

PROGRAMME

*compulsory lectures for the Volga Neuroscience School participants

	CELLULAR NEUROSCIENCE	COMPUTATIONAL NEUROSCIENCE	MOLECULAR NEUROSCIENCE	WORKSHOP BRAIN-COMPUTER INTERFACES, COGNITIVE NAVIGATION AND NEUROENGINEERING	WORKSHOP DYNAMICS IN LIFE SCIENCES, NEUROSCIENCE APPLICATIONS
Chairs	Alexey Semyanov Dmitri Rusakov	Victor Kazantsev Boris Gutkin	Victor Tarabykin Sergey Kasparov	Alexander Kaplan Valeri Makarov	Andrey Shilnikov Grigory Osipov Alexander Neiman
12:00-18:00	Registration				
19:00	Departure from St.-Petersburg				
19:00-20:00	<i>Dinner</i>				
20:00-21:00	Opening remarks (Hall A) <i>Evgeny Chuprunov, Rector of the Lobachevsky State University of Nizhny Novgorod</i> <i>Victor Kazantsev, Vice-Rector for Research of the Lobachevsky State University of Nizhny Novgorod</i> <i>Alexey Semyanov, Director of the Institute of Neuroscience, Lobachevsky State University of Nizhny Novgorod</i>				
21:30	<i>Welcome party (Hall B)</i>				

Sunday, July 24

7:30-8:30	<i>Breakfast</i>		
8:00	Arrival in Valaam		
8:30-12:00	Excursion		
12:00	Departure from Valaam		
13:00-14:30	<i>Lunch</i>		
14:30-15:20	Plenary lecture (Hall A) * Role of microglial cells in different brain diseases <i>Helmut Kettenmann</i> <i>Max Delbrueck Center for Molecular Medicine (Germany)</i>		
15:20-16:10	*Special Lecture (Hall A) How to write a better review <i>Sian Lewis</i> <i>Editor-in-Chief of</i> <i>Nature Reviews Neuroscience Journal</i>		
16:10-16:30	<i>Coffee break</i>		
16:30-19:30	CELLULAR NEUROSCIENCE (HALL A) Chairman Kirill Volynski	MOLECULAR NEUROSCIENCE (HALL B) Chairman Victor Tarabykin	COMPUTATIONAL NEUROSCIENCE (HALL C) Chairman Misha Tsodyks
16:30-17:00	* Structural plasticity of synaptic environment: A quest into the machinery <i>Dmitri Rusakov,</i> <i>University College London (UK);</i> <i>Institute of Neuroscience, Lobachevsky</i> <i>State University of Nizhny Novgorod</i> <i>(Russia)</i>	Control of cortical progenitor potential by Sonic Hedgehog signaling <i>Samuel Pleasure,</i> <i>UCSF Institute for Regeneration Medicine</i> <i>(USA)</i>	Nonlinear dynamics of neural information processing <i>Boris Gutkin,</i> <i>Ecole Normale Supérieure, (France)</i>
17:00-17:30	* Synaptic and extrasynaptic neuron-glia interactions <i>Alexey Semyanov,</i> <i>Institute of Neuroscience, Lobachevsky</i>	Dynamic control of neural stem cells <i>Ryoichiro Kageyama,</i> <i>Institute for Virus Research Kyoto</i> <i>University Shogoin-Kawahara (Japan)</i>	Intelligence in intracellular gene-regulatory networks <i>Alexei Zaikin,</i> <i>UCL (UK), Lobachevsky State University</i>

Monday, July 25

	<i>State University of Nizhny Novgorod (Russia)</i>		<i>of Nizhny Novgorod (Russia)</i>
17:30-18:00	Diffusion versus extrusion: mechanisms for recovery of neurons from intracellular sodium loads <i>Christine Rose, Institute of Neurobiology, Heinrich Heine University Dusseldorf (Germany)</i>	Dynamic control of neural progenitor fates in the developing neocortex <i>Debra Silver, Duke University School of Medicine, (USA)</i>	Nanophysiology of dendritic spines. <i>David Holcman, Ecole Normale Supérieure, (France)</i>
18:00-18:30	<i>Coffee break</i>		
18:30-19:00	Rapid sodium signaling couples glutamate uptake to breakdown of ATP in perivascular astrocyte endfeet <i>Karl Kafitz, Institute of Neurobiology, Heinrich Heine University Dusseldorf (Germany)</i>	A dynamic unfolded protein response controls cortical neurogenesis <i>Laurent Nguyen, University of Liège (Belgium)</i>	*Computations with intracellular circuits <i>Michail Ivanchenko, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
19:00-19:30	*Unraveling the role of astroglial networks in neuronal coordination <i>Nathalie Rouach, College de France (France)</i>	Lack of Diap3 relaxes the spindle checkpoint causing the loss of neural progenitors and microcephaly <i>Fadel TISSIR, Université catholique de Louvain, (Belgium)</i>	Hearing: The next level of understanding <i>Ruedi Stoop, Institute of Neuroinformatics ETHZ/UZH Zürich, (Switzerland)</i>
19:30-20:30	<i>Dinner</i>		
20:30-21:00	Historical Lecture on Russian wooden architecture. Alexey Paevskiy (Hall C)		
21:00-22:00	<i>Live music (Hall A)</i>		
22:30	<i>Dance floor open (Hall B)</i>		

Monday, July 25

8:00-9:00	<i>Breakfast</i>		
9:00-9:50	Plenary lecture (Hall A) *Transcriptional regulation of telencephalic development <i>John Rubenstein, UCSF (USA)</i>		
9:50-10:40	Plenary lecture (Hall A) *Synaptic origins of working memory capacity <i>Misha Tsodyks, Weizmann Institute of Science (Israel)</i>		
10:40-11:00	<i>Coffee break</i>		
11:00-13:30	CELLULAR NEUROSCIENCE (HALL A) Chairman Alexey Semyanov	MOLECULAR NEUROSCIENCE (HALL B) Chairman Denis Jabaudon	COMPUTATIONAL NEUROSCIENCE (HALL C) Chairman Boris Gutkin
11:00-11:30	*Role of astroglial calcium/calcieneurin-mediated signaling in Alzheimer's disease: in search of potential mechanisms and mediators <i>Dmitry Lim, Università del Piemonte Orientale (Italy)</i>	Control of cell fate in the developing cerebral cortex <i>Shubha Tole, Tata Institute of Fundamental Research in Mumbai (India)</i>	Modeling stochastic processes in neurons <i>Erik De Schutter, Okinawa Institute of Science and Technology (Japan)</i>
11:30-12:00	Mechanisms and consequences of neuronal protein SUMOylation in health and disease <i>Jeremy Henley, University of Bristol (UK)</i>	Evolution of cortical development <i>Andre Goffinet, University of Louvain, (Belgium)</i>	*Emergence of new dynamical modes due to extracellular modulation of neuron network dynamics <i>Victor Kazantsev, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
12:00-12:30	Extrasynaptic protease, MMP-9 in healthy and diseased mind <i>Leszek Kaczmarek, Nencki Institute (Poland)</i>	Cortical expansion in the development of complex mammalian brains <i>Fumio Matsuzaki, RIKEN Center for Developmental Biology (Japan)</i>	Coherence enhancement in coupled chaotic neurons <i>Alexander Pisarchik, Technical University of Madrid (Spain)</i>
12:30-13:00	*Gliocrine Astrocytes in Health and Disease <i>Robert Zorec, University of Ljubljana (Slovenia)</i>		Multistability and Coherent Dynamics in Directed Networks of Heterogeneous Neural Oscillators with Modular Network Topologies

Tuesday, July 26

			<i>Ivan Tyukin, University of Leicester (UK)</i>
13:30-15:00	<i>Lunch</i>		
15:00-17:30	CELLULAR NEUROSCIENCE (HALL A) Chairman Dmitri Rusakov	MOLECULAR NEUROSCIENCE (HALL B) Chairman John Rubenstein	COMPUTATIONAL NEUROSCIENCE (HALL C) Chairman Victor Kazantsev
15:00-15:30	*The Role of Astrocyte Alterations in Early Changes in the Dynamics of Cultured Cerebellar Networks in health and disease <i>Ari Barzilai, Tel Aviv University (Israel)</i>	Establishing neuronal identity in the cerebral cortex <i>Carina Hanashima, RIKEN Center for Developmental Biology (Japan)</i>	A model of asynchrones neurotransmitter release <i>Martin Krupa, INRIA Paris-Rocquencourt (France)</i>
15:30-16:00	*Astrocytes in Huntington's disease: Focus on glutamate uptake activity <i>Rosemarie Grantyn, University Medicine Berlin – Charité (Germany)</i>	Distinct epigenetic functions of sox2 in self-renewal and differentiation <i>Alexey Terskikh, SBP Medical Discovery Institute (USA)</i>	Competitive learning mechanisms for distributed synthetic gene classifiers <i>Oleg Kanakov, Lobachevsky State University of Nizhny Novgorod (Russia)</i>
16:00-16:30	A new pathway for presynapse to nucleus communication: potential implications for information storage in the brain <i>Eckart Gundelfinger, Leibniz Institute for Neurobiology (Germany)</i>	Multiplex approach in depressive disorders research <i>Anastasiia Boiko, Mental Health Research Institute (Russia)</i>	WORKSHOP DYNAMICS IN LIFE SCIENCES, NEUROSCIENCE (HALL C) <i>Chairman Andrey Shilnikov</i>
			Towards bifurcation theory for rhythmogenesis in neural networks <i>Andrey Shilnikov, Georgia State University (USA)</i>
16:30-17:00	*Homeostatic control of dopamine by astrocytes in the postnatal maturation of the prefrontal cortex <i>Paola Bezzi, University of Lausanne (Switzerland)</i>	Merck Life Science Update: genomic and proteomic aspects in neuroscience research <i>Marina Prokhorova, Merck</i>	Mechanical and electrical oscillations and their role in sensory hair cells <i>Alexander Neiman, Ohio State University (USA)</i>
17:00	Arrival in Kizhi		
17:15-20:15	Excursion		

Tuesday, July 26

20:30-21:30	<i>Dinner</i>
21:00	Departure from Kizhi
21:30-22:30	Poster Session I (Hall B)
22:30	<i>Dance floor open (Hall B) / Live music (Hall A)</i>

Wednesday, July 27

8:00	Arrival in Vytegra		
8:00-9:00	<i>Breakfast</i>		
9:00-12:00	Excursion		
12:30-13:30	Plenary lecture (Hall A) <i>*All-optical interrogation of neural circuits</i> <i>Michael Hausser,</i> <i>Wolfson Institute for Biomedical Research University College London (UK)</i>		
13:00	Departure from Vytegra		
13:30-15:00	<i>Lunch</i>		
15:00-16:30	CELLULAR NEUROSCIENCE (HALL A) Chairman Robert Zorec	MOLECULAR NEUROSCIENCE (HALL B) Chairman Samuel Pleasure	WORKSHOP DYNAMICS IN LIFE SCIENCES, NEUROSCIENCE (HALL C) Chairman Prodyot Kumar Roy, Emeritus scientist
15:00-15:30	Linking AMPA receptor nanoscale organization and function at excitatory synapses <i>Daniel Choquet,</i> <i>Université de Bordeaux (France)</i>	<i>*Cell fate in the neocortex: Can we change it?</i> <i>Victor Tarabykin,</i> <i>Universitätsmedizin Berlin Charité (German), Lobachevsky State University of Nizhny Novgorod (Russia)</i>	Optimal Extraction of Collective Rhythmicity from Unreliable EEG Channels <i>Justus Schwabedal,</i> <i>MPI PKS Dresden (Germany)</i>
15:30-16:00	Role of synaptic plasticity in AMPA receptor intracellular trafficking <i>Françoise Coussen,</i> <i>Université de Bordeaux (France)</i>	Becoming a new neuron in the cerebral cortex <i>Denis Jabaudon,</i> <i>Université de Genève (Suisse)</i>	<i>*Transient and periodic spatiotemporal structures in a reaction-diffusion-mechanics system</i> <i>Grigory Osipov,</i>

Wednesday, July 27

			<i>Lobachevsky State University (Russia)</i>
16:00-16:30	Orphan G-protein coupled receptors on astrocytes as potential targets for glio- and neuro-protection <i>Teschemacher Anja Gabriele, University of Bristol (UK)</i>		Extreme events in bursting neurons <i>Syamal Kumar Dana, Emeritus Scientist, CSIR-Indian Institute of Chemical Biology (India)</i>
16:30-17:00	<i>Coffee break</i>		
17:00-19:00	CELLULAR NEUROSCIENCE (HALL A) Chairman Paola Bezzi	MOLECULAR NEUROSCIENCE (HALL B) Chairman Samuel Pleasure	WORKSHOP DYNAMICS IN LIFE SCIENCES, NEUROSCIENCE (HALL C) Chairman Andrey Shilnikov
17:00-17:30	Space and time shape the functions of the NMDA receptor coagonists in the hippocampus <i>Jean-Pierre Mothet, Aix Marseille University (France)</i>	The suppressors of cytokine signalling SOCS6 and SOCS7 are essential for cortical layering and reelin signaling <i>Anne Kathrin Voss, Walter and Eliza Hall Institute, (Australia)</i>	Chimeralike states in network of oscillators <i>Prodyot Kumar Roy, Emeritus Scientist, Presidency University (India)</i>
17:30-18:00	Astrocytic GABA transporter activity modulates excitatory neurotransmission in the hippocampus <i>Matthew Walker, University College London (UK)</i>	Molecular mechanisms underlying area-specific circuit formation in the mouse neocortex <i>Michele Studer, Institute of Biology Valrose (France)</i>	Decision-making model and experimental study of the influence of stochastic processes on cognitive brain ability <i>Anastasiya Runnova, Saratov State University (Russia)</i>
18:00-18:30	*Effects of thyroid hormones in neuron-glia interaction. <i>Mami Noda, Kyushu University (Japan)</i>		Chaos & Biological Information Processing: Coarse-Graining, Rough Set Approximations and Quantum Cognition in Decision Making. <i>Vasileos Basios, Universite Libre de Bruxelles (Belgium)</i>

Wednesday, July 27

18:30-19:00	Calcineurin Inhibition Attenuates Function of the Neuronal Potassium-Chloride Cotransporter <i>Kerim Mutig, Charité Medical University (Germany)</i>		*Active Wireless Networks for Experimental Study in Neuroscience <i>Alexandr Dmitriev, Kotelnikov Institute of RAS (Russia)</i>
19:00-20:00	<i>Dinner</i>		
20:00-20:30	Sky Come Closer: Solar System Last Years Exploring. Alexey Paevskiy (Hall C)		
20:30-22:00	Poster Session II (Hall B)		
22:00	<i>Live music (Hall A)</i>		

Thursday, July 28

7:00-8:00	<i>Breakfast</i>		
08:00	Arrival in Goritsy		
8:00-10:00	Bus tour		
10:30-13:40	CELLULAR NEUROSCIENCE (HALL A) Chairman Matthew Walker	MOLECULAR NEUROSCIENCE (HALL B) Chairman Franck Polleux	WORKSHOP DYNAMICS IN LIFE SCIENCES, NEUROSCIENCE(HALL C) Chairman Alexander Neiman
10:30-11:00	Generation of multi-innervated dendritic spines in memory formation in ageing <i>Michael Stewart, The Open University (UK)</i>		*Frequency and hemispheric specialization of brain activity in convergent and divergent thinking: the intelligence effect <i>Olga Razumnikova, Novosibirsk State Technical University (Russia)</i>
11:00-11:30	*Morphological changes in synapses during memory formation in ageing <i>Igor Kraev, The Open University (UK)</i>		Quantification of fast presynaptic Ca²⁺ kinetics using non-stationary single compartment model <i>Yulia Timofeeva,</i>

Thursday, July 28

			<i>University of Warwick (UK)</i>
11:30-12:00	Signal transduction underlying structural plasticity of dendritic spines <i>Ryohei Yasuda,</i> <i>Max Planck Florida Institute for Neuroscience (USA)</i>		Temporal correlations in neuronal spikes induced by noise and periodic forcing <i>Cristina Masoller,</i> <i>Universitat Politecnica de Catalunya (Spain)</i>
12:00	Departure from Goritsy		
12:00-12:30	<i>Coffee break</i>		
12:30-13:00	Optical quantal analysis of glutamate release <i>Thomas G. Oertner,</i> <i>Institute for Synaptic Physiology, Center for Molecular Neurobiology Hamburg (Germany)</i>	Primary cilia modulates neuronal connectivity <i>Eva Anton,</i> <i>University of North Carolina at Chapel Hill School of Medicine (USA)</i>	Modelling noise-induced escape problems in networks <i>Jennifer Lynn Creaser,</i> <i>University of Exeter (UK)</i>
13:00-13:30	*Experimental and modeling approaches to studying ion channel function in small presynaptic terminals in health and disease <i>Kirill Volynski,</i> <i>UCL Institute of Neurology (UK)</i>	TAF8 is essential for transcriptional fidelity and cell survival in the cerebral cortex during embryogenesis <i>Tim Thomas,</i> <i>Walter and Eliza Hall Institute, (Australia)</i>	Spike-adding in parabolic bursting: the role of folded-saddle canards <i>Mathieu Desroches,</i> <i>Inria, Sophia Antipolis – Méditerranée (France)</i>
13:30-14:00	Spontaneous neurotransmitter release and synaptic plasticity <i>Elena Nosyreva,</i> <i>UT Southwestern Medical Center (USA)</i>	In Vivo knockdown of basal forebrain p75 neurotrophinreceptor stimulates the cholinergic septo-hippocampal system in mature animals <i>Graham L Barrett,</i> <i>University of Melbourne (Australia)</i>	On the dynamics of some small hypercycles with short-circuits <i>Tomás Lázaro,</i> <i>Universitat Politecnica de Catalunya (Spain)</i>
14:00-15:00	<i>Lunch</i>		
15:00-16:30	CELLULAR NEUROSCIENCE (HALL A) Chairman Igor Kraev	MOLECULAR NEUROSCIENCE (HALL B) Chairman Sergey Kasparov	WORKSHOP DYNAMICS IN LIFE SCIENCES, NEUROSCIENCE (HALL C) Chairman Grigory Osipov
15:00-15:30	*Offline effects of single and paired		Distributed delay differential equation models in laser dynamics

Thursday, July 28

	pulse TMS <i>Evgeny Blagoveschensky, Institute of Translational Biomedicine, St. Petersburg State University (Russia)</i>		<i>Andrey Vladimirov, Weierstrass Institute (Germany)</i>
15:30-16:00	Molecular changes in penumbra after focal photothrombotic stroke in the rat cerebral cortex <i>Anatoly Uzdensky, Southern Federal University (Russia)</i>	Novel signaling pathways underlying the effects of mitochondria on neuronal morphogenesis and synaptic function <i>Franck Polleux, Columbia University Morningside Campus (USA)</i>	
16:00-16:30	Cell protective and trophic properties of GDNF and its derivatives <i>Galina Pavlova, Federal State Budget Institution of Sciences Institute of Gene Biology (Russia)</i>	Defining the role of ciliary proteins BBS (Bardet-Biedl syndrome) in neuroplasticity <i>Sophia Christou-Savina, London's Global University, (GB)</i>	WORKSHOP BRAIN-COMPUTER INTERFACES (HALL C) Chairman Mikhail Lebedev
			*The Control Human Phantom Fingers by Means of P300 Brain-Computer Interface for Neurorehabilitation <i>Alexander Kaplan, Moscow State University (Russia), Lobachevsky State University of Nizhny Novgorod (Russia)</i>
16:30-17:00	<i>Coffee break</i>		
17:00-19:00	CELLULAR NEUROSCIENCE (HALL A)	MOLECULAR NEUROSCIENCE (HALL B) Chairman Sergey Kasparov	WORKSHOP BRAIN-COMPUTER INTERFACES (HALL C) Chairman Mikhail Lebedev
17:00-17:30		Transcriptional control of neocortical pyramidal neuron differentiation and axonal growth by Neurod1/2/6 <i>Ingo Bormuth, Charité Universitätsmedizin Berlin, (Germany)</i>	Multidimensional Dynamic Chaos in Cerebellum <i>Witali Dunin-Barkowski, Scientific research institute for system analysis, Russian Academy of Sciences, Moscow (Russia)</i>
17:30-18:00		Shaping the dendritic tree: the role of ARHGAP33 in neocortical development and disease <i>Marta Rosário,</i>	Fixation-based eye-brain-computer interfaces: Approaching a better human-computer symbiosis <i>Sergei Shishkin,</i>

Thursday, July 28

		<i>Charité Universitätsmedizin Berlin, (Germany)</i>	<i>NRC Kurchatov Institute (Russia)</i>
18:00-18:30		Role of the oligodendrocyte lineage in acute CNS trauma <i>Frank Kirchhoff, Center for Integrative Physiology and Molecular Medicine, (Germany)</i>	Steady state visual evoked potential based BCI study in overt and covert attention <i>Zafer Iscan, HSE, Moscow, (Russia)</i>
18:30-19:00			Methodological aspects of enactive neurocinema creation <i>Nataliya Galkina, Neurotrend (Russia)</i>
19:00-20:00	<i>Dinner</i>		
20:30-21:30	Plenary lecture (Hall A) *Neuroprotective role of gap junctions in a neuron astrocyte network model <i>David Terman, Ohio State University</i>		
21:30-22:30	<i>Live music (Hall C)</i>		
22:30-00:00	<i>Dance floor open (Hall B)</i>		

Thursday, July 28

8:00-9:00	<i>Breakfast</i>		
9:00-9:50	Plenary lecture (Hall A) *Epigenetic Regulation of Neuronal Connectivity in the Brain <i>Azad Bonni,</i> <i>Washington University School of Medicine (USA)</i>		
9:50-10:40	Plenary lecture (Hall A) *Modern Trends in Brain-Machine Interfaces <i>Mikhail Lebedev,</i> <i>Department of Neurobiology, Duke University, USA</i>		
11:00	Arrival in Yaroslavl		
11:00-15:30	Bus tour (Yaroslavl-Rostov)		
16:00	Departure from Yaroslavl		
15:30-16:30	<i>Lunch</i>		
16:30-19:00	NEUROENGINEERING, COGNITIVE NAVIGATION (HALL A) Chairman Alexander Pisarchik	MOLECULAR NEUROSCIENCE (HALL B) Chairman Shubha Tole	WORKSHOP BRAIN-COMPUTER INTERFACES (HALL C) Chairman Alexander Kaplan
16:30-17:00	3D biodegradable scaffolds produced by microstereolithography technique for neural tissue engineering in experimental traumatic brain injury <i>Irina Mukhina,</i> <i>Nizhny Novgorod State Medical Academy (Russia)</i>	Amyloid Precursor Protein Maintains Constitutive and Adaptive Plasticity of Dendritic Spines in Adult Brain by Regulating Extracellular D-Serine Concentration <i>Jochen Herms,</i> <i>Ludwig-Maximilians-Universität München, (Germany)</i>	Rapid SSVEP mindspelling achieved with spatiotemporal beamforming <i>Marc van Hulle,</i> <i>KU Leuven (Belgium)</i>
17:00-17:30	Device for Electrophysiological Signal Recognition and Data Transmission on Wheelchairs <i>Maxim Patrushev,</i> <i>Institute of Chemistry and Biology, Immanuel Kant Baltic Federal University (Russia)</i>	Pharmacological characterisation of lactate-mediated signalling in central catecholaminergic neurons. <i>Sergey Kasparov,</i> <i>University of Bristol (UK)</i>	Detection of the EEG-correlates of subjective significance of visual stimuli <i>Ilya Ganin,</i> <i>Lomonosov Moscow State University, Lobachevsky State University of Nizhny Novgorod, (Russia)</i>

Friday, July 29

17:30-18:00	Neuroengineering methods in study hippocampal neural circuits <i>Alexey Pimashkin, Lobachevsky State University of Nizhny Novgorod (Russia)</i>	Post-translational control of vesicular release <i>Joern Steinert, MRC Toxicology Unit, (UK)</i>	
18:00-18:30	<i>Coffee break</i>		
18:30-21:00	SELECTED REPORTS OF YOUNG SCIENTISTS (Hall B) Chairman Irina Mukhina		
18:30-18:45	The Influence of Glial Cell Line-Derived Neurotrophic Factor and Modulated Activity of Endocannabinoid System on C3H Mice Sustainability to Ischemic Brain Injury In Vivo <i>Helena Mitroshina, Lobachevsky State University of Nizhny Novgorod (Russia)</i>		
18:45-19:00	Ephrin class a reverse signaling guides callosal axon growth via efna 4-ntrk 2 receptor complex downstream of neurod 2/6 <i>Kuo Yan, Charité Universität smedizin Berlin, (Germany)</i>		
19:00-19:15	HP1 and Endogenous Retroviruses in the Brain <i>Andrew Newman, Charité Universität smedizin Berlin, (Germany)</i>		
19:15-19:30	Design of optoelectronic interface between neuron-like generation and living neuron <i>Mikhail Mischenko, Lobachevsky State University of Nizhny Novgorod (Russia)</i>		
19:30-19:45	Development of tactile feedback loop based on skin vibro-stimulation for brain-computer interface <i>Alexey Pimashkin, Lobachevsky State University of Nizhny Novgorod (Russia)</i>		
19:45-20:00	A human-machine interface built on sEMG toolkit with artificial neuralnetwork feature classifier <i>Innokentiy Kastalskiy, Lobachevsky State University of Nizhny Novgorod (Russia)</i>		
20:00-20:15	Computational model of neural-glia-ecm interactions <i>Sergey Stasenko, Lobachevsky State University of Nizhny Novgorod (Russia)</i>		
20:15-20:30	The dependence on noise of STDP-driven synchronization at neural network <i>Sergey Lobov, Lobachevsky State University of Nizhny Novgorod (Russia)</i>		
20:30-20:45	Experimental Studies of Anticipative Dynamics in Neuronal Networks <i>José Jiun-Shian Wu, Institute of Physics, Academia Sinica, Taipei (Taiwan)</i>		
21:00	<i>Party (Hall A)</i>		

Friday, July 29

7:00-8:00	<i>Breakfast</i>
8:00	Arrival in Gorodets
8:00-10:00	Excursion
10:00-10:50	<p>Plenary lecture (Hall A)</p> <p>*Wave dynamics for real-time cognitive navigation in complex environments</p> <p><i>Valeri Makarov,</i> <i>Complutense University of Madrid (Spain)</i></p>
10:50-12:00	Round Table
12:00-12:30	<i>Coffee break</i>
12:30-13:30	Closing session
13:30-14:30	<i>Lunch</i>
17:00	Arrival in Nizhny Novgorod
17:00-19:00	Visit to the laboratories of the UNN Institute of Neuroscience
19:00-23:00	Departure of participants

Saturday, July 30

Poster Session I

1. Role of Hypothalamic Glycine Receptors in Regulation of Male Sexual Behavior in Rats

N.A. Titova, Z.D. Zhuravleva, M. Druzin, I.V. Mukhina

Neurotechnologies Department, Lobachevsky State University Of Nizhny Novgorod, Russia

2. Network Ca^{2+} - Cell Activity Field CA_3 Hippocampal Slices of Rat Early and Late Postnatal Development

Y.I. Mitaeva, A.M. Mozherov, I.V. Mukhina

Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia;

3. Identification of Novel Mutations Causing Malformations in Cortical Development by ENU Induced Mutagenesis in the Mouse

E.V. Borisova, A.A. Babaev, M.V. Turovskaya, E.A. Turovsky, V.S. Tarabykin

Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia.

4. Use of Optogenetic Technology in Cell Culture Models, Implantable Device to Works in Slices and Live Animals

A.I. Erofeev, O.A. Zakharova, M.V. Matveev, S.G. Terekhin, I.B. Bezprozvanny, O.L. Vlasova

Molecular Neurodegeneration Lab, Peter the Great Polytechnic University, Saint-Petersburg, Russia.

Department of Medical Physics, Peter the Great St. Petersburg Polytechnic University, Saint-Petersburg, Russia

5. Stimulus Induced Plasticity in Dissociated Neuronal Network with Direct Connectivity

V.N.Kolpakov, Y.I. Pigareva , A.A. Gladkov, E.I. Malishev, A.Y. Bukatin, A.S. Pimashkin, V.B. Kazantsev , I.V. Mukhina

Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia

6. Unidirectional Axon Growth in Microchannels of Various Shapes

Y.I. Pigareva, A.A. Gladkov, V.N. Kolpakov, A.S. Pimashkin, A.Y. Bukatin, E.I. Malishev, I.V. Mukhina and V.B. Kazantsev

Department of Neuroengineering, Center of Translational Technologies, Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia

7. The Role of Sip1 in the Spine Density of Neocortical Neurons

V.A. Salina, E.A. Turovsky, M.V. Turovskaya, A.A. Babaev, V.S. Tarabykin, M. Rosario

Institute of Biology and Biomedicine, Lobachevsky State University of Nizhny Novgorod, Russia

Institute for Cell and Neurobiology, Center for Anatomy, Charité-
Universitätsmedizin Berlin, Germany

8. Up- and Down-Regulation of H-Channels Conductance in CA1 Hippocampal
Neurons

M.S. Doronin, Yu.V. Dembitskaya, A.V. Semyanov

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9. Multistable Dynamics in the Motif of Inhibitory Coupled Rulkov Neurons

T. A. Levanova, A.O. Kazakov, G. V. Osipov

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10. Effect of Previous Neuronal Activity on Characteristics of Action Potentials

E.N. Vasileva and A.V. Semyanov

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11. Lactate and Ketone Bodies Regulate Astrocytic Calcium Dynamics in Early
Postnatal Development

A. Lebedeva, E. Shishkova, A. Semyanov

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12. The Effects of Caloric Restriction and Western Diet on Astrocytes

A. Lebedeva, A. Plata, V. Tovpyga, P. Denisov, S. Makovkin, A. Semyanov

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13. Learning in Coupled Neural Networks with Heteroclinic Circuits

A.O. Selskii and V.A. Makarov

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14. Region- and Age-Dependent Heterogeneity of Receptors Involved in Calcium
Signaling and SLC-Family Transporters in Rat Astrocytes

O. Tuchina, I. Dominova, L. Klimaviciusa, N. Filiakova, A. Vasilev, M.

Patrushev, V. Kasymov

Immanuel Kant Baltic Federal University, Kaliningrad, Russia

15. Model of Neuronal Activity in Cultural Network with Energy

Feedback F.D.Iudin, D.I. Iudin, A.N. Gorban, T.A. Tyukina, I.V. Mukhina, V.B.

Kazantsev, and I.Yu. Tyukin

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16. Analysis of the Brain Activity in Rodents Being Under Influence of General Anesthesia

M. O. Zhuravlev, O. I. Moskalenko, A. A. Koronovskii, A. E. Hramov, S.A. Lobov, V. A. Makarov
Saratov State University, Russia

17. Sip 1-Mutation Causes A Disturbance in Activity of Nmda- and Ampa Receptors of Neurons in Cerebral Cortex

M.V. Turovskaya, A.A. Babaev, E.A. Turovsky, V.S. Tarabykin
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18. VMAT2 in astrocytes regulates morphology of pyramidal neurons in developing PFC by modulating extracellular levels of dopamine

Pucci L, Tamara Z, Petrelli F , Cali C1, Dellerac G, Kirchhoff F, Déglon N, Giros B, Edwards R, Mothet JP, Paola Bezzi
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Poster Session II

1. Adenoviral Vectors Expression in Human Astrocytic Glioma Cells and Primary Astrocytes Monocultures

N.V. Ponomareva, S. A. Tutukova, E.V. Mitroshina, A.V. Lebedeva, E.A. Epifanova, T.A. Mishchenko, M.V. Vedunova, A.A. Babaev
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2. Sigma-1 Receptor is a Potential Drug Target for Neuropathology Treatment

A.V. Bolshakova, V.A. Zhemkov , A.N. Gainullina, E.O. Kukanova, S.A. Korban, I.B. Bezprozvanny
Laboratory of Molecular Neurodegeneration, Peter the Great St. Petersburg Polytechnic University, Russia

3. Creating of Adenoassociated Viral Vector for Expressing of Neurotrophic Factor BDNF in Neuronal Cells

E.A. Epifanova, E.V. Mitroshina, A.A. Babaev
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4. Metabolic Therapy in Post-Traumatic Period of Craniocerebral Trauma

A.V. Shumilova, A. V. Deryugina and G. A. Boyarinov
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5. Effort and Reward Based Decision Making in Individuals at High Risk of Depression

V. Samborska and J. Roiser

University College London, London, United Kingdom; University College London, London, United Kingdom

6. Complex Behavior in Cyclic Competition Bimatrix Games

C. Olszowiec

Departament de Fisica, Universitat Politecnica de Catalunya, Terrassa, Barcelona, Spain

7. The Implementation of the Cost-Effective and Adaptive Two-Photon Microscope for Neuroscience

A.V. Popov, M.S. Doronin, Y.V. Dembitskaya, A.V. Semyanov

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8. Studying on-off Firing Patterns in the Network of Coupled Hodgkin-Huxley Neurons in the Presence of Noise

P.M. Esir, A.Yu. Simonov, S.Yu. Gordleeva

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9. Two-Theta Neuron Model: Novel Phase Reduced Model Explored in Central Pattern Generators

A. Kelley and A. Shilnikov

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10. Development of a Method for the Estimation of Gap-Junctional Parameters

I. Falk and Y. Timofeeva

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11. Analytical and Numerical Study of Finite-Size-Induced Transitions to Synchrony in Oscillator Ensembles with Nonlinear Global Coupling

C. Gong and A. Pikovsky

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12. Whether the Motor Cortex Excitability Changes during Control of Phantom Hand Within P300-Based BCI Contour

N.V.Syrov, D.D.Zhigulskaya, D.A.Kirjanov, S.V.Borisov, A.Ya.Kaplan

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13. Is There a Connection between BCI Performance and the Neurophysiological Effects of Motor Imagery?

L.V. Yakovlev, A.N. Vasilyev, S.P. Liburkina and A.Y. Kaplan

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Pirogov National Russian Medical University, Moscow, Russia

14. Oscillations in Physiological Adaptation: Limit Cycles, Oscillating Death and Recovery

A. N. Gorban and T. A. Tyukina

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15. GDNF Influence on the Morpho-Structural Integrity of Hippocampal Neural Network in Hypoxia Modeling In Vitro

T.V. Shishkina, T.A. Mishchenko, E.V. Mitroshina, I.V. Mukhina, V.B. Kazantsev, M.V. Vedunova

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16. A Human-Computer Interface Based on Electromyography and Factors Limiting its Performance

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17. BCI Matrix Speller Based on Coded Visual Evoked Potentials

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