlin, Berlin, Germany
Modeling visual cortical representations

13.15-13.30 Coffee break

13.30-14.00 **Gabriela Mochol**, Nencki Institute, Warsaw, Poland
Stochastic properties of superior colliculus neuronal responses to moving stimuli

14.00-14.30 **Szymon Łęski**, Nencki Institute, Warsaw, Poland
Current source density - analysis of multielectrode recordings

14.30-15.00 **Gaute Einevoll**, Norwegian University of Life Sciences, Ås, Norway
Extracting information from multielectrode data by means of biophysical modeling

15.00 Departures...

Chairs: **Małgorzata Kossut, Andrzej Wróbel**

Practicals

Monday, September 19th (8.15-10.45)

Artur Marchewka, Nencki Institute, Warsaw, Poland
Structural and functional imaging of the human brain - neuroimaging workshop for beginners

For registration contact organizers: a.foik@nencki.gov.pl