

PROGRAMME

of the International Symposium «Volga Neuroscience Meeting – 2018»

Sunday, July 22

	MOLECULAR AND CELLULAR NEUROSCIENCE	WORKSHOP SYSTEMS BIOLOGY AND AGE-RELATED DISEASES	WORKSHOP COGNITIVE NEUROSCIENCE	WORKSHOP NEUROREHABILITATION	WORKSHOP NEUROMORPHIC AND NEUROHYBRID SYSTEMS	NEURODYNAMICS AND ARTIFICIAL INTELLIGENCE
	Victor Tarabykin	Claudio Franceschi, Alexey Zaikin	Mikhail Lebedev, Vasiliy Klyucharev	Tatiana Bulova	Alexey Mikhaylov	Grigory Osipov, Andrey Shilnikov, Alexander Gorban
7:00 - 9:00	Registration					
9:00	Departure from Nizhny Novgorod					
9:00 - 10:00	<i>Breakfast</i>					
10:00 - 10:30	Opening remarks (Hall A) Evgeny Chuprunov , Rector, Lobachevsky State University of Nizhny Novgorod, Russia Victor Tarabykin , Director, Institute of Cell Biology and Neurobiology, Charité, Germany. Lobachevsky State University of Nizhny Novgorod, Russia Victor Kazantsev , Vice-Rector for Research, Lobachevsky State University of Nizhny Novgorod, Russia					
10:30 - 11:20	Plenary lecture (Hall A) COST-EFFICIENT TRADE-OFF IN NEURAL CONNECTIVITY AND ACTIVITY, Changsong Zhou , Hong Kong Baptist University, China					
11:20 - 11:40	<i>Coffee break</i>					

11:40 - 13:20	<p align="center">Plenary lecture (Hall A) 20 THINGS YOU DIDN'T KNOW ABOUT MEMRISTORS, Leon Chua, University of California, Berkeley, USA</p>		
13:30 - 14:30	<p align="center"><i>Lunch</i></p>		
15:00 - 17:00	<p align="center"><i>Makaryevo. Excursion</i></p>		
17:10 - 17:40	<p align="center">SECTION MOLECULAR AND CELLULAR NEUROSCIENCE (Hall A)</p> <p align="center"><i>Symposium 1 Stem cells and progenitors</i> <i>Chair: Victor Tarabykin</i></p>	<p align="center">WORKSHOP NEUROREHABILITATION (Hall B)</p>	<p align="center">SECTION NEURODYNAMICS AND ARTIFICIAL INTELLIGENCE (Hall C) <i>Chair: Eckehard Schoell</i></p>
	<p align="center">STEM CELL HETEROGENEITY IN THE ADULT BRAIN, François Guillemot, The Francis Crick Institute, UK</p>	<p align="center">EPTRI - EUROPEAN PAEDIATRIC TRANSLATIONAL RESEARCH INFRASTRUCTURE, Donato Bonifazi, Consorzio per Valutazioni Biologiche e Farmacologiche, Italy</p>	<p align="center">UNIFIED NEURAL NETWORK APPROACH TO COGNITIVE NAVIGATION AND CONTROL OF LIMBS, Valeri Makarov, UPM, Spain</p>
17:40 - 18:10	<p align="center">ENGINEERING NEUROGENESIS FOR THE POSTNATAL BRAIN, Benedikt Berninger, King's College London, UK</p>	<p align="center">OUR EXPERIENCE IN REHABILITATION OF PATIENTS WITH SPINAL CORD INJURY, Tatiana Bullova, Lobachevsky State University of Nizhny Novgorod, Russia</p>	<p align="center">CLASSIFYING BRAIN RESPONSES TO MOTOR IMAGERY BY ANALYZING MEG RECORDINGS, Alexander Pisarchik, SSTU, Russia</p>

18:10 - 18:40	<i>Symposium 1 Stem cells and progenitors</i> <i>Chair: Victor Tarabykin</i>	INSTRUMENTAL VERIFICATION OF MUSCLE WEAKNESS IDENTIFIED DURING MANUAL MUSCLE TESTING, Ludmila Vasiljeva , Russian Academy of Medical and Social Rehabilitation, Russia	MACROSCOPIC PHASE RESPONSE CURVES AND COHERENCE STATES OF INTER-COMMUNICATING GAMMA OSCILLATORY NEURAL CIRCUITS, Boris Gutkin , Ecole Normale Supérieure, France, Higher School of Economics, Russia
	MECHANISMS GENERATING CELL-TYPE DIVERSITY IN CEREBRAL CORTEX, Simon Hippenmeyer , Institute of Science and Technology, Austria		
18:40 - 19:10	MODIFIED GDNF HAS STIMULATED THE NEURAL DIFFERENTIATION OF PROGENITOR CELLS AND IT MAY BE USED IN THE TREATMENT OF PARKINSON'S DISEASE AND ISCHEMIC STROKE, Galina Pavlova , Institute of Gene Biology (IGB) of the Russian, Russia	CONSCIOUS START OF THE HEAD-NECK REFLEX IN THE RESTORATION OF INDIVIDUAL ANATOMICAL NORM OF BODY POSITION IN SPACE, Liliia Semashko , Cert IBMT, Russia	DYNAMIC MODES IN A NETWORK OF FIVE OSCILLATORS WITH INHIBITORY ALL-TO-ALL PULSE COUPLING , Vladimir Vanag , Immanuel Kant Baltic Federal University, Russia
19:10 - 19:40	GENES, BRAIN AND BEHAVIOR, Evgeny Rogaev , Moscow State University, Biological Department, School of Genetics, Russia	THE TECHNOLOGY OF THE REMOTE CONTROL A REHABILITATION PATIENTS AT THE EXOSKELETON, Liliana Dmitrieva , POMC FBSI "Volga district medical centre of Federal medico-biological agency of Russia", Russia	OSCILLATOR NETWORKS: COLLECTIVE DYNAMICS THROUGH GENERALIZED INTERACTIONS, Christian Bick , University of Exeter, UK
19:40 - 20:30	<i>Dinner</i>		
22:00	<i>Welcome party</i>		

8:00 - 9:00	<i>Breakfast</i>
9:00 - 9:50	<p>Plenary lecture (Hall A) DYNAMICS OF LARGE-SCALE EPILEPTIC BRAIN NETWORKS, Klaus Lehnertz, University of Bonn, Germany</p>
9:50 - 10:40	<p>Plenary lecture (Hall A) DECIPHERING HUMAN-SPECIFIC MECHANISMS OF NEUROGENESIS AND NEURONAL CIRCUIT FORMATION, Pierre Vanderhaeghen, Institute of Interdisciplinary Research (IRIBHM) University of Brussels ULB, Belgium</p>
10:40 - 11:00	<i>Coffee break</i>
11:00 - 11:30	<p>WORKSHOP SYSTEMS BIOLOGY AND AGE-RELATED DISEASES & SECTION NEURODYNAMICS AND ARTIFICIAL INTELLIGENCE (Hall A) <i>Chair: Claudio Franceschi</i></p>
	<p>THE BRAIN AS A COMPLEX NETWORK OF NETWORKS: WHERE IS CONSCIOUSNESS AND HOW TO DETECT IF SOMETHING GOES WRONG, Alexey Zaikin, University College London, UK</p>
11:30 - 12:00	<p>MULTIPLEXING NETWORKS: THE GAINS AND LOSSES OF SYNCHRONY, Mikhail Ivanchenko, Lobachevsky State University of Nizhny Novgorod, Russia</p>
12:00 - 12:30	<p>REGULATING EIGENVECTOR LOCALIZATION IN MULTILAYER NETWORKS BY OPTIMIZED SINGLE LAYER REWIRING, Sarika Jalan, Indian Institute of Technology Indore, India</p>
12:30 - 13:00	<p>SPATIOTEMPORAL EVOLUTION OF CORTICAL SPREADING DEPRESSION SIMULATED WITH REFRACTORY PERIOD EFFECT, Shangbin Chen, Huazhong University of Science and Technology, China</p>
13:00 - 14:00	<i>Lunch</i>

	SECTION MOLECULAR AND CELLULAR NEUROSCIENCE (Hall A) <i>Symposium 2 Connecting the brain</i> Chair: Simon Hippenmeyer	WORKSHOP SYSTEMS BIOLOGY AND AGE-RELATED DISEASES (Hall B) Chair: Shangbin Chen	SECTION NEURODYNAMICS AND ARTIFICIAL INTELLIGENCE (Hall C) Chair: Grigory Osipov
14:00 - 14:30	MOLECULAR CONTROL OF NEOCORTICAL PROJECTIONS, Victor Tarabykin, Charité-Universitätsmedizin Berlin, Germany, Lobachevsky State University of Nizhny Novgorod, Russia	CONTOUR INTEGRATION AND NOISE-INDUCED SYNCHRONIZATION IN THE VISUAL CORTEX, Ekkehard Ullner, University of Aberdeen, Scotland	CHIMERA STATES IN BRAIN NETWORKS AND APPLICATION TO EPILEPTIC SEIZURE, Eckehard Schoell, TU Berlin, Germany
14:30 - 15:00	NMDA RECEPTORS CONTROL FORMATION AND STABILITY OF CORTICAL SENSORY CIRCUITS, Samuel Pleasure, UCSF Institute for Regeneration Medicine, USA	TIME-LAPSE IMAGING FOR CALCIUM ACTIVITY ANALYSIS IN ASTROCYTES WITH AUTOMATIC VIDEO PROCESSING, Valentina Kustikova, Lobachevsky State University of Nizhny Novgorod, Russia	EXTREME EVENTS IN DELAY-COUPLED FITZHUGH-NAGUMO OSCILLATORS, Ulrike Feudel, Carl von Ossietzky University Oldenburg, Germany
15:00 - 15:30	NEURONAL CIRCUITS IN THE HINDBRAIN THAT CONTROL BREATHING AND VOCALIZATION, Carmen Birchmeier-Kohler, Max-Delbrück-Centrum for Molecular medicine, Germany	MULTI-SCALE ANALYSIS OF CO-EXPRESSION NETWORKS, Nuno Rocha Nene, University College London, UK	SYNCHRONIZATION OF COUPLED HINDMARSH-ROSE NEURONS BY TIME-DELAY USING ELECTRONIC CIRCUITS, Guillermo Huerta Cuellar, University of Guadalajara, México
15:30 - 16:00	SUPPRESSION OF INCONGRUOUS GUIDANCE SIGNALS IS REQUIRED FOR AXON PATHFINDING, Dario Bonanomi, San Raffaele Scientific Institute, Italy		
16:00 - 20:00	<i>Bolgary. Excursion</i>		
20:00 - 21:00	<i>Dinner</i>		
21:30	<i>Live music / DJ (Dance floor open)</i>		

8:00-9:00	<i>Breakfast</i>		
9:00 - 9:50	Plenary lecture (Hall A) AGING, LONGEVITY AND REJUVENATION, Claudio Franceschi , University of Bologna, Italy		
9:50 - 10:40	Plenary lecture (Hall A) BIOLOGICALLY PLAUSIBLE MODELS OF RHYTHM GENERATING CIRCUITS, Andrey Shilnikov , Georgia State University, USA		
10:40 - 11:00	<i>Coffee break</i>		
11:00 - 11:30	SECTION MOLECULAR AND CELLULAR NEUROSCIENCE (Hall A) <i>Symposium 2 Connecting the brain</i> <i>Chair: Simon Hippenmeyer</i>	WORKSHOP SYSTEMS BIOLOGY AND AGE-RELATED DISEASES (HALL B) <i>Chair: Alexey Zaikin</i>	SECTION NEURODYNAMICS AND ARTIFICIAL INTELLIGENCE (Hall C) <i>Chair: Valeri Makarov</i>
	MOLECULAR MECHANISMS OF INHIBITORY SYNAPSE DEVELOPMENT, Wei Lu , National Institutes of Health, USA	DIAGNOSIS OF OVARIAN CANCER BASED ON LONGITUDINAL MEASUREMENTS OF MULTIPLE BIOMARKERS, Ines Mariño , Universidad Rey Juan Carlos, Spain	DRAGON-KING-LIKE EXTREME EVENTS IN COUPLED BURSTING NEURONS, Tomasz Kapitaniak , Lodz University of Technology, Poland
11:30 - 12:00	BRAIN EXTRACELLULAR MATRIX FAILURE DEPENDENT CHANGES IN GENE EXPRESSION IN MICE HIPPOCAMPUS IN THE NEONATAL PERIOD OF ONTOGENESIS, Irina Mukhina , Lobachevsky State University of Nizhny Novgorod, Russia	PARENCLITIC NETWORKS APPLIED TO OVARIAN CANCER PREDICTION, Harry Whitwell , Imperial College London, UK	LONG-RANGE TEMPORAL CORRELATIONS IN RESTING-STATE BRAIN OSCILLATIONS ARE CORRELATED WITH BEHAVIORAL PARAMETERS IN A SELF-INITIATED MOVEMENT TASK, Zafer Iscan , NeuroSpin center, France

	<p><i>Symposium 3 Human brain: is there anything new?</i> <i>Chair: Samuel Pleasure</i></p>		
12:00 - 12:30	<p>WHAT UNDERLIES THE EVOLUTIONARY INCREASE IN THE PROLIFERATIVE POTENTIAL OF CORTICAL PROGENITORS? Nereo Kalebic, Max Planck Institute of Molecular Cell Biology and Genetics, Germany</p>	<p>COMPARISON OF LONGITUDINAL ALGORITHMS FOR THE EARLY DETECTION OF OVARIAN CANCER, Oleg Blyuss, Queen Mary University of London, UK</p>	<p>SYNCHRONIZATION OF SYSTEMS WITH MULTISTABLE VISUAL PERCEPTION BY DETERMINISTIC AND STOCHASTIC BROWNIAN NOISE, José Luis Echeausía Monroy, Centro Universitario de los Lagos, Universidad de Guadalajara, Mexico</p>
12:30 - 13:00	<p>HUMAN BRAIN ORGANIDS ON A CHIP TO STUDY DEVELOPMENT AND DISEASE, Orly Reiner, Weizmann Institute of Science, Israel</p>	<p>RIGOR MORTIS-LIKE PROCESS DURING ORGANISMAL DEATH IN C. ELEGANS, Evgeniy Galimov, University College London, UK</p>	<p>DYNAMICAL MECHANISMS OF HIGH FREQUENCY SPIKING OF A DOPAMINE NEURON, Denis Zakharov, IAP RAS, Russia</p>
13:00-14:30		<p>MOLECULAR PATHWAYS TO ALZHEIMER'S DISEASE, Evgeny Rogaev, Moscow State University, Biological Department, School of Genetics, Russia</p>	
13:00 - 14:00	<i>Lunch</i>		
14:00 - 18:00	<i>Samara. Excursion</i>		
19:00 - 20:00	<i>Dinner</i>		
20:00 - 21:30	Poster Session I		
21:30	<i>Live music / DJ (Dance floor open)</i>		

8:00 - 9:00	<i>Breakfast</i>		
9:00 - 9:50	Plenary lecture (Hall A) MODES OF DIVISION AND DIFFERENTIATION OF NEURAL STEM CELLS, Grigori Enikolopov, Stony Brook University, USA, Moscow Institute of Physics and Technology, Russia		
9:50 - 10:40	Plenary lecture (Hall A) MEMORY REGULATION, Pavel Balaban, Institute of Higher Nervous Activity and Neurophysiology of RAS, Russia		
10:40 - 11:00	<i>Coffee break</i>		
11:00 - 11:30	SECTION MOLECULAR AND CELLULAR NEUROSCIENCE (Hall A) <i>Symposium 3 Human brain: is there anything new?</i> <i>Chair: Samuel Pleasure</i>		SECTION NEURODYNAMICS AND ARTIFICIAL INTELLIGENCE (Hall C) <i>Chair: Changsong Zhou</i>
	HUMAN MIDBRAIN ORGANOIDs FOR IN VITRO MODELING OF PARKINSON'S DISEASE, Jens Christian Schwamborn, Luxembourg Centre for Systems Biomedicine (LCSB), Luxembourg		PATTERNS OF PERIODIC AND EVENTUALLY PERIODIC ORBITS OF A NEURON MODEL WITH A PERIODIC INTERNAL DECAY RATE, Michael Radin, Rochester Institute of Technology, USA
11:30 - 12:00	ORGANIZATION AND FUNCTION OF CORTICAL MICROCIRCUITS IN MOUSE AND HUMAN BRAIN, Huibert Mansvelder, CNCR, Neuroscience Campus Amsterdam, Netherlands		CHAOS AND RANDOMNESS IN NEURONIC SYSTEMS, W. L. Dunin-Barkowski, MIPT, Russia
12:00 - 12:30	A CELLULAR BASIS OF HUMAN INTELLIGENCE, Natalia Goriounova, Vrije Universiteit Amsterdam, Netherlands		CONVERSATIONAL AI, Mikhail Burtsev, MIPT, Russia

12:30 - 13:00	<p align="center"><i>Symposium 4 Disease models</i> <i>Chair: Patricia Salinas</i></p>		<p align="center">EXCITABILITY AND SYNCHRONIZATION OF PHASE-CONTROLLED NEURON-LIKE GENERATOR, Mikhail Mishenko, Lobachevsky State University of Nizhny Novgorod, Russia</p>
	<p align="center">SYNAPTIC DYSFUNCTION IS A LIKELY CAUSE OF COGNITIVE IMPAIRMENT IN CILIOPATHY, BARDET-BIEDL SYNDROME, Sophia Christou-Savina, University College London, UK</p>		
13:00 - 14:00	<p><i>Lunch</i></p>		
14:00 - 14:30	<p align="center">CALCINEURIN INHIBITION SUPPRESSES THE NEURONAL POTASSIUM-CHLORIDE COTRANSPORTER AND IMPAIRS THE NEURONAL CHLORIDE HOMEOSTASIS, Kerim Mutig, Charité-Universitätsmedizin Berlin, Germany</p>	<p align="center">WORKSHOP NEUROMORPHIC AND NEUROHYBRID SYSTEMS (Hall B) <i>Chair: Alexey Mikhaylov</i></p>	<p align="center">TBA, Alexey Kazakov, Lobachevsky State University of Nizhny Novgorod, Russia</p>
		<p align="center">POLYANILINE MEMRISTIVE DEVICES AND NEUROMORPHIC NETWORKS, Victor Erokhin, Kazan Federal University, Russia; CNR-IMEM, Italy</p>	
14:30 - 15:00	<p align="center">THALIDOMIDE ATTENUATES DEVELOPMENT OF MORPHINE DEPENDENCE IN MICE BY INHIBITING PI3K/AKT AND NITRIC OXIDE SIGNALING PATHWAY, Muhammad Imran Khan, Department of Pharmacy, Kohat University of Science and Technology, Pakistan</p>	<p align="center">THE FIRST STEPS TOWARDS REALIZATION OF SPIKING NEURAL NETWORKS ON NANOCOMPOSITE MEMRISTORS, Vyacheslav Demin, Kurchatov Institute, Russia</p>	<p align="center">PERSONALIZED MATHEMATICAL MODELS OF HUMAN CARDIOMYOCYTES ELECTROPHYSIOLOGY, Roman Syunyuev, MIPT, Russia</p>

<p>15:00 - 15:30</p>	<p><i>Symposium 5 Ion channels and currents</i> <i>Chair: Christine R. Rose</i> <i>Co-chair: Matteo Bergami</i></p>	<p>ORGANIC NEUROMORPHIC DEVICES FOR BIO-INSPIRED INFORMATION PROCESSING, Paschalis Gkoupidenis, Max Planck Institute for Polymer Research, Germany</p>	
<p>15:30 - 16:00</p>	<p>SODIUM SIGNALLING IN ASTROCYTES AND ASTROCYTE NETWORKS, Christine R. Rose, Institute of Neurobiology Heinrich Heine University Duesseldorf, Germany</p>	<p>SELF-LEARNING ROBOT CONTROLLED BY STDP-DRIVEN NEURAL NETWORK, Sergey Lobov, Lobachevsky State University of Nizhny Novgorod, Russia</p>	
<p>16:00 - 19:30</p>	<p><i>Kazan. Excursion</i></p>		
<p>19:30 - 20:30</p>	<p><i>Dinner</i></p>		
<p>20:30 - 22:30</p>	<p><i>Excursion Night tour of Kazan</i></p>		

Thursday, July 26

8:00 - 9:00	<i>Breakfast</i>		
9:00 - 9:50	Plenary lecture (Hall A) DEFICIENT WNT SIGNALLING TRIGGERS SYNAPTIC PLASTICITY DEFECTS AND SYNAPSE DEGENERATION: IMPLICATIONS IN ALZHEIMER'S DISEASE, Patricia Salinas, University College London, UK		
10:00	<i>Departure from Kazan</i>		
10:00 - 10:30	SECTION MOLECULAR AND CELLULAR NEUROSCIENCE (Hall A) <i><u>Symposium 5 Ion channels and currents</u></i> <i>Chair: Christine R. Rose</i> <i>Co-chair: Matteo Bergami</i>	WORKSHOP NEUROMORPHIC AND NEUROHYBRID SYSTEMS (Hall B) <i>Chair: Victor Erokhin</i>	WORKSHOP COGNITIVE NEUROSCIENCE (Hall C) <i>Chair: Anna Shestakova</i>
	PRESYNAPTIC KV7 CHANNEL FUNCTION IN HIPPOCAMPAL MOSSY FIBER BOUTONS, Mala Shah, University College London, UK	METAL-OXIDE MEMRISTIVE DEVICES FOR NEUROMORPHIC AND NEUROHYBRID SYSTEMS, Alexey Mikhaylov, Lobachevsky State University of Nizhny Novgorod, Russia	NEURAL DECODING: ACCOUNTING FOR OVERT BEHAVIORS, PLASTICITY AND INFORMATION TRANSFER RATE, Mikhail Lebedev, Duke University, USA Higher School of Economics, Russia
10:30 - 11:00	DIFFUSION OF SODIUM SIGNALS IN SPINY DENDRITES OF THE MOUSE BRAIN, Karl Kafitz, Heinrich Heine University Düsseldorf, Germany	MEMRISTIVE SPINAL CORD SEGMENT PROSTHESIS, Max Talanov, Kazan Federal University, Russia	ROLE OF OSCILLATIONS IN CONTROL OF WORKING MEMORY DYNAMICS, Boris Gutkin, Ecole Normale Supérieure, France, Higher School of Economics, Russia
11:00 - 11:30	<i>Coffee break</i>		

11:30 - 12:00	<p><i>Symposium 5 Ion channels and currents</i> <i>Chair: Christine R. Rose</i> <i>Co-chair: Matteo Bergami</i></p>	<p><i>Chair: Paschalis Gkoupidenis</i></p>	<p>TRANSCRANIAL OSCILLATORY POTENTIALS OF THE HUMAN MOTOR SYSTEM, Matteo Feurra, Higher School of Economics, Russia</p>
	<p>A ROLE FOR MFN2 IN ASTROCYTE PERIVASCULAR REPAIR FOLLOWING BRAIN INJURY, Matteo Bergami, CECAD Research Center University Hospital Cologne, Germany</p>	<p>PHOTOMEMRISTORS BASED ON GRAPHENE/2D CRYSTALS FOR INTERFACING ARTIFICIAL ELECTRONIC NEURAL NETWORKS AND NATURAL NEURONS, Gennady Panin, Dongguk University, Korea; Institute for Microelectronics Technology and High Purity Materials RAS, Russia</p>	
12:00 - 12:30	<p><i>Symposium 6 New technologies in Neuroscience</i> <i>Chair: François Guillemot</i></p>	<p>GRAPHENE MATERIAL FOR NEUROMORPHIC AND NEUROHYBRID SYSTEMS, Panagiotis Dimitrakis, NCSR “Demokritos”, Greece</p>	<p>ELECTROPHYSIOLOGICAL ACTIVITY OF THE CEREBRAL CORTEX IN CHILDREN WITH ARTHROGRYPOSIS, Evgeny Blagovechtchenski, Higher School of Economics, Russia</p>
	<p>NEW SYNTHETIC BIOLOGY APPROACHES IN NEUROSCIENCE: THERMOGENETICS AND METABOLIC ENGINEERING, Vsevolod Belousov, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Russia</p>		
12:30 - 13:00	<p>MICROELECTRODE ARRAY WITH MICROTUNNEL STRUCTURES FOR RECORDING AXON CONDUCTION FROM NEURONAL NETWORKS, Kenta Shimba, The University of Tokyo, Japan</p>	<p>NANOMATERIALS BASED THIN FILM MEMRISTORS AND THEIR POTENTIAL APPLICATION IN NEUROMORPHIC SYSTEMS, Natasa Samardzic, University of Novi Sad, Serbia</p>	<p>CONSCIOUSNESS AND VOLITION AS OBSTACLES AND AS GOALS IN HUMAN-MACHINE INTERACTION, Sergei Shishkin, NRC Kurchatov Institute, Russia</p>
13:00 - 14:00	<p><i>Lunch</i></p>		

	<i>Symposium 6 New technologies in Neuroscience</i> <i>Chair: François Guillemot</i>	<i>Chair: Gennady Panin</i>	ACTION IN AUCTIONS: NEURAL AND COMPUTATIONAL LEARNING MECHANISMS OF REPEATED BIDDING Vasily Klucharev , Higher School of Economics, Russia
14:00 - 14:30	DIFFRACTION-UNLIMITED OPTICAL IMAGING FOR SYNAPTIC PHYSIOLOGY, Johann Danzl , Institute of Science and Technology, Austria	CHARGE TRANSPORT MECHANISM AND TRAP NATURE IN MEMRISTORS BASED ON HIGH-K DIELECTRICS, Vladimir Gritsenko , A.V. Rzhanov Institute of Semiconductor Physics SB RAS, Russia	
14:30 - 15:00	SUBCELLULAR RESOLUTION NEURAL CIRCUIT IMAGING IN TRANSLUCENT MOUSE BRAINS: IMPLICATIONS FOR ASSESSING THE SUITABILITY OF NEURAL TRANSPLANTS FOR RESTORING NEURONAL FUNCTION, Martin K. Schwarz , University Of Bonn Medical Faculty, Germany	DESIGNING MEMRISTOR-BASED NEURAL NETWORKS WITH SPECIFIED FAULT TOLERANCE, Sergei Shchanikov , The Stoletovs Vladimir State University, Russia	
15:00 - 15:30		MEMRISTIVE DEVICES AND SYSTEMS FABRICATED BY LbL TECHNIQUE, Svetlana Erokhina , Kazan Federal University, Russia	
15:30 - 19:30	<i>Sviyazhsk. Excursion</i>		
19:30 - 20:30	<i>Dinner</i>		
20:30 - 22:00	Poster Session II		
22:00	<i>Banquet</i>		

8:00 - 9:00	<i>Breakfast</i>
9:00 - 9:50	Plenary lecture (Hall A) TARGETING OLFACTION, Peter Mombaerts , Max Planck Research Unit for Neurogenetics
9:50 - 10:40	Plenary lecture (Hall A) NEUROSCIENCE AND SOCIAL SCIENCE: THE GROWING LINK, Vasily Klucharev , Higher School of Economics, Russia
11:00 - 11:30	<i>Coffee break</i>
11:30 - 12:20	Plenary lecture (Hall A) INTEGRATION OF REWARDS AND BELIEFS IN HUMAN DECISION-MAKING, Etienne Koechlin , Ecole Normale Supérieure, France
12:20 - 12:50	Plenary lecture (Hall A) PROMINENT TOPICS IN NEUROSCIENCE RESEARCH, Anton Degtev , Research Intelligence Solutions Manager, Elsevier
12:50 - 13:30	Round table (Hall A) <i>Chair: Victor Kazantsev</i>
13:30 - 14:30	<i>Lunch</i>
14:30 - 16:00	Closing session (Hall A)
16:00	<i>Arrival to Nizhny Novgorod</i>
16:00 - 22:00	Departure of participants
17:00 - 18:00	Visit to the laboratories of the Institute of Neuroscience, Lobachevsky State University

Poster Session I

1. EEG POTENTIALS RELATED TO MOVING OBJECT SELECTION WITH GAZE: A POSSIBLE BASIS FOR MORE FLEXIBLE EYE-BRAIN-COMPUTER INTERFACES

Darisiy Zhao, NRC “Kurchatov Institute”, Russia

2. SPACE-TIME-FREQUENCY FEATURES AND THE CONVOLUTIONAL-LSTM NEURAL NETWORK FOR CLASSIFYING EEG SIGNALS IN AN EYE-BRAIN-COMPUTER INTERFACE

Alena Moskalenko, NRC “Kurchatov Institute”, Russia

3. CLASSIFYING SHORT EEG EPOCHS WITH A COMPACT CONVOLUTIONAL NEURAL NETWORK

Bogdan Kozyrskiy, NRC “Kurchatov Institute”, Russia

4. EFFECT OF MOTOR IMAGINARY BRAIN-COMPUTER INTERFACE WITH VIBRO-TACTILE FEEDBACK ON CORTICOSPINAL EXCITABILITY IN HEALTHY ADULTS

Maksim Lukovanov, Lobachevsky State University of Nizhny Novgorod, Russia

5. TESTING EEG-BASED MOTOR IMAGERY BRAIN-COMPUTER INTERFACE WITH TACTILE FEEDBACK IN PEOPLE AFTER STROKE

Andrei Savosenkov, Lobachevsky State University of Nizhny Novgorod, Russia

6. TACTILE AND VISUAL FEEDBACK INFLUENCE ON OPERATOR'S MOTOR IMAGERY SKILL IN BRAIN-COMPUTER INTERFACE

Nikita Grigor`ev, Lobachevsky State University of Nizhny Novgorod, Russia

7. ADAPTIVE BEHAVIOR OF MEMRISTIVE DEVICE STIMULATED BY NEURON-LIKE SIGNAL

Svetlana Gerasimova, Lobachevsky State University of Nizhny Novgorod, Russia

8. BRAIN-COMPUTER INTERFACE FOR EVALUATING PSYCHOPHYSIOLOGICAL STATE

Andrey Andreev, Yuri Gagarin State Technical University of Saratov, Russia

9. INTEGRATED INFORMATION IN COUPLED GENETIC REPRESSILATORS

Luis Abrego, University College London, UK

10. COMPARISON OF BRAIN FUNCTIONAL CONNECTIVITY ESTIMATION ON SENSOR AND SOURCE LEVELS

Anna Tabueva, Higher School of Economics, Russia

11. ASTROCYTE-INDUCED SYNCHRONIZATION IN NEUROGLIAL NETWORKS

Anastasia Ermolaeva, Lobachevsky State University of Nizhny Novgorod, Russia

12. CHAOTIC NEURON-LIKE ACTIVITY IN THE ENSEMBLE OF FITZHUGH-NAGUMO ELEMENTS WITH WEAK EXCITATORY COUPLINGS

Alexander Korotkov, Lobachevsky State University of Nizhny Novgorod, Russia

13. COMPARISON OF TWO METHODS OF IDENTIFICATION OF CHARACTERISTIC FEATURES FOR THE BRAIN-MACHINE INTERFACE CLASSIFIER OF THE MOTOR-IMAGINARY TYPE WITH VIBROTACTILE FEEDBACK SYSTEMS ON PATIENTS WITH POST-STROKE BRAIN DAMAGE

Julia Lotareva, Lobachevsky State University of Nizhny Novgorod, Russia

14. ADAPTATION OF THE NEURONS IN THE CRAB STOMATOGASTRIC GANGLION TO CHANGES IN EXTRACELLULAR POTASSIUM CONCENTRATION

Ekaterina Morozova, Brandeis University, USA

15. WM-CLICK, A NEW METHOD FOR 3D DETECTION, REPRESENTATION AND ANALYSIS OF DIVIDING CELLS IN THE WHOLE BRAIN

Alexander Lazutkin, Moscow Institute of Physics and Technology, Russia

16. A CLOSER LOOK AT THE TOPOGRAPHY OF HIPPOCAMPAL NEURAL STEM CELLS INDICATES THEIR LIMITED SELF-RENEWAL

Olga Mineyeva, Moscow Institute of Physics and Technology, Russia

17. UBIQUITIN-PROTEASOME-DEPENDENT REGULATION OF COFILIN LEVEL IN THE NERVE CELLS

Vladimir Pershin, Lobachevsky State University of Nizhny Novgorod, Russia

18. THE STUDY OF PECULIARITIES IN MORPHOLOGY AND FUNCTIONAL ACTIVITY OF PRIMARY HIPPOCAMPAL CULTURES OBTAINED FROM 5XFAD MOUSE EMBRYOS IN ALZHEIMER'S DISEASE MODEL

Viktoriya Krut`, Lobachevsky State University of Nizhny Novgorod, Russia

19. ADENO-ASSOCIATED VIRAL EXPRESSION OF BDNF IN PRIMARY NEURONAL CULTURE

Mary Gavrish, Lobachevsky State University of Nizhny Novgorod, Russia

20. AXON GROWTH AND NAVIGATION MONITORING USING MICROFLUIDIC AND ELECTROPHYSIOLOGY METHODS

Oksana Antipova, Lobachevsky State University of Nizhny Novgorod, Russia

21. MICROFLUIDIC AND MICROPRINTING METHODS TO STUDY AXON NAVIGATION AND AXO-AXONAL INTERACTIONS IN VITRO

Arseniy Gladkov, Lobachevsky State University of Nizhny Novgorod, Russia

22. MICROFLUIDIC CHIP DESIGN TO STUDY AXO-AXONAL INTERACTIONS AND NAVIGATION

Yana Pigareva, Lobachevsky State University of Nizhny Novgorod, Russia

23. LYNX1, AN ENDOGENOUS NICOTINIC RECEPTOR MODULATOR, COMPENSATES IMPAIRED SYNAPTIC PLASTICITY DUE TO A β 1-42

Natalia Vasilyeva, Lomonosov Moscow State University, Moscow, Russia

24. CREATION OF VIRAL DESIGN, CARRYING GENE GLYNAL NEUROTROPHIC FACTOR (GDNF)

Viktoriya Turubanova, Lobachevsky State University of Nizhny Novgorod, Russia

Poster session II

1. NEUROMORPHIC OPTOELECTRONIC INTERFACE FOR HIPPOCAMPAL NEURONS STIMULATION

Svetlana Gerasimova, Lobachevsky State University of Nizhny Novgorod, Russia

2. REDOX PROCESSES IN NEUROMORPHIC MEMRISTIVE SYSTEMS BASED ON GRAPHENE

Olesya Kapitanova, Lomonosov Moscow State University, Russia

3. NOVEL PERSONALISED MACROPOROUS BIODEGRADABLE CONDUCTIVE HYDROGEL SCAFFOLDS VIA ADDITIVE MANUFACTURING FOR NERVOUS REGENERATION

Pavel Evdokimov, Lomonosov Moscow State University, Russia

4. SELF-ORGANIZING MAPS OF FOREARM MUSCLES MYOGRAPHIC PATTERNS GENERATED BY WRIST MOVEMENTS

Maxim Shamshin, Lobachevsky State University of Nizhny Novgorod, Russia

5. EXPERIMENTAL INVESTIGATION OF HARDWARE NEURON MODEL

Denis Bolshakov, Lobachevsky State University of Nizhny Novgorod, Russia

6. ASTROCYTE REGULATION OF POSTSYNAPTIC CELLULAR ACTIVITY IN NEUROGLIAL NETWORKS

Alena Kalyakulina, Lobachevsky State University of Nizhny Novgorod, Russia

7. NETWORK EPIGENETIC CLASSIFIERS FOR CANCER

Igor Yusipov, Lobachevsky State University of Nizhny Novgorod, Russia

8. QUASISTATIONARY OSCILLATIONS IN GAME-DRIVEN EVOLUTIONARY DYNAMICS

Olga Vershinina, Lobachevsky State University of Nizhny Novgorod, Russia

9. SYNCHRONIZATION IN MODEL NEURON-GLIAL MULTIPLEX NETWORKS: ROLE OF NETWORK TOPOLOGY

Sergey Makovkin, Lobachevsky State University of Nizhny Novgorod, Russia

10. COHERENT RESONANCE IN THE BRAIN UNDER VISUAL PERCEPTION

Andrey Andreev, Yuri Gagarin State Technical University of Saratov, Russia

11. THE IMPACT OF ELECTRICAL COUPLINGS ON THE DYNAMICS OF DISCRETE NEURON-LIKE ELEMENTS

Tatiana Levanova, Lobachevsky State University of Nizhny Novgorod, Russia

12. COMPUTATIONAL METHOD FOR NEUROPHYSIOLOGICAL DATA PROCESSING USING NVIDIA CUDA TECHNOLOGY

Daniil Kirsanov, Yuri Gagarin State Technical University of Saratov, Russia

13. BRAIN-COMPUTER INTERFACE FOR RECOGNITION OF BRAIN ACTIVITY IN IMAGINED MOVEMENTS USING AN ARTIFICIAL NEURAL NETWORK
Vladimir Nedaivozov, Yuri Gagarin State Technical University of Saratov, Russia
14. HYPERBOLIC CHAOS IN COUPLED FITZHUGH-NAGUMO MODEL NEURONS WITH ALTERNATING EXCITATION OF RELAXATION SELF-OSCILLATIONS
Vyacheslav Kruglov, Saratov Branch IRE RAS, Russia
15. TWO BZ-OSCILLATORS CONNECTED VIA BOTH DIFFUSIVE AND PULSATILE COUPLING
Dmitry Safonov, Saratov Branch IRE RAS, Russia
16. CHIMERA STATES IN A NONLINEARLY COUPLED OSCILLATORY NETWORK
Maxim Bolotov, Lobachevsky State University of Nizhny Novgorod, Russia
17. MODELING RHYTHM GENERATION IN SWIM CENTRAL PATTERN GENERATOR OF MELIBE LEONINA
Deniz Alacam, Georgia State University, USA
18. DYNAMICAL TOOLS FOR CPG MODELLING FEATURING DENDRONOTUS IRIS
James Scully, Georgia State University, USA
19. STOCHASTIC TOROIDAL BURSTING IN HINDMARSH-ROSE MODEL
Evdokia Slepukhina, Ural Federal University, Russia
20. FAST LEARNING OF COMPLEX BEHAVIORS FROM DEMONSTRATION IN NEURAL NETWORKS
Carlos Calvo Tapia, Universidad Complutense de Madrid, Spain
21. AXONAL CONDUCTION DELAYS CAN ENHANCE FORMATION OF UP AND DOWN STATES IN SPIKING NEURAL NETWORKS
Pavel Esir, Lobachevsky State University of Nizhny Novgorod, Russia
22. NONLINEAR DYNAMICS IN THE TWO-DIMENSIONAL MATHEMATICAL MODEL OF THE EXTRACELLULAR MATRIX OF THE BRAIN
Sergey Stasenko, Lobachevsky State University of Nizhny Novgorod, Russia
23. INTERNEURONAL HETEROGENEITY IN THE CORTEX SHAPES NETWORK DYNAMICS AND FUNCTIONAL STATES
Ivan Lazarevich, Lobachevsky State University of Nizhny Novgorod, Russia
24. BEHAVIORAL CHARACTERIZATION OF TWO MOUSE LINES RESULTING FROM ENU-INDUCED MUTAGENESIS
Natalia Zhidkova, Lobachevsky State University of Nizhny Novgorod, Russia