ICASC 2019: CONFERENCE PROGRAM

12.09.2019 (10:00-17:10)		
9:00 **REGISTRATION** (60')		
9:30 **WELCOME COFFEE** (30')		
OPENING SESSION (10:00-10:30)		
10:00 **Foreword: Continuing the conference series titled "Grid, Cloud and High-Performance Computing in Science" (2006-2018)**	**Mihnea Dulea**	IFIN-HH
10:10 **The CPC Program Library: 50 years of open-source software in computational physics** **Speaker: Prof. STAN SCOTT, Queen's University Belfast**		
SPONSORS SESSION (10:30-11:30)		
10:30 **Make Innovation real with DELL Technologies - AI and High Performance Computing solutions** **Speaker: DAN BOGDAN, ISG Technology Consulting manager, DELL EMC Romania**		
11:00 **Accelerating HPC and AI applications with In-Network Computing** **Speaker: GIL BLOCH, Mellanox Principal Architect, MellanoxTechnologies**		
11:30 **BREAK** (10')		
IT INFRASTRUCTURES FOR RESEARCH (11:40-14:50)		
11:40 **European Infrastructure for Advanced Computing** (TBC) **Speaker: YANNICK LEGRÉ, Managing Director of EGI.eu Foundation**		
12:10 **Overview of JINR computing infrastructure** **Speaker: Dr. VLADIMIR KORENKOV, Joint Institute for Nuclear Research (JINR)**		
12:40 TBA **Speaker: EDUARD BODOR, Solution Architect for Data Centers, Schneider Electronics**		
13:10 **LUNCH BREAK** (60')		
14:10 **Romanian NREN – support for Romanian Research facilities**	**Octavian Rusu**	UAIC
14:30 **Participation of DFCTI/IFIN-HH in advanced computing for research**	**Mihnea Dulea**	IFIN-HH
COMPUTING SUPPORT FOR LHC EXPERIMENTS (14:50-16:00)		
14:50 **Status and prospects of ATLAS (FR Cloud) computing**	**Frédéric Derue**	LPNHE
15:10 **ALICE Grid Computing resources utilization report and plans for Run 3**	**Costin Grigoras**	CERN
15:30 **COFEE BREAK** (20')		
15:50 **Real-time conditions data distribution for the online data processing of the ALICE experiment**	**Daniel-Florin Dosaru**	UPB
DATA MANAGEMENT, PROCESSING, AND MONITORING - I (16:10-17:10)		

16:10	Data Management services in highly distributed environments: recent achievements of the eXtreme-DataCloud project		Daniele Cesini	INFN
16:30	Monitoring of exascale data processing		Dana Petcu	UVT
16:50	Jupyter Notebooks as scientific gateways to access cloud computing and distributed storage		Fernando Aguilar	IFCA

| 20:00 | CONFERENCE DINNER |

13.09.2019 (10:00-17:00)

RO-LCG REPORTS (10:00-11:20)			NUMERICAL METHODS FOR PHYSICS (10:00-16:40)		
10:00 Introduction: Romanian participation in the WLCG collaboration	Mihnea Dulea	IFIN-HH	10:00 User-friendly expressions for the coefficients in exponential fitting	Liviu Ixaru	IFIN-HH
10:05 Multi-VO support at a Tier2 site in the perspective of the LHC's Run 3	Mihai Ciubancan	IFIN-HH	10:20 Problem-dependent discretizations of evolutionary problems	Beatrice Paternoster	Univ. of Salerno
10:20 Deployment and maintenance of an XRootD storage cluster for ALICE	Adrian Sevcenco	ISS			
10:35 EOS deployment at the RO-03-UPB Grid site	Mihai Carabas	UPB	10:40 Quantum-quasiclassical model for calculation of resonant processes in hybrid atom-ion traps	Vladimir Melezhik	JINR
10:50 Migration of the UAIC Grid site in a new configuration	Ciprian Pinzaru	UAIC			
11:05 Contribution of the RO-14-ITIM site to ATLAS computing	Felix Farcas	INCDTIM	11:00 Adapted two step peer methods for advection diffusion problems	Dajana Conte	Univ. of Salerno
11:20 COFFEE BREAK (20')					
DATA MANAGEMENT, PROCESSING AND MONITORING - II (11:40-13:00)			11:20 A tribute to Liviu Ixaru, developer of successful CP-algorithms	Marnix Van Daele	Ghent Univ.
11:40 Challenges in Mathematical Modeling and Computational Physics in LIT-JINR on 2020–2023	Gheorghe Adam	JINR; IFIN-HH	11:40 Solving Quasi-exactly solvable differential equation by a canonical polynomials approach	Mohamad Khalil El Daou	CTS Kuwait
			12:00 Finite Element Method and Programs for Investigation of Quantum Few-Body Systems	Sergue Vinitsky	JINR
12:20 Analyzing Data generated by the High Power Laser System in ELI-NP	Georgios Kolliopoulos	ELI-NP / IFIN-HH	12:20 Algorithms for Generating in Analytical Form Interpolation Hermite Polynomials in Hypercube	Alexander Gusev	JINR
12:40 Cluster monitoring system of the Multifunctional Information and Computing Complex (MICC) LIT	Ivan Kashunin	JINR	12:40 PySlise: a Python Package for solving Schrödinger Equations	Toon Baeyens	Ghent Univ.
13:00 LUNCH BREAK (60')					

Time	Title	Speaker	Affil.	Time	Title	Speaker	Affil.
14:00	A Research Management System based on Rdf Graphs	Loredana Mocean	UBB	14:00	Modelling high precision spectroscopy experiments	Dimitar Bakalov	IRNRE
14:20	Development of cloud computing, HTC, and HPC services at NGI-RO	Ionut Vasile	IFIN-HH	14:20	Gibbs Phenomenon in Clenshaw-Curtis Quadrature	Sanda Adam	JINR; IFIN-HH
MOLECULAR BIOLOGY AND BIOCOMPUTING (14:40-16:00)				**QUANTUM CORRELATIONS RELEVANT FOR QUANTUM COMPUTING**			
14:40	Application of the fragment molecular orbital method to the investigation of antimicrobial peptides interaction with membrane models	George Necula	IFIN-HH	14:40	Evolution of quantum correlations in Gaussian bosonic channels	Aurelian Isar	IFIN-HH
15:00	Molecular dynamics simulations on the interaction between a silver nanoparticle and lipid monolayers	Maria Mernea	UB	15:00	The quantum dynamics of a two-qubit pair longitudinally coupled with a single-mode boson field	Elena Cecoi	Inst. of Appl. Phys.
15:20	COFFEE BREAK (20')						
15:40	Distributed bioinformatics analyses on an SGE cluster, for variant calling on bovine whole-genome samples	Alexandru E. Mizeranschi	RDSB - Arad	15:40	Uhlmann Fidelity of Two Bosonic Modes in a Thermal Bath	Marina Cuzminschi	IFIN-HH; UB
MACHINE LEARNING (16:00-17:00)				16:00	Lasing and cooling effects of a quantum oscillator coupled with a three-level lambda - type system	Alexandra Mirzac	Inst. of Appl. Phys.
16:00	Accurate data identification in low signal-to-noise ratio series	Eduard Barnoviciu	UTI; UPB				
16:20	Representing Character Sequences as Sets. A simple and intuitive string encoding algorithm for text data cleaning	Martin Marinov	TU Sofia	16:20	Fidelity of teleportation for two mode Gaussian resource states in a thermal bath	Alexei Zubarev	INFLPR; UB
16:40	Speeding up atomistic DFT simulations by machine learning methods	Tudor Mitran	IFIN-HH				

14.09.2019 (10:00-11:30)

SOFTWARE APPLICATIONS (10:00-11:00)			
10:00	Software developments for experimental data processing in NICA projects	Nicolay Voytishin	JINR
10:20	Improving cooling by airflow control inside the Data Center - model and simulation	Mihail Radu Catalin Trusca	INCDTIM
10:40	Detection and Validation of Asteroids using the NEARBY Software Platform	Liliana A. Boldea	IFIN-HH
11:00	COFFEE BREAK (20')		
CLOSING SESSION: Conference review			

| 12:00 | EXCURSION and LUNCH (12:00-16:00) |