

# CCCP 2018 **Cortical Codes: Control & Perception**

National Research University Higher School of Economics

Moscow, Russia, October 29-30, 2018

## Program

### • Day 1

- 9:45-10:00 Welcome note from the organizers
- **Session 1 Neurointerfaces for rehabilitation**
  - **10:00-11:00 Invited lecture 1: Galit Pelled** Aquatic inspired neuromodulation
  - 11:00-11:30 Alexei Ossadtchi, Nikolai Smetanin, Alexander Belyayev, Alexandra Kuznetsova, Motor imagery and EMG-based interfaces at HSE
  - 11:30 – 12:15 Alexander Frolov, Pavel Bobrov, Motor Imagery BCI in post-stroke recovery: clinical study
  - 12:15-12:45 *Coffee break and informal discussion*
  - **12:45 – 13:45 Invited lecture 2 Mehdi Ordikhani** - "Brain-computer interfaces for augmenting attention"
  - 13:45 – 15:00 *Lunch and informal discussion*
- **Session 2 Deep learning in BCI**
  - **15:00 – 16:00 Invited lecture 3 Tonio Ball** Deep learning for brain-machine interfacing
  - 16:00-16:30 Alexei Ossadtchi, Arthur Petrosuan, Anton Lebedev, Ksenia Volkova, Various uses of deep learning: decoding continuous kinematics and knowledge extraction
  - 16:30-17:00 Sergey Shishkin, Bogdan Kozyrski, Deep Learning for eye-brain-computer interfaces
  - 17:00 – 17:30 Ivan Zubarev, Transfer learning techniques for brain-computer interfacing and cognitive neuroscience
  - 17:30-18:00 *Coffee break and informal discussion*
  - 18:00 – 19:00 Mikhail Lebedev, Alexei Ossadtchi, Animal studies of invasive brain-computer interfaces and the first Russian invasive BCI project
  - 19:00-20:00 Tour over Institute for cognitive Neuroscience facilities
  - 20:30-22:30 *Gala Dinner @ "I like wine", Pokrovka, 16*

### • Day 2

- **Session 3 Neurofeedback and bidirectional BCIs**
  - **10:00-11:00 Invited lecture 4: Thorsten Zander** Towards Neuroadaptive Technology: An outlook on the potential impact of Passive Brain Computer Interfaces on Technology, Neuroscience and Society.
  - 11:00 – 11:30 Mikhail Lebedev, Invasive interfaces with sensory feedback,
  - 11:30-12:00 *Coffee break and informal discussion*
  - **12:00 – 13:00 Invited lecture 5: Guenter Edlinger** BCI with multisensory feedback
  - 13:00-14:15 *Lunch and informal discussion*

- **Session 4 Open issues and future hopes**
  - **14:30-15:30 Invited lecture 6: Guido Nolte**, Estimating brain connectivity from EEG and MEG data: concepts, interpretations and limitations
  - 15:30-16:00 Vadim Nikulin, "Pre-stimulus and resting state neuronal dynamics as factors defining performance in sensorimotor and cognitive tasks"
  - 16:00 – 16:30 *Coffee break and informal discussion*
  - 16:30 – 17:00 Alexei Ossadtchi, Nikolai Smetanin, Anastasia Belinskaya, Towards zero-latency neurofeedback
  - 17:00 – 17:30 Nikita Novikov, Boris Gutkin, Effects of oscillatory entrainment on the working memory system: computational and experimental study

18:00 – 20:30 **Poster session with Farewell wine & cheese**



