

Session Program

26 August 2024 to 4 September 2024



XIII International Conference
on New Frontiers in Physics
26 Aug - 4 Sep 2024, OAC, Kolymbari, Crete, Greece

XIII International Conference on New Frontiers in Physics 2024

Heavy Ion Collisions and Critical Phenomena

Orthodox Academy of Crete, Kolymbari, Crete, Greece

Monday 26 August

16:50

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 1 | **Convener:** Francesco Longo

16:50–17:15 **PHENIX Heavy Ion Overview**

Speakers

Tamas Novak, Tamas Novak

17:15–17:40 **Heavy Ions Physics at ATLAS - highlights**

Speaker

Dr Nicolas Viaux Maira

17:40

Tuesday 27 August

10:00

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 1 | **Convener:** Elena Arbusova

10:00–10:30 **Effective Lagrangian for the macroscopic motion of fermionic matter**

Speaker

Prof. Mikhail Zubkov

10:30

11:00

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 1 | **Convener:** Dr Pietro Vischia

11:00–11:20 **Casimir effect in magnetized dense QCD**

Speaker

Daisuke Fujii

11:20–11:40 **System size analysis of the fireball produced in heavy-ion collisions**

Speaker

Egor Nedorezov

11:40

Wednesday 28 August

11:40

Heavy Ion Collisions and Critical Phenomena

Session | Location: Room 3 | Convener: Evgeny Zabrodin

11:40–12:00 **The study of identified charged-hadron production at PHENIX**

Speaker

Mariia Mitrankova

12:00

12:00

Heavy Ion Collisions and Critical Phenomena

Session | Location: Room 3 | Convener: Evgeny Zabrodin

12:00–12:20

Underlying event characterization in 200 GeV Au+Au collisions and jet measurements with the sPHENIX detector

Speaker

Tanner Austin Mengel

12:20–12:40

Study of bulk properties through ϕ -meson in Au+Au collisions at high μ_B using the PHSD model

Speaker

Dr Vipul Bairathi

12:40–13:00

Zubarev Meets Bayes: Non-Equilibrium Pion Distribution Function in Heavy-Ion Collisions

Speaker

Mr Oleksandr Vitiuk

13:00

16:00

Heavy Ion Collisions and Critical Phenomena

Session | Location: Room 3 | Convener: Evgeny Zabrodin

16:00–16:20

Probing the onset of deconfinement - hadron production properties in the NA61/SHINE experiment at CERN SPS

Speaker

Elizaveta Zherebtsova

16:20–16:40

K^*/K ratio and the time between freeze-outs for intermediate-mass Ar+Sc system at the SPS energy range

Speaker

Bartosz Kozlowski

16:40–17:00

The $v^{\{1/3\}}_3/v^{\{1/2\}}_2$ ratio in PbAu collisions at $\sqrt{s_{NN}} = 17.3$ GeV - a hint of a hydrodynamic behavior

Speaker
Jovan Milosevic

17:00–17:20 **sPHENIX at RHIC**

Speaker
Dr Stacyann Nelson

17:20–17:40 **Overview of STAR Measurements on Correlations and Fluctuations**

Speaker
Yu Hu

17:40–18:00

A systematic approach to studying Quark Energy Loss in Nuclei using Positive Pions

Speaker
Mr Nicolás Zambra Gómez

18:00

Thursday 29 August

12:20

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 3 | **Convener:** Lais Soares Lavra

12:20–12:40

Recent results of quarkonia elliptic flow measured by the ALICE Collaboration

Speaker

Dr Liuyao Zhang

13:00

Friday 30 August

12:40

Heavy Ion Collisions and Critical Phenomena

Session | Location: Room 1

12:40-13:00

Centrality dependence of two-pion Bose-Einstein correlations in $\sqrt{s(NN)} = 200$ GeV Au+Au collisions

Speakers

Tamás Ferenc Csörgö, Tamás Ferenc Csörgö

13:00

Tuesday 3 September

09:30

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 1 | **Convener:** Prof. Laszlo Pal Csernai

09:30–10:00 **Simulating collectivity in dense baryon matter with multiple fluids**

Speaker

Dr Iurii Karpenko

10:00

16:00

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 1 | **Convener:** Evgeny Zabrodin

16:00–16:25 **STAR (non-spin physics) Highlights**

Speaker

Barbara Trzeciak

16:25–16:45 **Overview of STAR Measurements on Flow, Chirality, and Vorticity**

Speaker

Yicheng Feng

16:45–17:05

Identified and strange hadron production and their flow in $O+O$ collisions at $\sqrt{s_{\mathrm{NN}}}$ = 7 TeV using various models

Speaker

Dr Jagbir Singh

17:05–17:25 **Recent jet measurements from STAR**

Speaker

Tanmay Pani

17:25

17:25

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 1 | **Convener:** Evgeny Zabrodin

17:25–17:45

Particle production in high-energy collisions and generalized non-additive distributions

Speaker

Trambak Bhattacharyya

17:45–18:05

Investigating the CME in isobaric ($^{96}_{44}\mathrm{Ru}+^{96}_{44}\mathrm{Ru}$ and $^{96}_{40}\mathrm{Zr}+^{96}_{40}\mathrm{Zr}$) collisions at $\sqrt{s_{\mathrm{NN}}}$ = 200 GeV using Sliding Dumbbell Method with the STAR detector at RHIC

Speaker

Jagbir Singh

18:05–18:25 **Heavy ions: soft physics (CMS)**

Speaker

Jovan Milosevic

18:25

Wednesday 4 September

11:00

Heavy Ion Collisions and Critical Phenomena

Session | **Location:** Room 1 | **Convener:** Jon Paul Lundquist

11:00–11:25

HYDroynamics with JETs (HYDJET++): Latest developments and results

Speaker

Evgeny Zabrodin

11:25–11:50

Analysis of particle p_T -spectra in model-generated HICs using Tsallis statistics

Speaker

Larisa Bravina

11:50