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# 1 17. August

#### 1.1 Lectures

0. 00 00 10	Convenor INSERT CHAIRMEN
05.30 - 06.10 35+5 min.	David Edward Bruschi (University of York)
55+5 mm.	Elements and applications of Relativistic Quantum Information
06.10 - 06.50	Gordon Semenoff (University of York)
35+5 min.	Infrared Quantum Information
00.50 05.00	
06.50 - 07.30 35+5 min.	Dmitry Gorbunov (INR of RAS) Gravity Wave signatures of Electroweak Phase Transition in Split
55±5 mm.	NMSSM
08.00 - 08.40	Nikos Mavromatos (University of London (GB))
35+5 min.	Self-Interacting Dark Matter, Right-Handed Neutrinos and Small-Scale
	Cosmology "Crisis"
08.40 - 09.20	Atlas (University of London (GB))
35+5  min.	Collider searches for $DM$ (ATLAS+CMS)
11.30 - 12.10	Vladimir Zelevinsky (Michigan State University)
35+5 min.	Chaotic Quantum Many-Body Systems and Philosophy of Thermalization
12.10 - 12.50	Boris Kopeliovich (UTFSM)
35+5 min.	Fragmentation of highly virtual partons
12.50 - 13.30	Laszlo Csernai (UTFSM)
35+5  min.	Advances in Relativistic Fluid Dynamics, Observables, and Applications
13.30 - 14.10	Evgeny Zabrodin (SINP MSU (RU) and University of Oslo (NO))
35+5 min.	Fluctuations and correlations

# 2 18. August

## 2.1 Special Session on QCD

	Convenor INSERT CHAIRMEN
06.00 - 06.30 25+5 min.	Willibald Plessas (University of Graz) Pion-Dressing Effects in Nucleon and Delta Masses and Form Factors
06.30 - 07.00 25+5 min.	Hugo Reinhardt (72076 Tbingen") Hamiltonian approach to QCD in Coulomb gauge
07.00 - 07.30 25+5 min.	Mario Mitter (University of Graz)  Quark, gluon and meson correlators of unquenched QCD
12.00 - 12.30 25+5 min.	Christian Schubert (UMSNH) Form factor decompositions of the QCD four-gluon vertex
12.30 - 13.00 25+5 min.	James Edwards (Universidad Michoacana de San Nicols de Hidalgo) Worldline colour fields and non-Abelian quantum field theory
13.30 - 14.00 25+5 min.	Leonid Glozman (University of Graz) $SU(2N_F)$ symmetry of confinement in QCD and its observation at high $T$
14.00 - 14.30 25+5 min.	Thierry Grandou ("UMR-CNRS-7010)  Effective locality and non-abelian gauge-invariance
14.30 - 15.00 25+5 min.	Ryo Yoshiike (Kyoto university)  Non-linear effect of the fluctuation for the inhomogeneous chiral phase transition

#### 2.2 W. Greiner Memorial Session

	Convenor INSERT CHAIRMEN
08.00 - 08.30	Dirk Rischke (University Frankfurt)
25+5 min.	Anisotropic dissipative fluid dynamics
08.30 - 09.00	Carsten Greiner (University of Frankfurt)
25+5 min.	Comparison of hydrodynamical and transport theoretical calculations for $p+A$ and $A+A$ collisions
09.00 - 09.30	Gottfried Mnzenberg (GSI Darmstadt)
25+5 min.	Super Heavy Elements - experimental developments
09.30 - 10.00	Igor Mishustin ("Frankfurt Institute for Advanced Studies)
25+5 min.	Greiner and exotic matter
10.00 - 10.30	Mikhail Itkis (joint institute for nuclear research)
25+5 min.	Experimental investigation of fusion-fission mechanisms for superheavy nuclei

## 2.3 Mini-workshop on Highly Ionising Avatars of New Physics

06.00 - 06.30 25+5 min.	Convenor INSERT CHAIRMEN Wim De Boer (KIT - Karlsruhe Institute of Technology (DE)) Perspectives on Detection of supersymmetric Dark Matter
06.30 - 07.00 25+5 min.	Yongmin Cho (Konkuk University) Cosmic Electroweak Monopole
07.00 - 07.30 25+5 min.	John Ellis (University of Graz) LHC Constraint on Light-by-light Scattering, Born-Infeld theory and the mass of an Electroweak Monopole
08.00 - 08.30 25+5 min.	Sarben Sarkar (King's College London)  Magnetic Monopoles from Global Monopoles in the presence of a Kalb-Ramond Field
08.30 - 09.00 25+5 min.	Laura Patrizii ("Universita e INFN) Status of the searches for Magnetic Monopoles
09.00 - 09.30 25+5 min.	Frederik Lauber (IceCube)  Magnetic monopole searches with IceCube
09.30 - 10.00 25+5 min.	Adrian Bevan (Queen Mary University of London (GB)) Searching for monopoles in polar ice samples
12.00 - 12.30 25+5 min.	James Pinfold (University of Alberta (CA)) The MoEDAL Experiment Past, Present and Future.
12.30 - 13.00 25+5 min.	Richard Soluk (University of Alberta (CA)) The MoEDAL Detector at the LHC
14.00 - 14.30 25+5 min.	Igor Ostrovskiy ("UMR-CNRS-7010) Searching for magnetic monopoles with Solid State Breakdown Counters: from LHC to Space
14.30 - 15.00 25+5 min.	Oliver Gould (Imperial College London)  Magnetic monopole production in heavy ion collisions
15.10 - 15.40 25+5 min.	Jonathan Hays (University of London (GB))  Machine LEarning, Monopoles and MoEDAL
15.40 - 16.10 25+5 min.	Daniela Bauer (Imperial College (GB))  Distributed Computing for Small Collaborations
16.10 - 16.30 15+5 min.	Arka Santra (Univ. of Valencia and CSIC (ES))  Magnetic monopole production in photon fusion process.

16.30 - 17.00 Vasiliki Mitsou, Oscar Manuel Vives Garcia, Kazuki Sakurai, Roberto Ruiz De Austri (Univ. of Valencia and CSIC (ES))
25+5 min. Long-lived charged supersymmetric particles and MoEDAL

# 3 19. August

#### 3.1 Parallel session

12.00 - 12.30 25+5 min.	
12.00 - 12.30 25+5 min.	Viktor Riabov (Petersburg Nuclear Physics Institut (RU)) Resonance production in Pb-Pb collisions measured with the ALICE experiments at the LHC
12.30 - 13.00 25+5 min.	Cristina Bedda (Utrecht University (NL)) Measurements of D-meson production in p-Pb and Pb-Pb collisions with the ALICE detector at the LHC
12.30 - 13.00 25+5 min.	Samuel Louis Bein (Hamburg University (DE)) CMS Search for new physics in events with jets, b-tagged jets, and large missing transverse momentum in the all-hadronic channel at $s=13\ TeV$
13.30 - 14.00 25+5 min.	Maria Vasileiou (National and Kapodistrian University of Athens (GR)) Transverse momentum spectra and nuclear modification factors of identified charged hadrons in p-Pb and Pb-Pb collisions at $sNN=5.02~TeV$ with ALICE
13.30 - 13.50 15+5 min.	Atlas (National and Kapodistrian University of Athens (GR)) Inclusive searches for squarks and gluinos with the ATLAS detector
13.50 - 14.15 20+5 min.	Athina Kourkoumeli-charalambidi ("Institute of Modern Physics) Searches for electroweak production of supersymmetric gauginos and sleptons with the ATLAS detector
14.00 - 14.30 25+5 min.	Agnieszka uszczak (DESY @Cracow University of Technology) Dipole model analysis of highest precision HERA data, including very low $Q\hat{Z}$
14.00 - 14.30 25+5 min.	Varvara Batozskaya (National Centre for Nuclear Research (PL))  Measurements of the CP violating phase phi_s at LHCb
14.15 - 14.45 25+5 min.	Sergey Polikarpov (National Research Nuclear University MEPh I $(\mathrm{RU}))$ $Recent\ CMS\ B\ physics\ results$
14.30 - 15.00 25+5 min.	Evgeni Kolomeitsev (Matej Bel University) Fluctuations in non-ideal pion gas with dynamically fixed particle number

#### 3.2 Special session on Astro-Cosmo-Gravity

12.00 - 12.30

25+5 min.

# Convenor INSERT CHAIRMEN Violetta Sagun (CENTRA/BITP) Neutron stars equation of state consistent with high-energy nuclear

physics data

13.30 - 14.00 Alexandros Gezerlis ("Institute of Modern Physics)
25+5 min. Strongly interacting matter in neutron stars

## 3.3 B Heavy Ion Physics Session

# Convenor INSERT CHAIRMEN

15.00 - 15.30	Sergei Voloshin (Wayne State University (US))
25+5 min.	Vorticity and global polarization in heavy ion collisions

# 3.4 Mini-Workshop on Latest Results and New Physics in the Higgs Sector

05.30 - 05.55 20+5 min.	Convenor INSERT CHAIRMEN Maxime Gouzevitch (Universite Claude Bernard-Lyon I (FR)) Introduction to the Mini-Workshop on Latest Results and New Physics in the Higgs Sector
05.55 - 06.25 25+5 min.	Atlas (Universite Claude Bernard-Lyon I (FR)) $BEH\ overview\ (ATLAS)$
06.30 - 07.00 25+5 min.	Anna Kropivnitskaya (The University of Kansas (US)) Higgs parameters measurement with CMS data
07.00 - 07.30 25+5 min.	Atlas ("ITP)  Measurement of cross sections and couplings of the Higgs Boson in fermionic production and decay modes with the ATLAS detector
08.00 - 08.30 25+5 min.	Valeria Botta (Deutsches Elektronen-Synchrotron (DE)) Measurements of the Higgs $H(125)$ boson at CMS
08.30 - 08.55 20+5 min.	Asma Hadef, Asma Hadef (Joint Institute for Nuclear Research) ttH Coupling Measurement with the ATLAS Detector at the LHC
08.55 - 09.25 25+5 min.	Oleg Lebedev (University of Helsinki) The Higgs and cosmology
09.25 - 09.55 25+5 min.	Junquan Tao ("Institute of High Energy Physics) Search for rare and exotic Higgs Boson decay modes at CMS
09.55 - 10.25 25+5 min.	Atlas (Joint Institute for Nuclear Research (RU)) Search for rare and exotic Higgs Boson decay modes and Higgs boson pair production with the ATLAS detector
12.00 - 12.30 25+5 min.	Pier Paolo Giardino (Brookhaven National Laboratory) Single Higgs production at LHC as a probe for anomalous Higgs self cou- pling
12.30 - 13.00 25+5 min.	Konstantin Androsov (INFN Pisa (IT)) Search for new physics in HH final state in CMS
13.30 - 14.00 25+5 min.	Atlas (National and Kapodistrian University of Athens (GR)) Search for neutral and charged BSM Higgs Bosons with the ATLAS detector
14.00 - 14.30	Luca Panizzi (INFN Genova (Italy))

25+5 min.	$Phenomenological\ scenarios\ to\ fit\ a\ possible\ excess\ in\ the\ di-muon\ +\ jets\ channel$
14.30 - 15.00 25+5 min.	Luigi Marchese (University of Oxford (GB)) Measurement of $Z\to b\bar b$ cross section and search for Higgs-like particle produced in association with $b$ quarks at CDF
15.00 - 15.30 25+5 min.	Justin Andrew Williams (The University of Kansas (US)) Search for Anomalous Quartic Photon Coupling at the LHC

# 4 21. August

#### 4.1 Poster session

	Convenor INSERT CHAIRMEN
16.30 - 17.30 55+5 min.	Frederic Lassiaille (FL research) Surrounding matter theory
16.30 - 17.30 55+5 min.	Hexi Shi (Frascati (RM) Italy") Search for the violation of Pauli principle at LNGS - first physics result of VIP2 experiment
16.30 - 17.00 25+5 min.	Andre Sopczak (Czech Technical University (CZ)) ttH Coupling Measurement with the ATLAS Detector at the LHC
16.30 - 17.30 55+5 min.	Wim De Boer (KIT - Karlsruhe Institute of Technology (DE)) Molecular Clouds as the Origin of the Gamma-Ray GeV excess
16.30 - 17.30 55+5 min.	Marjan Abbasipour (Iran University of Science and Technology)  Modification of Material Surface by Plasma
16.30 - 17.30 55+5 min.	Igor Bulyzhenkov (Moscow Institute of Physics and Technology) Gravity until equipartition of relativistic kinetic energies.
16.30 - 17.30 55+5 min.	Timur Kamalov (Moscow Institute of Physics and Technology)  Quantum Correction for Newtons Law of Motion
16.30 - 17.30 55+5 min.	Chhanda Samanta (Virginia Military Institute) A-dependence of $\Lambda\Lambda$ -bond and charge symmetry energies
16.30 - 17.30 55+5 min.	Shihan Sajeed (University of waterloo) Insecurity of detector-device-independent quantum key distribution
16.30 - 17.30 55+5 min.	Luigi Marchese, Luigi Marchese (University of waterloo)  muon performance
16.30 - 17.30 55+5 min.	Alessandro Romito (Lancaster University) Thermodynamics along individual trajectories of a quantum bit
16.30 - 17.30 55+5 min.	Jorge Bernal Arroyo (Lancaster University) New Mathematical Formulation of the Correspondence Principle
16.30 - 17.30 55+5 min.	Gopinath Kamath (Indian Institute of Technology Tirupati) Cylindrical symmetry: II. The Greens function in $3+1$ dimensional curved space
16.30 - 17.30	Luis Gonzalez-mestres (John Naisbitt University)

55+5 min.	New particles and nonstandard new Physics
16.30 - 17.30 55+5 min.	Valerio Mascagna (Sezione di Pavia) Experimental technique for $\bar{p}$ -nucleus annihilation cross section measurements at low energy
16.30 - 17.30 55+5 min.	Luca Venturelli (Sezione di Pavia)  Antiproton-nucleus annihilation cross section at low energy
16.30 - 17.30 55+5 min.	Christian Farnese ("INFN)  The new front end and DAQ of the ICARUS detector
16.30 - 17.30 55+5 min.	Ryan Parker (University of York)  Hybrid Photonic Loss Resilient Entanglement Swapping
16.30 - 17.30	Virendrasinh H. Kher, Nayneshkumar Devlani, Ajay Kumar Rai (University of York)
55+5 min.	Radiative transitions and the mixing parameters of the D meson
16.30 - 17.30 55+5 min.	Zalak Marfatia, Ajay Kumar Rai (University of York)  Heavy baryon spectroscopy in Hypercentral constituent quark model
16.30 - 17.30 55+5 min.	Adam Balcerzak (University of Szczecin) Varying constants quantum cosmologies
16.30 - 17.30 55+5 min.	Yifan Cheng ("Academia Sinica) Possible Approach to Dynamical Supersymmetry Breaking via Nambu– Jona-Lasinio Model
16.30 - 17.30	Georgios Karathanasis (National and Kapodistrian University of Athens
55+5 min.	(GR)) The new CMS Barrel Muon Track Finder
16.30 - 17.30	Alexander Joan Cristo Jurez-domnguez (Benemrita Universidad Autnoma de Puebla)
55+5 min.	Quantization Aspects of a Hypercomplex Field
16.30 - 17.30 55+5 min.	Swagata Mukherjee (Rheinisch-Westfaelische Tech. Hoch. (DE)) Search for R-parity violating supersymmetry and Quantum black-holes in $e+mu$ final state in CMS
16.30 - 17.30 55+5 min.	mer Bayraktar (Max Planck Institute for the Science of Light) Experimental Relativistic Quantum Information with a Geostationary Satellite
16.30 - 17.30	Andrea Lavagno ("Politecnico di Torino)

55+5 min.	Nuclear phase transition and thermodynamic instabilities in dense nuclear matter
16.30 - 17.30	Mohammad M. Qaemmaqami (Institute for Research in Fundamental Sciences (IPM))
55+5 min.	On the Butterfly Effect in 3D Gravity
16.30 - 17.30 55+5 min.	Anna Stakia (CERN) Search for supersymmetry in events with one lepton, multiple jets and missing transverse momentum in proton-proton collisions at $s=13~{\rm TeV}$
16.30 - 17.30 55+5 min.	Anna Stakia (CERN)  Jet-flavour tagging using deep-learning in the CMS experiment
16.30 - 17.30 55+5 min.	Ralf Seidl (RIKEN)  Latest results on azimuthal anisotropy at RHIC-PHENIX
17.00 - 17.30 25+5 min.	Elisaveta Zherebtsova (National Research Nuclei University MEPhI) Procedure for event characterization in Pb-Pb collisions at $40AGeV$ in the NA49 experiment at CERN SPS
17.10 - 17.30 15+5 min.	Laszlo Csernai (National Research Nuclei University MEPhI) Applications of Advances in Relativistic Fluid Dynamics to Laser Fusion
17.10 - 17.30 15+5 min.	Cristiano Sebastiani ("Sapienza Universita e INFN) Search for displaced lepton jets with the ATLAS experiment
17.10 - 17.30 15+5 min.	Oleksii Ivanytskyi (BITP) On bimodal size distribution of spin clusters in the one-dimensional Ising model

## 4.2 A Particle Physics

05.30 - 06.00 25+5 min.	Convenor INSERT CHAIRMEN John Ellis (The University of Kansas (US)) What Physics Beyond the Standard Model?
06.00 - 06.30 25+5 min.	Malgorzata Kazana (NCBJ Warsaw (PL))  CMS Overview
06.30 - 07.00 25+5 min.	Atlas (NCBJ Warsaw (PL)) ATLAS overview highlight talk
07.00 - 07.30 25+5 min.	Yasmine Sarah Amhis (NCBJ Warsaw (PL)) <i>LHCb overview</i>
08.00 - 08.30 25+5 min.	Vladimir Gligorov (Centre National de la Recherche Scientifique (FR)) Flavourful roads to New Physics
08.30 - 09.00 25+5 min.	Rainer Mankel (Deutsches Elektronen-Synchrotron (DE)) $ATLAS$ and $CMS$ prospects for Higgs measurements and searches at the high luminosity $LHC$
09.00 - 09.30 25+5 min.	Marek Karliner (Tel Aviv University (IL))  Prediction and discovery of doubly-heavy baryon

#### 4.3 C Quantum Optics and Quantum Information

#### Convenor INSERT CHAIRMEN

15.00 - 15.50 Avshalom Elitzur (Iyar)

45+5 min. Would Nega-Particles Prove to be Essential Ingredients of Quantum Re-

ality?

## 4.4 Special Session on Instruments and Methods in HEP

	Convenor INSERT CHAIRMEN
10.00 - 10.30	Silvio Donato (Universitaet Zuerich (CH))
25+5 min.	Overview talk on trigger performances (CMS)
12.00 - 12.50	Nicolas Berger (LAPP Annecy (CNRS/IN2P3))
45+5 min.	Lecture on Statistical analysis methods by ATLAS
13.30 - 14.00	Thomas Josua Mettler (Universitaet Bern (CH))
25+5 min.	The Short Baseline Neutrino Detector at Fermilab
14.00 - 14.30	Antonio Sbrizzi ("Universita e INFN)
25+5 min.	The LUCID-2 detector
14.30 - 15.00	Murat Ali Guler (University of St Andrews)
25+5 min.	Directional dark matter search with nuclear emulsion

## 4.5 Workshop on continuous variables and quantum information

08.00 - 08.30 25+5 min.	Convenor INSERT CHAIRMEN Maria Chekhova (Max-Planck Institute for the Science of Light) Phase supersensitivity in an unbalanced $SU(1,1)$ interferometer
08.30 - 09.00 25+5 min.	U L Andersen (Max-Planck Institute for the Science of Light) Squeezed light enhanced sensing of a micro-mechanical oscillator
09.00 - 09.30 25+5 min.	Radim Filip (Palacky University in Olomouc)  Highly nonlinear quantum optics and optomechanics
09.30 - 10.00 25+5 min.	Christian Ralf Mller (Tel Aviv University (IL)) From Quantum-Limited Measurements towards Quantum Squeezing Detection over Satellite Links
12.00 - 12.20 15+5 min.	Vladimir Shevchenko (University of Glasgow) Quantum measurements in finite space-time domain
12.20 - 12.40 15+5 min.	Aurelian Isar ("National Institute of Physics and Nuclear Engineering)  Dynamics of quantum correlations in two-mode Gaussian open quantum systems
12.40 - 13.00 15+5 min.	Mihaescu Tatiana (KVI-CART/University of Groningen) Gaussian quantum steering of two bosonic modes in a squeezed thermal environment
13.30 - 14.00 25+5 min.	Ladislav Mista (Palacky University) Gaussian intrinsic entanglement
14.00 - 14.30 25+5 min.	Petros Wallden (University of Edinburgh) Relativistic and Device Independent Verifiable Quantum Computation
14.30 - 14.50 15+5 min.	Matthew Thornton (University of St Andrews) Gigahertz quantum signatures compatible with telecommunication technologies
14.50 - 15.10 15+5 min.	Tom Douce (Universit Pierre et Marie Curie)  Quantum advantage and fault tolerant universal quantum computing in continuous variables

## 4.6 Workshop on Exotic Hadrons

12.00 - 12.30 25+5 min.	Convenor INSERT CHAIRMEN  Dominik Werthmller (University of Glasgow)  Exotic Baryons at MAMI
12.30 - 13.00 25+5 min.	Johan Messchendorp (KVI-CART/University of Groningen) Prospects for Exotic Hadron Spectroscopy at PANDA
13.30 - 14.10 35+5 min.	Jianbin Jiao (Shandong University) light exotic hadrons at BESIII
14.10 - 14.40 25+5 min.	Hideko Nagahiro (Nara Women's University) Structure of excited charmed baryons studied by pion emission decays
14.40 - 15.00 15+5 min.	Atsushi Hosaka (Osaka University)  Heavy hadron production for the study of their structure
15.00 - 15.40 35+5 min.	H. Noumi (Universit Pierre et Marie Curie) Strange and Charm Baryon Spectroscopy at J-PARC
15.40 - 16.00 15+5 min.	Milena Piotrowska (Jan Kochanowski University) Excited vector mesons: phenomenology and predictions for a yet unknown vector $\bar{s}s$ state with a mass of about 1.93 GeV

## 4.7 S. Belyaev Memorial Session

	Convenor INSERT CHAIRMEN
12.00 - 12.30	Vladimir Zelevinsky (Michigan State University)
25+5 min.	Introduction
12.30 - 13.00	Peter Ring (Technical University Munich)
25+5 min.	Covariant density functionals in nuclear physics and their microscopic origin.
13.30 - 14.00	Michael Urin (Universitaet Bern (CH))
25+5 min.	DAMPING OF SIMPLE MODES OF HIGH-ENERGY NUCLEAR EX- CITATIONS
14.00 - 14.30	Elena Litvinova (Western Michigan University)
25+5 min.	Isospin dynamics in nuclear structure
14.30 - 15.00	Oleg Sushkov (University of New South Wales)
25+5 min.	Bose condensation of triplons in quantum magnets

## 5 22. August

## 5.1 Session on Physics Education and Outreach

12.00 - 12.25 20+5 min.	Convenor INSERT CHAIRMEN Mina Katramatou (Kent State University) Active Learning Teaching for Introductory Physics
12.25 - 12.50 20+5 min.	Gerassimos Petratos (Kent State University)  Trends in Undergraduate Physics Education in the US
13.30 - 13.55 20+5 min.	Georgios Fanourakis (Nat. Cent. for Sci. Res. Demokritos (GR))  The European Researchers' Night: concepts and impact
13.55 - 14.20 20+5 min.	Helen Gourlay (Brunel University)  Learning about A Level Physics students understandings of particle physics using concept mapping
14.20 - 14.45 20+5 min.	Antonios Leisos (Aristotle University of Thessalonki (GR)) The Hellenic Open University Cosmic Ray Telescope: Research and Educational Activities
14.45 - 15.10 20+5 min.	Lazaros Merakos (Greek Universities Network) Opening up Greek Universities: opencourses.gr

#### 5.2 Public talk

#### Convenor INSERT CHAIRMEN

16.30 - 17.30 John Ellis ("INFN)

55+5 min. What are we? Where do we come from? Where are we going?

## 6 23. August

#### 6.1 Workshop on Quantum Foundations and Quantum Information

#### Convenor INSERT CHAIRMEN

11.45 - 12.00 10+5 min.	(University of Bonn (DE)) Opening words
12.00 - 12.30 25+5 min.	Alessandro Romito (Lancaster University) Ubiquitous non-local entanglement with Majorana bound states
12.30 - 13.00 25+5 min.	Yutaka Shikano (The University of Tokyo)  Quantum Dynamical Simulation by Quantum Walk
13.30 - 14.00 25+5 min.	Lajos Diosi (Wigner Research Centre for Physics)  Pure state post-selection is universal
14.00 - 14.30 25+5 min.	Angelo Bassi (Department of Physics - University of Trieste) Wave function collaspe and gravity
14.30 - 15.00 25+5 min.	Ron Folman (Ben-Gurion University of the Negev) Matter waves exposed to the external world: Decoherence, gravity, complementarity and time irreversibility
15.00 - 15.30 25+5 min.	Andrea Alberti (University of Bonn)  Testing the superposition principle with individual trapped atoms

## 6.2 Joint Quantum Session

08.00 - 08.30 25+5 min.	Convenor INSERT CHAIRMEN Lorenzo Maccone (Institute for Nuclear Research) Quantum time mechanism, towards quantum spacetime
08.30 - 09.00 25+5 min.	Ralf Schuetzhold (University Duisburg-Essen) Fundamental quantum effects in the laboratory?
09.30 - 10.00 25+5 min.	Yuval Gefen (Konkuk University) Manifestation and Detection of Discord in Nanostructures

## 7 24. August

#### 7.1 D Astroparticle, Cosmology,d Gravity, Math Phys

#### Convenor INSERT CHAIRMEN

10.00 - 10.30 Mario Buscemi ("Universit di Catania)

25+5 min. The Pierre Auger Observatory: latest results and future perspectives

#### 7.2 H. Oeschler Memorial Session

12.00 - 12.30 25+5 min.	Convenor INSERT CHAIRMEN  Jean Cleymans (University of Cape Town (ZA))  Helmut Oeschler and Particle Chemistry in Heavy Ion Collisions
12.30 - 13.00 25+5 min.	Krzysztof Redlich (University of Wroclaw (PL)) Linking the particle yields data in HIC and lattice QCD results
13.30 - 14.00 25+5 min.	Natasha Sharma (Hacettepe University)  Light flavour particle production in ALICE at LHC
14.00 - 14.30 25+5 min.	Unknown Unknown (Hacettepe University) Probing resonance matter with HADES
14.30 - 15.00 25+5 min.	Lokesh Kumar ("University of Washington) Recent results on light hadron production from STAR TBC

## 7.3 Workshop on Physics at FAIR-NICA-SPS-BES/RHIC

	Convenor INSERT CHAIRMEN
06.30 - 07.00 25+5 min.	Yu. B. Ivanov (RIKEN) Three-fluid Hydrodynamics-based Event Simulator Extended by UrQMD final State interactions (THESEUS) for FAIR-NICA-SPS-BES/RHIC
07.00 - 07.30	energies  Hanna Zbroszczyk (Warsaw University Of Technology)
25+5 min.	Two-particle correlations using THERMINATOR model for BES program
08.00 - 08.30 25+5 min.	Kyrill Bugaev ("Bogolyubov Institute for Theoretical Physics) Probing the tricritical endpoint of QCD phase diagram at NICA-FAIR energies
08.30 - 09.00 25+5 min.	Oleksii Ivanytskyi (BITP) Separate freeze-out of strange particles and the quark-hadron phase transition
09.30 - 10.00 25+5 min.	Antoni Marcinek (Polish Academy of Sciences (PL)) New Baryonic and Mesonic Observables from NA61/SHINE
12.00 - 12.30 25+5 min.	Andrej Kugler ("Nuclear Physics Institute) Flow at SIS energies - overview of SIS18 results and prospect for SIS100
12.30 - 13.00 25+5 min.	Chi Yang (Shandong University) The STAR detector upgrade and future plan

## 7.4 Workshop on NCG

	Convenor INSERT CHAIRMEN
05.30 - 06.10	Latham Boyle (Perimeter Institute)
35+5 min.	What is the standard model of particle physics trying to tell us?
06.10 - 06.50	Nadir Bizi (UPMC (Paris VI))
35+5 min.	A Noncommutative Geometry inspired GUT
06.50 - 07.30	Shane Farnsworth (Max-Planck Institute for Gravitational Physics)
35+5 min.	Applications of non-associative geometry in particle physics
08.00 - 08.40	Koen Van Den Dungen (SISSA)
35+5 min.	Families of spectral triples and foliations of spacetime
08.40 - 09.20	Tomasz Miller (Warsaw University of Technology)
35+5 min.	Causal relations in noncommutative spacetime
09.20 - 10.00	Nicolas Franco (University of Namur)
35+5 min.	Physical models from noncommutative causality
12.00 - 12.40	Anna Pachol (Queen Mary University of London)
35+5 min.	Introduction to noncommutative digital geometry
13.30 - 14.10	Christopher Fritz (Sussex University)
35+5 min.	Noncommutative Spherically Summetric Spacetimes at Semicalssical Order

## 8 **25.** August

# 8.1 Mini-workshop:Correlations and Fluctuations in Relativistic Heavy Ion Collisions

#### ${\bf Convenor\ INSERT\ CHAIRMEN}$

09.30 - 10.00	Ewa Maksymiuk (Jan Kochanowski University)
25+5 min.	Equations of anisotropic hydrodynamics for quark and gluon fluids

## 9 28. August

## 9.1 Workshop on Future of Fundamental Physics

	Convenor INSERT CHAIRMEN
05.30 - 06.15	John William Womersley (University of Arizona)
40+5 min.	The challenges of large infrastructure physics projects in the 21st century
06.15 - 06.55	Jie Gao ("Institute of High Energy Physics)
35+5 min.	The CEPC/SppC project: status and challenges
06.55 - 07.30	Davide Gamba (CERN)
30+5 min.	Status and plans of the Compact Linear Collider project
08.00 - 08.35	Erik Adli (University of Oslo (NO))
30+5 min.	AWAKE: the proton-driven plasma wakefield accelerator experiment at CERN
08.35 - 09.10	Mario Antonelli (INFN e Laboratori Nazionali di Frascati (IT))
30+5 min.	Low emittance muon beam for multi-TeV muon collider
12.00 - 12.30	Amarjit Soni (BNL)
25+5 min.	Advances in Direct CP violation
12.30 - 13.00	Giulia Ricciardi (Univ. Napoli Federico II)
25+5 min.	Tensions in the flavour sector

#### 9.2 Workshop on (Super)gravity, String theory and Related Topics

Convenor INSERT CHAIRMEN

#### 08.00 - 08.10Augusto Sagnotti (Scuola Normale Superiore and INFN-Sezione di Pisa (IT)TBA05+5 min. 08.10 - 08.55Nikos Irges (National Technical University of Athens) Non-perturbative Gauge-Higgs Unification 40+5 min. 08.55 - 09.40Silvia Nagy (University of Nottingham) Supergravity as Yang-Mills squared: from classical to quantum 40+5 min.09.40 - 10.25Fabio Riccioni (INFN - National Institute for Nuclear Physics) TBA40+5 min.12.00 - 13.00 Paolo Natoli (Universit di Ferrara) 55+5 min. TBA

Andrea Campoleoni (Universit Libre de Bruxelles)

Alessandro Tomasiello (Milan Bicocca University)

Recent progress on M5-branes at singularities

Higher spins in 3D: from AdS to flat space

13.30 - 14.15 40+5 min.

14.15 - 15.00

40+5 min.

## 9.3 Interdisciplinary Session

#### ${\bf Convenor\ INSERT\ CHAIRMEN}$

14.00 - 14.30	Georgios Pavlos (Democritus University of Thrace)
25+5 min.	Complexity and unification in Physical theory