

NEC'2015

XXV International Symposium
on Nuclear Electronics & Computing

28 September 2015 - 2 October 2015



PROGRAM



Platformix



Schneider
Electric

NIAGARA
Russian Supercomputers



September 28

Opening Plenary

<i>Chair: Bird Ian</i>	
09.00-10.00	Welcome of Minister Education - Boshkovic Predrag
	Welcome of JINR – Matveev Victor
	Welcome of CERN – Kurtyka Tadeusz
	Welcome of Russian Ambassador - Gritcai Sergei
	Welcome of France Ambassador to Montenegro
	Welcome of Swiss Ambassador to Montenegro
	Welcome of NEC'2015 Local Organizing Committee – Backovic Slobodan
	Welcome of NEC'2015 Local Organizing Committee – Khragian Andrey
	Welcome of sponsors (IBS Platformix, Jet Infosystems, Niagara)
10.00-10.30	Matveev Victor (JINR) - The JINR Scientific Program.
10.30-11.00	Mapelli Livio (CERN) –The CERN Scientific Program - Is there life after Higgs?
11.00-11.40	<i>Coffee break</i>
<i>Chair: Korenkov Vladimir</i>	
11.40-12.10	Kurtyka Tadeusz, Schaefer Christoph (CERN) - Collaboration of CERN with CIS and South-East-European countries.
12.10-12.40	Bird Ian (CERN). The evolution of the WLCG grid.
12.40-14.10	LUNCH
<i>Chair: Kurtyka Tadeusz</i>	
14.10-14.40	Lamanna Massimo (CERN). Large-scale data services for science: present and future challenges.
14.40-15.10	Korenkov Vladimir (JINR). Status and perspectives of Laboratory of Information Technology at JINR.
15.10-15.40	Peshekhonov Dmitry (JINR). Status of the NICA project at JINR.
15.40-16.00	<i>Coffee break</i>
<i>Chair: Lamanna Massimo</i>	
16.00-16.20	Paramonov Aleksandr (IBS Platformix, Moscow). Virtualization of computations - new approaches and technologies: from data storage systems to desktops.
16.20-16.40	Struchenko Alexey (Jet Infosystems, Moscow). The main approach to Big Data parallel processing: Oracle way.
16.40-17.00	Garanov Dmitry (Niagara, Moscow). Supermicro/Niagara Innovation Technologies.

19.00 Welcome Party

September 29

Detector & Nuclear Electronics	
<i>Chair: Vankov Ivan</i>	
10.00-10.20	Dimitrov Lubomir (INRNE BAN, Sofia). Radiation Monitoring of the GEM Muon Detectors at CMS.
10.20-10.35	Strekalovsky Oleg (JINR). Trigger Module for Spectrometer with DT5742 Digitizers
10.35-10.50	Buryakov Mikhail (JINR). Status of the Front-end-Electronics based on the NINO ASIC for the Time-of-Flight measurements in the MPD.
10.50-11.05	Borisov Vladimir (JINR). Magnetic measurement system for series production of NICA superconducting magnets. Data acquisition, control and data analysis.
11.05-11.25	<i>Coffee break</i>
<i>Chair: Gorbachev Evgeny</i>	
11.25-11.40	Kuznetsov Aleksey (JINR). Electronic devices for multichannel setups in FLNR.
11.40-11.55	Motycak Stefan (JINR). New beam diagnostic system for MASHA setup .
11.55-12.10	Gorbunov Nikolay (JINR). Groundbased complex for checking the optical system of the TUS experiment.
12.10-14.00	LUNCH
Triggering, Data Acquisition, Control Systems	
<i>Chair: Mapelli Livio</i>	
14.00-14.30	Gorbachev Evgeny (JINR). Status of the Nuclotron and NICA control system development.
14.30-14.50	Karetnikov Maxim (VNIIA , Moscow). Multidetector system for nanosecond tagged neutron technology.
14.50-15.10	Tsyganov Yury (JINR). New trends in development of "Active Correlation" Technique.
15.10-16.10	<i>Coffee break</i>
<i>Chair: Gorbunov Nikolay</i>	
<i>Chair: Karetnikov Maxim</i>	
16.10-16.25	Monakhov Dmitrii (JINR). Development of tools for real-time betatron tune measurement at Nuclotron.
16.25-16.40	Sedykh Georgy (JINR). The thermometry system of superconducting magnets test bench for the NICA accelerator complex .
16.40-17.05	Andreev Vasily (JINR). TANGO Standard Software for Nuclotron Beam Slow Extraction Control.
17.05-17.20	Shirikov Ilyia (JINR). Low Level Radio Frequency system of NICA linac.
17.20-17.35	Filippov Ivan (JINR). DAQ software in MPD experiment NICA .
17.35-17.50	Rogov Victor (JINR). LO Trigger unit for BM@N setup.
16.10-16.25	Voinov Alexey (JINR). New Analog Electronics for the New Challenges in the SHEs Synthesis .
16.25-16.40	Murashkevich Svetlana (JINR). DeLiDAQ-2D – a new data acquisition system for position-sensitive neutron detectors with delay-line readout.
16.40-17.05	Novoselov Aleksey (JINR). Data acquisition system for focal plane detector of mass separator MASHA –
17.05-17.20	Ponkin Dmitriy (JINR). ESIS KRION-6T beam emittance measurement device .
17.20-17.35	Zamriy Victor (JINR). Host-based data acquisition system to control pulsed facilities of the accelerator .
17.35-17.50	Yudin Andrey (JINR). Automatization of control channel 8 of Phasotron at DLNP of JINR.

17.50-18.05	Terletskiy Andrey (JINR). Data acquisition electronics at BM@N.	17.50-18.05	Slepov Ivan (JINR). Creating interactive video broadcast system at VBLHEP.
18.05-18.20	Egorov Dmitry (JINR). Slow Control system at BM@N experiment.		

Workshop "From Local File Catalog to Name space publisher + meta-catalog" :

10:00 – 18:00

September 30

	ATLAS DAQ
<i>Chair: Peshekhonov Dmitry</i>	
09.00 - 9.15	Zivkovic Lidija (Institute of Physics Belgrade, Serbia). Real-time flavour tagging selection in ATLAS.
09.15 - 9.30	Sawyer Lee (Louisiana Tech University). The ATLAS Jet Trigger Software and Performance for LHC Run 2.
09.30 - 9.45	Ryan White (Universidad Técnica Federico Santa María). The Upgrade of the ATLAS Electron and Photon Triggers towards LHC Run 2 and their Performance.
09.45 – 10.05	<i>Coffee break</i>
<i>Chair: Sawyer Lee</i>	
10.05 - 10.20	Qin Yang (University of Manchester). The design and performance of the ATLAS Inner Detector trigger for Run 2.
10.20 - 10.35	Asbah Needa (DESY). A Hardware Fast Tracker for the ATLAS trigger.
10.35 - 10.50	Tatsuya Mori (The University of Tokyo). Phase-I Trigger Readout Electronics Upgrade of the ATLAS Liquid-Argon Calorimeters .
10.50 - 11.10	<i>Coffee break</i>
	Non-relational databases and heterogeneous repositories
<i>Chair: Peters Andreas</i>	
11.10-11.40	Barberis Dario (University and INFN Genova). Evolution of the use of relational and NoSQL databases in the ATLAS experiment.
11.40-11.55	Gertsenberger Konstantin (JINR). The unified database for the fixed target experiment BM@N.
11.55-12.10	Kyaw Thurein (Saint Petersburg State University). Parallel Database support for Distributed Computing.
12.10-12.25	Bashsashin Maksim (JINR). NICA Project Management Information System.
12.25-12.40	Filozova Irina (JINR). Concept of JINR Corporate Information System.
12.40-14.00	LUNCH

Excursion: 14:00 – 19:00

October 1

Distributed Computing. GRID & Cloud computing			
<i>Chair: Al-Turany Mohammad</i>			
9.00-9.30	Bukowiec Sebastian (CERN). CERN LHC run 2 on OpenStack.		
9.30-10.00	Bogdanov Aleksander ((Saint Petersburg State University).). Desktop supercomputer: what can it do?		
10.00-10.30	Andreeva Julia (CERN). Migration of the WLCG monitoring infrastructure to a new technology stack .		
10.30-10.50	Ososkov Gennady (JINR). Simulation concept of NICA-MPD-SPD Tier0-Tier1 computing facilities.		
10.50-11.10	Coffee break		
<i>Chair: Fuhrmann Patrick</i>			
11.10 -11. 30	Klimentov Alexei (BNL) and Krasnoprvtsev Dimitrii (National Research Nuclear University MEPhI). Study of ATLAS TRT performance with GRID and supercomputers.		
11.30-12.00	Peters Andreas (CERN). EOS - evaluating object drives and non-volatile memory.		
12.00-12.30	Tsaregorodtsev Andrei (CPPM-IN2P3-CNRS). Status of the DIRAC Project: overview and recent developments.		
12.30-14.00	LUNCH		
Distributed Computing. GRID & Cloud computing (cont.)		Computations with Hybrid Systems (CPU, GPU, coprocessors)	
<i>Chair: Lokajicek Milos</i>		<i>Chair: Degtyarev Alexander</i>	
14.00-14.15	Kundrat Jan (Institute of Physics of the AS CR and CESNET). Grids and Clouds in the Czech Republic.	14.00-14.30	Zrellov Petr (JINR) - HybriLIT: status report.
14.15-14.30		Degteariov Nichita (RENAM). Scientific Computing Infrastructure and Services in Moldova.	
14.30-14.45	Yermolchuk Vitaly (NC PHEP BSU). Usage of cloud platform for the BY-NCPHEP Tier3 site.	14.30-14.45	Kulabukhova Nataliia (Saint Petersburg State University). Virtual Accelerator Laboratory: the symbolic presentation for space charge fields.
14.45-15.05	Coffee break		
<i>Chair: Ilyin Slava</i>		<i>Chair: Ososkov Gennady</i>	
15.05-15.20	Furano Fabrizio (CERN IT/SDC). Dynamic federation of grid and cloud storage.	15.20-15.35	Pepelyshev Yury (JINR). Application of cluster analysis and autoregressive neural networks for the noise diagnostics of the IBR-2M reactor.
15.20-15.35	Kutovskiy Nikolay (JINR). Cloud infrastructure at JINR.	15.35-15.50	Ivashchenko Andrei (St.Petersburg State University). System of HPC content archiving.
15.35-15.50	Semenov Roman (JINR). Creating cloud storage system at JINR .	15.50-16.05	Iuzhanin Nikolai (Saint Petersburg State University). Impact of Configuration Management system of computer center on support of scientific projects throughout their lifecycle.
15.50-16.05	Balashov Nikita (JINR). Optimization of over-provisioned clouds.	16.05-16.20	Gankevich Ivan (Saint-Petersburg State University). Resource and task management tools for physics applications.

16.05-16.20	Pelevanyuk Igor (JINR). BES-III distributed computing.	16.20-16.35	Guschansky Dmitry (Saint-Petersburg State University). Social Data Collection and Processing Framework.
16.20-16.35	Boger Evgeny (JINR). Parallel computing with BEAN – BES-III Analysis Framework.		
16.35-16.50	Manoshin Sergey (JINR). Professional simulations of neutron spectrometers and experiments by VITESS software package.		
16.50-17.05	Kouzinopoulos Charalampos (CERN). Performing Track Reconstruction at the ALICE TPC using a Fast Hough Transform method.		
17.05-17.20	A.Demichev, A.Kryukov (SINP MSU). Design of Web platform for science and engineering in the model of open market		

CONFERENCE DINNER

October 2

		Computing for Large Scale Accelerator Facilities (LHC, FAIR, NICA, etc.) and Big Data	
<i>Chair: Andreeva Julia</i>			
9.00-9.30	Al-Turany Mohammad (GSI/CERN). ALFA: Next generation concurrent framework for ALICE and FAIR experiments.		
9.30-10.00	Vukotic Ilija (University of Chicago). Data analytics in the ATLAS Distributed Computing.		
10.00-10.30	Klimentov Alexei (BNL). Integration Of PanDA Workload Management System With Supercomputers.		
10.30-10.50	Borodin Mikhail (NRNU MEPHI, NRC KI). The Next Generation ATLAS Production System.		
10.50-11.10	Coffee break		
<i>Chair: Barberis Dario</i>			
11.10-11.40	Fuhrmann Patrick (DESY). dCache, Sync-and-Share for Big Data.		
11.40-12.10	Velikhov Vasily (National Research Centre "Kurchatov Institute"). Complex for mega-science data modeling and processing.		
12.10-12.40	Degtyarev Alexander (Saint-Petersburg State University). Big Data processing: test results.		
12.40 – 14.00	LUNCH		
	Workload Management Systems in Applied Research and BigData	Innovative IT Education with use of IT-technologies	
<i>Chair: Klimentov Alexei</i>		<i>Chair: Cheremisina Evgenia</i>	
14.00-14.20	Cheremisina Evgenia (Dubna University). New technologies of 2-D & 3-D modeling for analysis and management of natural resources.	14.00-14.20	Panebrattsev Yury (JINR). Educational Project for the STAR Experiment at RHIC.
14.20-14.40	Ryabinkin Eygene (National Research Centre "Kurchatov Institute"). Tier-1 in Kurchatov Institute: first months of operations during Run-2.	14.20-14.40	Sakharov Iurii (Dubna University). Transition to Standard 3+ and Optimization of the Universities Network in Russia
14.40-14.55	Strizh Tatiana (JINR). JINR TIER-1 Centre for the CMS Experiment at LHC.	14.40-14.55	Belaga Victoria (JINR). Hardware-Software Complex "Virtual Laboratory of Nuclear Fission" for LIS Experiment (Flerov Laboratory of Nuclear Reactions, JINR).
14.55-15.10	Tikhonenko Elena (JINR). Status of RDMS CMS Computing.	14.55-15.10	Klygina Ksenia (JINR). Web-based Builder of Digital Educational Resources.
15.10-15.25	Tsutskiridze Niko (Georgian Technical University). Simulation Loop between CAD systems, Geant4 and GeoModel: Implementation and Results.	15.10-15.25	Tyatyushkina Olga/Tokareva Nadezhda (Dubna university). E-learning as a technological tool to meet the requirements of professional standards in training of IT specialists

15.25-15.40	Bednyakov Ivan (JINR). LGD cluster LNP as a basic platform for tasks of the ATLAS Experiment .	15.25-15.40	Samoylenko Yury (Dubna university). Adaptive educational environment in the IT field of study reacting on changes in the labor market.
15.40-15.55	Osipova Victoriya (Tomsk Polytechnic University). Efficient Data Management Tools for the Heterogeneous Big Data Warehouse.	15.40-15.55	Karlov Aleksandre (JINR). Virtualization in Education - Information Security lab in your pocket.
15.55-16.10	Grigorieva Maria (National Research Centre "Kurchatov Institute"). The development of hybrid metadata storage for PanDA Workload Management System.	15.55-16.10	Tokareva Nadezhda (Dubna university), Belov Mikhail (Dubna University) and Perlyak Sergey (Dubna University). Virtual Computer Laboratory 2.0. 3D Graphics as Service. Methodological aspects of the use in research and education.
16.10-16.30	<i>Coffee break</i>		
<i>Chair: Tsaregorodtsev Andrei</i>		<i>Moderators: Klimentov Alexei, Korenkov Vladimir, Korotkov Mikhail, Kurtyka Tadeusz</i>	
16.30-16.45	Petrosyan Artem (JINR). PanDA for COMPASS at JINR.	16.30 – 17.45	ROUND TABLE (in Russian) "Russian research, scientific and educational centers coherent and consolidated efforts in computing research and software development for mega-science projects in HENP and other compute-intensive sciences in Russia"
16.45-17.00	Favareto Andrea (University and INFN Genova). Use of the Hadoop structured storage tools for the ATLAS EventIndex event catalogue.		
17.00-17.15	Barrientos Arias Ignacio (CERN). Configuration management at CERN.		
17.15-17.30	Abrahamyan Suren (Saint-Petersburg State University). Collaboration and decision making tools for mobile groups.		
17.30-17.45	Parubets Valeriy (Tomsk Polytechnic University). Mathematical modeling of heterogeneous distributed data storages.		

Closing: 18:00