











## 5<sup>th</sup> Baltic-Nordic School on Neuroinformatics BNNI 2017

# Theoretical modelling of brain functions in neurological and psychiatric disorders: Advancing future neuroscience and medicine through Neuroinformatics methods

#### 6-7 October 2017

Advanced Pharmaceutical and Health Technologies Centre of Lithuanian University of Health Sciences Sukileliu Av. 13, Kaunas, Lithuania

### 6 October 2017

8.00-9.00	Registration. Coffee/Tea
9.00-9.15	Opening and welcome Auditorium A205
	I session. Neuroinformatics methods in neuroscience and medicine.  Auditorium A205
9.15-10.00	<b>Dr. R. Naginiene</b> , Neuroscience Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania <i>Translational neuroscience and neuroscience in Lithuania</i>
10.00-11.00	<b>Prof. ML.Linne</b> , Tampere University of Technology, Finland; The Human Brain Project Advancing future neuroscience and medicine through neuroinformatics methods: the Human Brain Project
11.00-11.30	Coffee/Tea
11.30-13.00	<b>Prof. B. Graham</b> , Institute of Mathematics and Informatics, University of Stirling, UK From neurons and synapses to networks: Basics of computational/ theoretical modelling of the brain
13.00-14.00	Lunch. Coffee/Tea
	II session. Computer exercises. Modeling the healthy brain Computer classroom A010
14.00-15.00	<b>Dr. A. Roth</b> , Wolfson Institute of Biomedical Research, University College London, UK <i>Introduction to NEURON simulator.</i>
15.00-17.00	Prof. B. Graham, Institute of Mathematics and Informatics, University of Stirling, UK Dr. A. Roth, Wolfson Institute of Biomedical Research, University College London, UK Prof. A. Saudargiene, Neuroscience Institute, Lithuanian University of Health Sciences, and Vytautas Magnus University, Kaunas, Lithuania Simulating synapses, neurons and networks in health.
17.00-18.00	Coffee/Tea. Discussions and networking.
19.00-22.00	Get-Together-Dinner in the old town of Kaunas.

## **7 October 2017**

	III session. Challenges in understanding and treating brain disorders Auditorium A205
9.00-9.40	<b>Prof. P. Jedlicka</b> , NeuroScience Center, Goethe-University, Frankfurt, Germany Computational models of neurological and psychiatric disorders
9.40-10.25	<b>Dr. T. Mäki-Marttunen</b> , Simula Research Laboratory, Oslo, Norway Computational modelling of neuron combined with genomics data to study schizophrenia
10.25-10.45	<b>Prof. P. Enrico</b> , Department of Biomedical Sciences, University of Sassari, Sardinia, Italy  The neurobiology of drug withdrawal: insights and hints from computational modelling
10.45-11.15	Coffee/Tea
11.15-12.00	<b>Prof. D. Wojcik</b> , Nencki Institute of Experimental Biology, Warsaw, Poland Extracellular electrophysiology from modeling perspective
12.00-12.30	<b>Prof. I. Griskova-Bulanova</b> , Institute of Bioscience, Vilnius University, Lithuania Biomarkers of psychiatric disorders
12.30-13.00	A. Radžiūnas, Department of Neurosurgery, Medical Academy, and Neuroscience Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania Psychiatric complications after subthalamic nucleus deep brain stimulation in Parkinson disease patients
13.00-14.00	Lunch. Coffee/Tea
	IV session. Computer exercises. Modeling diseased brain Computer classroom A010
14.00-17.00	Prof. P. Jedlicka, NeuroScience Center, Goethe-University, Frankfurt, Germany Dr. A. Roth, Wolfson Institute of Biomedical Research, University College London, UK Dr. T. Mäki-Marttunen, Institute of Clinical Medicine, University of Oslo, Norway Prof. A. Saudargiene, Neuroscience Institute, Lithuanian University of Health Sciences, and Vytautas Magnus University, Kaunas, Lithuania Simulating the neuronal mechanisms of neurological and psychiatric disorders
17.00-18.00	Coffe/Tea. Farewell.

## Kaunas, Lithuania





