Oslo International School for Master and PhD Students

Relativistic Heavy Ion Collisions
Cosmology and Dark Matter
Cancer Therapy

15-26 May 2017 **Oslo, Norway** https://indico.cern.ch/event/612795/

Workshop

Nuclear, Particle physics and Cosmology

16-18 May 2017 **DFDS Ferry Oslo-Copenhagen-Oslo**

https://indico.cern.ch/event/632020/

Public lecture at Niels Bohr Institute:

Nuclear fragmentation reactions: from basic research to medical applications Igor Mishustin

The Main Topics of the School

Relativistic Heavy Collisions and High Energy Particle Physics

Lattice QCD, Phase Diagram: Liquid-Gas Phase Transition, Chiral Symmetry Restoration

Quark Gluon Plasma to Hadron Gas Phase Transition

Parton Model, Jet Production, Jet Quenching

Signatures of Quark Gluon Plasma: Anisotropic Flow, Ridge, Strangeness, Heavy Quarkonia, Femtoscopy, Photons and Dileptons

Thermal Model, Hydrodynamics and Microscopic Models

Interaction of Radiation with Matter and Cancer Therapy

SUSY, Phenomena Beyond Standard Model

Practical sessions with ALICE and ATLAS open data

Cosmology-Astrophysics. Dark Matter. Black Holes. Nuclear Reactions in Stars.

Critical phenomena — Superconductivity

Organizing Committee

Larissa Bravina (Chair) (University of Oslo, Norway)
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Pavlo Mikheenko (University of Oslo)
Heidi Sandaker (University of Oslo)
Evgeny Zabrodin (Moscow State University and University of Oslo)

ALICE Experimental Data Analysis (hands-on session) Igor Altsybeev, Ionut Cristian Arsene, Ilya Selyuzhenkov
Particle production in Heavy Ion Collisions Dmitry Anchishkin
Heavy Quarkonia in Heavy Ion Collisions Ionut Cristian Arsene
Indirect Searches for Dark Matter Torsten Bringmann
ATLAS Hands-on Session: Searching for exotic particles in pp collisions at 8 TeV using ATLAS open data and tools Magnar Kopangen Bugge
Relativistic Hydrodynamics Laszlo Csernai
Nuclear Reaction Rates in Stars Oleksandr Gorbachenko
Statistical Model and Signatures of Quark Gluon Plasma Mark Gorenstein
Introduction to Dark Matter Dmytro Iakubovskyi
Strangeness Production in Heavy Ion Collisions Sonia Kabana
Lattice QCD Eero Aleksi Kurkela
Femtoscopy of Heavy Ion Collisions Richard Lednicky
Dilepton and Photon Production in Heavy Ion Collisions Ana Marin
Superconductivity and its applications Pavlo Mikheenko
Phase transitions in dynamical environments; Properties of nuclear matter in supernova explosions Igor Mishustin
High Energy Physics in LHC Era Farid Ould-Saada
Supersymmetry Are Raklev
Discovery Statistics Alexander Lincoln Read
Experimental Searches for Dark Matter Heidi Sandaker
Anisotropic Flow In Heavy Ion Collisions Ilya Selyuzhenkov
Introduction to Cosmology of Early Universe Yurii Shtanov
Hydrodynamics and HBT Correlations Yuriy Sinyukov
Parton Model, Jet Physics and Jet Quenching Alexander Snigirev
Prospects for baryon rich matter research at NICA Alexander Sorin
Anisotropic Flow and Quark Gluon Plasma Arkadiy Taranenko
Coherent phenomena in diagnostics of charged particles and beams Alexey Tishchenko
Jet Quenching and Substructure Modifications in Heavy-Ion Collisions Konrad Tywoniuk
Cosmology of Early Universe Stanislav Vilchinskii
Physics of Black Holes Alexander Yakimenko
Fluctuations and Correlations Evgeny Zabrodin

Organising Institutes and Sponsors

The Norwegian Centre for International Cooperation in Education (SIU)
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