June 26 (Thursday)

Time	Small Hall	Time	Exhibition Centre	Time	Music hall
09:00 – 13:00	**BGRS-2014. Genomics and epigenetics** *Chairpersons:* *Prof. Y. Ruan, The Jackson Laboratory, USA* *Prof. E. Prokhortchouk, National Research Center "Kurchatov Institute", Moscow, Russia* *G. Li, Huazhong Agricultural University, China*	09:00 – 13:00	**MM-HPC-2014. High performance computing and software tools for bioinformatics and biomedicine** *Chairpersons:* *Prof. B.M. Glinskiy, D.A. Voronov, Institute of Computational Mathematics and Mathematical Geophysics SB RAS; Y.L. Orlov, ICG SB RAS, Novosibirsk, Russia*	09:00 – 13:00	**School SBB-2014. Section "Gene networks modeling and supercomputing"**
9.00-9.25	**V.N. Babenko** Center of neurobiology and neurogenetics, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia **Transposons vs genes: survival strategies?**	09:00-09:30	B.G. Mikhailenko, B.M. Glinskiy, **N.V. Kuchin**, I.G. Chernykh ICM&MG SB RAS, Novosibirsk, Russia **Siberian Supercomputer Center as a service for bioinformatics** **KEYNOTE TALK**	09:00-09:30	*Recommended to attend:* B.G. Mikhailenko, B.M. Glinskiy, **N.V. Kuchin**, I.G. Chernykh **Siberian Supercomputer Center as a service for bioinformatics** **KEYNOTE TALK**
9:25-9:45	**I.V. Antonov**, A.V. Marakhonov, A. Baranova, M.Y. Skoblov Research Centre for Medical Genetics RAMS, Moscow, Russia **Prediction of antisense RNA-RNA interactions in animal cells**	09:30-09:50	**N.N. Nikitina**, E.E. Ivashko, Y. Gupta, R. Ludwig, S. Möller University of Lübeck, Department of Dermatology, Germany; Institute of Applied Mathematical Research, Karelian Center of the RAS, Petrozavodsk, Russia **BOINC-based desktop GRID infrastructure for virtual drug screening**	09:35-11:00	**R. Hofestädt** Bielefeld University, Germany **Petri net modeling and simulation of metabolic pathways**
9:45-10:05	**C.K. Mitra**, A.K. Meena School of Life Sciences, University of Hyderabad, Hyderabad, India **Association between microRNA and UTRs from human tlr genes**	09:50-10:10	**I.G. Chernykh**, S.I. Kabanikhin, D.A. Voronov Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia **CHEMPAK software package: numerical modeling of direct and inverse pharmacokinetics problems**		
10:05-10:25	**A.T. Ivashchenko**, O.A. Berillo, A.Y. Pyrkova, R.E. Niyazova, S.A. Atambayeva National Nanotechnology Laboratory, Al-Farabi KazNU, Almaty, Kazakhstan **The features of binding sites of MIR-619-5P, MIR-5095, MIR-5096 and MIR-5585-3P in the mRNAS of human genes**	10:10-10:30	**I.V. Protsyuk**[1,2], G.A. Grekhov, A.V. Tiunov, M.Y. Fursov [1]Novosibirsk State University, [2]Center of Information Technologies "UniPro", Novosibirsk, Russia SHARED BIOINFORMATICS DATABASE WITHIN UNIPRO UGENE		

10:25-10:55	**E. Prokhortchouk** National Research Center "Kurchatov Institute"; Center of Bioengineering, RAS, Moscow, Russia Ancient DNA: genome and epigenome **KEYNOTE TALK**	10:30-10:50	**I.V. Afanasyev** Institute of Computational Mathematics and Mathematical Geophysics SB RAS **Application of cellular automata for investigation of pollution influence on Macrohectopus and Comephorus population in the lake Baikal**		

10:55-11:15	**Coffee break**

11:15-11:35	**P.B. Natalin** Genetic Analysis Team Leader, Genetic Medical & Applied Sciences, Life Sciences Solutions, Thermo Fisher Scientific, Moscow, Russia **ION Torrent™ platform in 2014: technology and applications**	11:15-11:45	**I. V. Oseledets** Skolkovo Institute of Science and Technology; Institute of Numerical Mathematics RAS, Moscow, Russia **Numerical methods for high-dimensional problems in biology** **KEYNOTE TALK**	11:15-11:35	*Recommended to attend:* **I. V. Oseledets** Moscow, Russia **Numerical methods for high-dimensional problems in biology** **KEYNOTE TALK**
11:35-11:55	G. St.Laurent, D. Shtokalo, M.R. Tackett, S. Nechkin, D. Antonets, **Yu. Vyatkin**, Y.A. Savva, P. Kapranov, C.E. Lawrence, and R.A. Reenan St.Laurent Institute, Cambridge, USA; AcademGene LLC, Novosibirsk, Russia. **Whole genome analysis of A-to-I Rna editing using single molecule sequencing in Drosophila**	11:45-12:00	**D. Petunin** Intel Corp. **Intel® Cilk™ plus – data parallelizm and vectorization in C/C++ programs**		
11:55-12:15	**K.V. Gunbin**, K.Y. Popadin Center of neurobiology and neurogenetics, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia **5' and 3' breakpoints of mtDNA deletions show drastic differences in dinucleotide properties**	12:00-12:20	Z.S.Mustafin, **S.A. Lashin** ICG SB RAS; Novosibirsk State University, Novosibirsk, Russia **High performance computing simulation of evolutionary processes in bacterial communities**		
12:15-12:50	**A.V. Nedoluzhko,** E.S. Boulygina, A.S. Sokolov, S.V. Tsygankova, M. Schubert, N.M. Gruzdeva, A.D. Rezepkin, L. Orlando, E.B. Prokhortchouk National Research Center "Kurchatov Institute", Moscow, Russia *De novo* **assembly of the mitochondrial genome of ~5000-year-old human from North Caucasus** **KEYNOTE TALK**	12:20-12:40	**A.A. Danilov**, V.K. Kramarenko, V.Yu. Salamatova, A. S. Yurova Institute of Numerical Mathematics RAS, Moscow, Russia **High resolution computational models for bioelectric impedance analysis**	12:15-12:50	*Recommended to attend:* **A.V. Nedoluzhko** et al. National Research Center "Kurchatov Institute", Moscow, Russia *De novo* **assembly of the mitochondrial genome of ~5000-year-old human from North Caucasus** **KEYNOTE TALK**
		12:40-13:00	T.S. Troeglazova, D.Ja. Baishibaev, **A.V. Penenko**, S.V. Nikolaev, U. Zubairova ICM&MG SB RAS **On a parallel algorithm for morpho-gene diffusion-reaction processes simulation on a 2D cell ensemble**		

13:00-14:00 **Lunch**					
14:00-17:50	**BGRS-2014. Genomics and epigenetics** *Chairpersons: Prof. Y. Ruan, The Jackson Laboratory, USA Prof. E. Prokhortchouk, National Research Center "Kurchatov Institute", Moscow, Russia G.Li, Huazhong Agricultural University, China*	14:00-18:05	**MM-HPC-2014. Hemodynamics and tomography** *Chairpersons: Dr. M.A. Shishlenin, N.S. Novikov, Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia*	14:00-17:40	**School SBB-2014. Presentations by young scientists**
14:00-14:35	R.V. Chereji, T.-W. Kan, V.P. Guryev, A.V. Morozov, **Y.M. Moshkin**[1,2] [1]Erasmus Medical Center, Rotterdam, the Netherlands; [2]Center of Genetic Resources, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia **Biophysical principles guiding nucleosome positioning** *in vivo*	14:00-14:30	**A.P. Chupakhin,** A. Cherevko, A. Khe, A.Chebotnikov, A. Krivoshapkin, K. Orlov, V. Panarin Lavrentyev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia **Comprehensive study of hemodynamics of cerebral vessels in the presence of pathologies** **KEYNOTE TALK**	14:00-14:20	**A. Barlukova**, S. Honoré, F. Hubert, M. Petit Aix-Marseille University, France **Dynamic instabilities of microtubules**
14:35-14:55	**D. Zharkov** SB RAS Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia **5-methylcytosine and DNA oxidation: at the crossroads of epigenetics, DNA damage, and DNA repair**	14:30-14:50	**A.V**. **Mikhailova**, A.A. Cherevko, A.P. Chupakhin, A.L. Krivoshapkin, K.Y. Orlov Novosibirsk State University, Russia **Identification of based on experimental clinical data hemodynamic model**	14:20-14:40	**A.A. Igolkina,** M.G. Samsonova Petersburg State Polytechnical University **Method to predict thepercentage of cell types in human blood**
14:55-15:15	**D.Y. Oschepkov**, V.G. Levitsky, I.V. Kulakovskiy, N.I. Ershov, V.J. Makeev, T.I. Merkulova Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia **Experimentally verified transcription factor binding sites models applied for computational analysis of ChIP-seq data**	14:50-15:10	A.A. Cherevko, A.P. Chupakhin, A.K. Khe, E.A.Vorontsova, **Y.A. Fedorova**, A.L. Krivoshapkin, P.A. Seleznev Lavrentyev Institute of Hydrodynamics SB RAS **Unsteady hemodynamic simulation of the brain's vascular system with aneurysms**	14:40-15:00	**A. Vitvitsky** Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia **Computer simulation of self-organization in the bacterial Mincde system**
15:15-15:35	T. Subkhankulova, **F. Naumenko** Imperial College, London, UK **Is the single cell ChIP-seq technique possible?**	15:10-15:30	**A.I. Konokhova,** K.V. Gilev, D.I. Strokotov, M.A. Yurkin, V.P. Maltsev Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia **The solution of the inverse light-scattering problem for precise morphological characterization of milk fat globules**	15:00-15:20	**T. Gamilov** Moscow Institute of Physics and Technology, Dolgoprudnyy, Russia **1D modelling of different time regimes of enhanced external counterpulsation**

15:35-15:55	**M. Djordjevic** Institute of Physiology and Biochemistry, University of Belgrade, Faculty of Biology, Belgrade, Serbia **A biophysical approach to bacterial transcription start site prediction**	15:30-15:50	**T.K. Dobroserdova** Institute of Numerical Mathematics RAS, Moscow, Russia **Numerical simulation of blood flow in the vascular network with pathologies or implants**	15:20-15:40	**A. Gurkov**, E.M. Kondratyeva, D.S. Bedulina Institute of Biology at Irkutsk State University, Irkutsk, Russia **IMAGEJ addon for 2D electrophoresis gel analysis**
15:55-16:15	Coffee break				
16:15-16:35	**S.V. Dzhenin** Limited Liability Company Eppendorf, Russia **Influence of consumables on quality and precision of experiments**	16:15-16:45	**A.V. Kel'manov** Sobolev Institute of Mathematics SB RAS, Novosibirsk, Russia **On some analysis, recognition and classification problems of biometrical sequences in a connection with combinatorial optimization problems** KEYNOTE TALK	16:15-16:35	**U. Gusev**, M.I. Chumakov Institute of Biochemistry and Physiology of Plants and Microorganisms RAS, Saratov, Russia **Evaluation of Vire2-complexes by molecular dynamic methods**
16:35-16:55	G.G. Krutinin, E.A. Krutinina, S.G. Kamzolova, **A.A. Osypov** Laboratory of Cell Genome Functioning, Institute of Cell Biophysics of RAS, Pushchino MR, Russia **Electrostatic properties of bacteriophage Lambda genome and its elements: virus vs host**	16:30-16:45	**T.M. Gamilov**, S.S. Simakov Moscow Institute of Physics and Technology, Dolgoprudny, Russia **1D modelling of different time regimes of enhanced external counterpulsation**	16:35-16:55	**A. Katugina**, U.F. Kartavtsev Institute of Marine Biology FEB RAS, Vladivostok, Russia **Comparative genetic analysis of three species of the genus Tribolodon (Cyprinidae, Cypriniformes) based on sequence data of mitochondrial DNA CO-1 gene**
16:55-17:15	**A.A. Ryasik**, A.A. Grinevich, L.V. Yakushevich Institute of Cell Biophysics RAS, Pushchino, Russia **Dynamics of nonlinear conformational excitations in functional regions of pttq18 plasmid**	16.45-17.05	**Y.A. Ivanov**, R. Pryamonosov Institute of Numerical Mathematics RAS, Moscow, Russia **Patient specific reconstruction of vascular network for hemodynamic modeling**	16:40-17:00	**L.A. Krasnobaeva**, L.V. Yakushevich Siberian State Medical University, Tomsk, Russia **Rotational dynamics of bases in the gene coding interferon alpha 17 (IFNA17)**
17:15-17:35	**G. Li** Huazhong Agricultural University, China **Chromatin interaction analysis and transcription models from RNAPII ChIA-PET data**	17.05-17.25	**A.E. Moskalensky**, D.I. Strokotov, M.A. Yurkin, V.P Maltsev Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia **Characterization of blood platelets solving the inverse light-scattering problem with pre-computed interpolating set**	17:00-17:20	**E. Kulakova** Novosibirsk State University, Russia **Computer data analysis of genome sequencing by technology ChIP-seq and Hi-C**

17:35-17:50	**A. Verner** Bio-Rad Laboratories, Moscow **Getting sophisticated: new approaches, trends and developments for DDPCR**	17.25-17.45	**A.Ye. Medvedev** Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia **Equation of state of blood flows in small vessels**	17:20-17:40	**K. Korla** School of Life Sciences, University of Hyderabad, India **Kinetic simulation of mitochondrial shuttles**
18:00-19:00	Foyer of Small Hall (House of Scientists SB RAS) POSTER SESSION	17.45-19.00	Auditorium near Conference HALl in the Exhibition Centre SB RAS POSTER SESSION		