

**January 29 (Wednesday)**

- 8:30-9:30            Registration
- 9:45-10:00        Opening ceremony
- 10:00-10:45        Plenary lecture I (Buzsáki lecture)  
**The Diversity of Cell Types in Human Cortex**  
Christof Koch (Allen Institute, USA)
- 10:45-11:00        Coffee break
- 11:00-12:45        **Symposium I**  
NOVEL INSIGHTS INTO MECHANISMS OF THE EPILEPSIES  
Chairs: **Vincenzo CRUNELLI (Cardiff University, UK)**  
          **István ULBERT (Péter Pázmány Catholic University,**  
          **Hungary)**
- Pannexin 1 channels control seizure generation in human epileptic tissue**  
Nathalie Rouach  
College de France, France
- Physiological and pathological synchronies in the human neocortex, in vitro**  
Lucia Wittner  
Péter Pázmány Catholic University, Hungary
- Paroxysmal depolarization shift in humans**  
Daniel Fabó  
National Institute of Clinical Neurosciences, Hungary
- Interictal epileptiform discharges shape large-scale intercortical communication**  
Jennifer GELINAS  
Columbia University Medical Center, USA
- Corticothalamic and thalamocortical components of absence seizure ictogenesis**  
Francois DAVID  
Centre de Recherche en Neurosciences de Lyon, France

12:45-15:45	<b>Poster section I &amp;lunch break</b>
15:45-16:30	Plenary lecture II <b>Diversity and plasticity in the assembly of cortical circuits</b> Oscar Marín King's College, UK
16:30-17:00	Coffee break

- 17:00-18:45      **Symposium II**  
**Learning and goal-directed navigation**  
Chairs: Panayiota Poirazi, Balázs Hangya
- Medial septal circuit at the intersection of movement, learning and memory**  
Balázs Hangya  
Institute of Experimental Medicine, Hungary
- Independent effects of learning and attentional switching on neural responses in mouse primary visual cortex**  
Adil Khan  
King's College, UK
- Modelling interneuronal contributions to spatial navigation in health and disease**  
Panayiota Poirazi  
Foundation of Research and Technology-Hellas, Grece
- Synaptic/cellular and microcircuit mechanisms of adaptive context encoding in the hippocampus**  
Attila Losonczy  
Columbia University, USA
- Dendritic activity in CA3 place cell coding in familiar and novel environments**  
Jayeeta Basu  
New York University School of Medicine, USA
- 19:00-19:45      General assembly of the Hungarian Neuroscience Society
- 20:00              Gala dinner

**January 30 (Thursday)**

- 9:30-10:15            Plenary lecture III  
**Cortical Circuits of Vision**  
Massimo Scanziani  
UCSF, USA
- 10:15-10:30           Coffee break
- 10:30-12:15           **Symposium III**  
**Neurocybernetics – coupling brains to machines or machines to brains**  
Chair: Dion Khodagholy  
Columbia University, USA
- Large-scale organic neural interface devices**  
Dion Khodagholy  
Columbia University, USA
- Spatially and temporally targeted neuromodulation in health and disease**  
Antal Berényi  
University of Szeged, Hungary
- Contactless neuromodulation using transcranial radio frequency stimulation**  
Mihály Vöröslakos  
New York University, USA
- Orientation-dependent electric fields in evoked after-discharges: differences between direct and temporal interference-based stimulation**  
Adam Williamson  
INSERM, France
- 3D micro/nanoneedle and 2D flexible film for neural interfaces**  
Takeshi Kawano  
Toyohashi University of Technology, Japan
- 12:15-15:15           Poster section II & lunch break
- 15:15-16:00           **Plenary lecture IV**
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**Immune-synaptopathies: how the immune system affects synaptic function**

Michela Matteoli  
CNR, Italy

16:00-16:30

Coffee break

16:30-18:00

**Symposium IV**  
**NAP-Symposium: Network analysis of brain functions**

Chair: Ferenc Mátyás

**Putative roles for local axon collaterals of projection neurons in spinal dorsal horn networks**

Péter Szűcs

University of Debrecen, Hungary

**Dual thalamoamygdalar routes control emotional behavior**

Ferenc Mátyás

Research Center for Natural Sciences, Hungary

**Selectivity of dendritic inhibition in the medial entorhinal cortex**

Csaba Varga

University of Pécs, Hungary

**Corticothalamic feedback modulates network state**

Péter Barthó

Research Center for Natural Sciences, Hungary

**Ictal heterogeneity in the awake cortex**

Magor L. Lőrincz

University of Szeged, Hungary

18:00

Closing ceremony